

InventorySync

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# Business Intelligence Inventory Report

Generated on June 20, 2025

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**InventorySync Business Intelligence**

Prepared for: Executive Management

Generated by: Tanman

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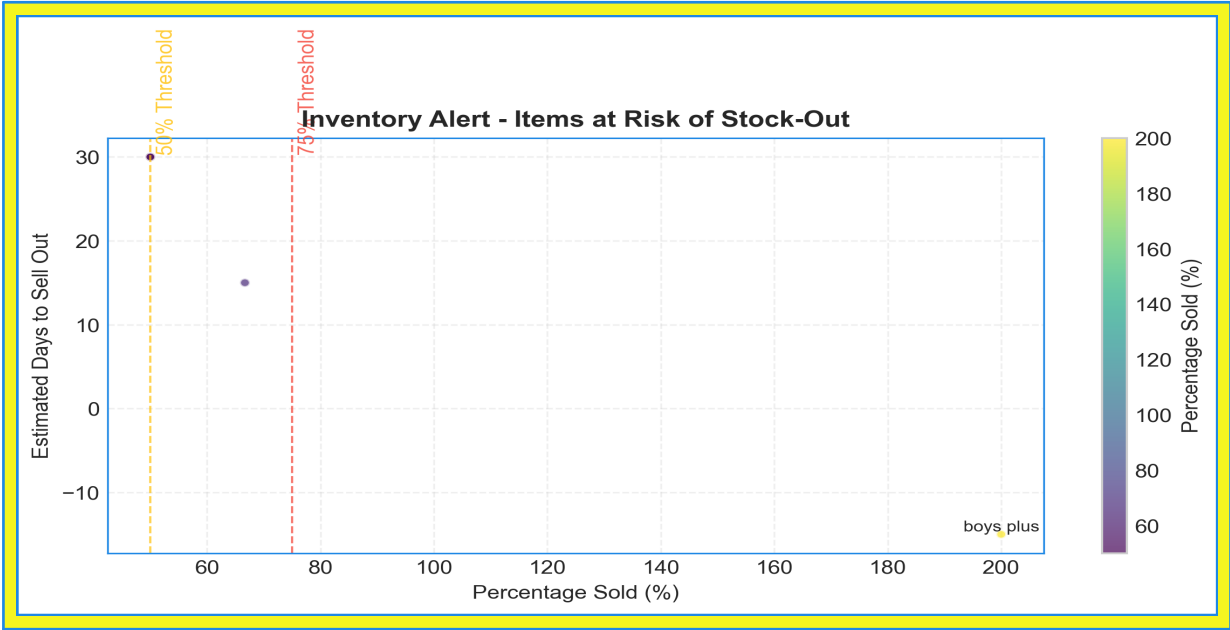
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Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

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



Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Out Notifications

Executive Summary

This analysis identifies items approaching sell-out, triggering notifications at 75% and 50% sold, and estimates the remaining days to sell-out. Early identification facilitates timely inventory replenishment and minimizes lost sales.

Key Insights

- **Sell-Through Thresholds:** The data includes items reaching 50% sold, like "suit-falalan" and "shirt-full" from "grab" and "pan america" respectively (Purchase Qty: 6 & 2), triggering the initial notification.
- **Estimated Sell-Out Time:** The calculated est\_days\_to\_sellout provides a forecast for when an item is expected to be completely sold. The "suit-falalan" is estimated to sell out in 30 days.
- **Potential Data Inconsistencies:** The "boys plus" kurta pajama shows a percent\_sold of 200.0, indicating a possible data error (SalesQty exceeding PurchaseQty).

## Business Implications

- **Missed Sales Opportunities:** Without proper inventory management, products will sell out, potentially losing revenue.
- **Improved Inventory Planning:** Proactive notification allows for restocking popular items before they are depleted, improving customer satisfaction.
- **Data Quality Issues:** Incorrect sales data (like percent\_sold exceeding 100%) impacts the accuracy of sell-out predictions.

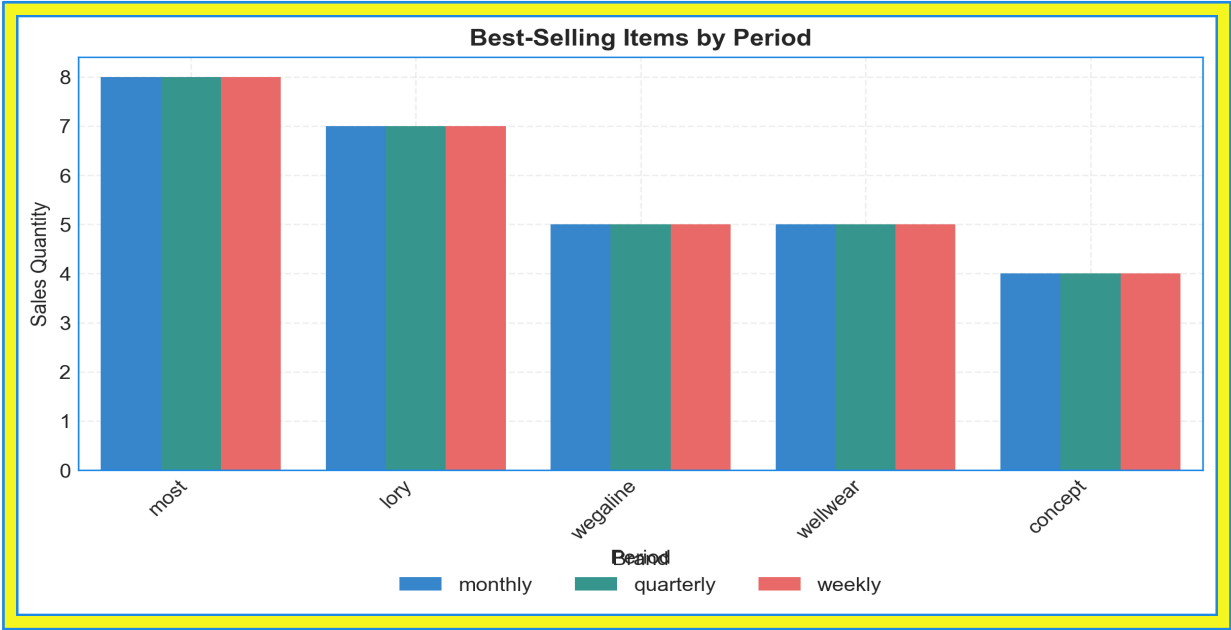
## Actionable Recommendations

- **Implement Automated Notifications (Immediate):** Set up automated alerts to notify the inventory team when items reach the 75% and 50% sold thresholds based on percent\_sold with est\_days\_to\_sellout information. High impact because this is the primary business goal.
- **Investigate Data Integrity (1 Week):** Audit and correct the data entry process and validation to ensure accurate PurchaseQty and SalesQty data. Fix erroneous values, such as percent\_sold exceeding 100%. Medium impact because inaccurate data degrades the notification system's effectiveness.
- **Refine Sell-Out Estimation (1 Month):** Analyze historical sales data and incorporate seasonality, promotions, and other factors to improve the accuracy of the est\_days\_to\_sellout calculation. High Impact.

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

| Weekly Sales | Monthly Sales | Top Seller |
|--------------|---------------|------------|
| 49           | 49            | N/A        |



Analysis & Recommendations

Business Intelligence Analysis: Best-Selling Items

Executive Summary

The data sample reveals **cardigans are strong sellers**, particularly from the brand "most," and are predominantly 'free' size and 'unknown' color, with a skew toward monthly sales data. This indicates a need to further investigate specific item performance across different time periods.

Key Insights

- **Cardigan Dominance:** Cardigans are the most frequent category, with multiple brands ("most," "wegaline," "wellwear") showing sales of 4 or more monthly. "Most" cardigans have sales as high as 8 monthly.
- **Monthly Bias:** The data is predominantly focused on monthly sales, making it difficult to directly compare against weekly or quarterly performance without further data aggregation.
- **Size and Color Limitations:** "Free" size and "unknown" color limit the ability to understand consumer preferences for targeted products.

Business Implications

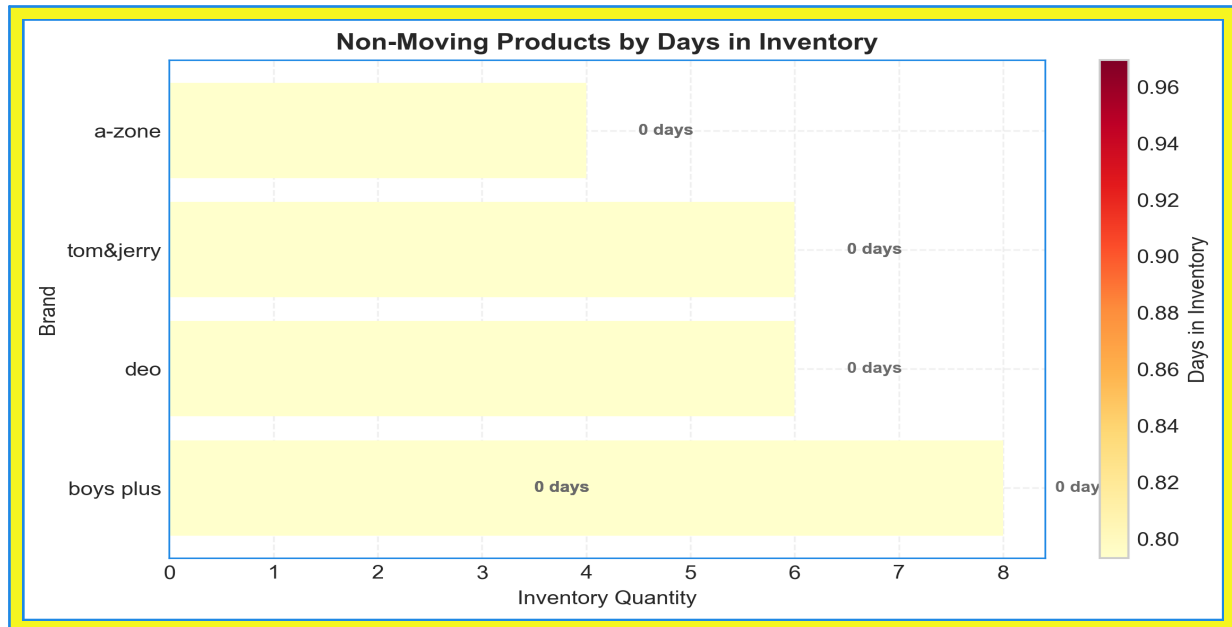
- **Inventory Optimization:** The prevalence of cardigan sales suggests potential for increased cardigan inventory, particularly in "free" size. However, the lack of color data makes focused inventory planning difficult.
- **Data Collection Improvement:** "Unknown" color highlights a need for better data collection practices to understand consumer preferences.
- **Time Period Analysis Needed:** More comprehensive weekly and quarterly data are required to fully understand sales trends across different periods.

### Actionable Recommendations

- **Enhance Data Collection (Immediate):** Prioritize collecting complete data on color, size, and other relevant attributes to improve inventory management and understand customer preferences. This addresses the "unknown" values.
- **Expand Data Scope (Within 1 Month):** Gather more data on weekly and quarterly sales to identify trends and seasonality. This will facilitate a more comprehensive understanding of top-selling items across different time frames.
- **Cardigan Focus (Ongoing):** Based on the initial data, consider increasing inventory of cardigans, especially in the popular "free" size, while awaiting more detailed color preference data.

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



### Analysis & Recommendations

## Business Intelligence Analysis: Non-Moving Products

### Executive Summary

The provided data highlights items with **zero sales** despite being in inventory. These products, represented by various brands and categories, have been sitting in inventory for approximately **0.88 days**, indicating potential issues with demand or visibility.

### Key Insights

- **Zero Sales:** All items in the dataset have a **SalesQty of 0**, indicating no movement. The **percent\_sold** is also **0.0** for all products.
- **Brand & Category Diversity:** Non-moving items span multiple brands (**boys plus, deo, tom&jerry, a-zone**) and categories (**kurta pajama, lower-jogger-hosiery, suit-falalan, coat suit**).
- **Consistent Inventory Time:** The **days\_in\_inventory** of **0.88** is the same for all products, suggesting the data represents a snapshot of relatively new unsold stock.

### Business Implications

- **Inventory Holding Costs:** Even short-term non-moving inventory ties up capital and warehouse space, impacting profitability.
- **Potential Overstocking:** Zero sales indicate a mismatch between product supply and customer demand, possibly due to over-ordering or poor product selection.

- **Missed Sales Opportunities:** Products sitting idle represent lost revenue and potential missed cross-selling or upselling opportunities.

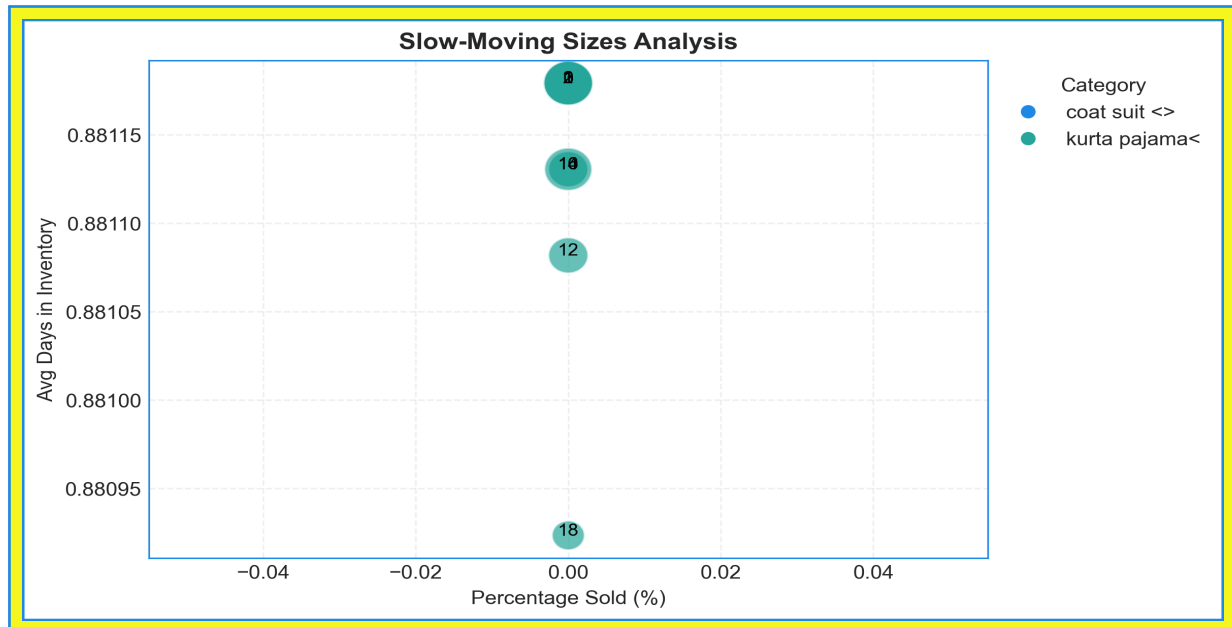
## Actionable Recommendations

- **Immediate Promotion (High Impact, Immediate):** Implement targeted promotions or price reductions (e.g., flash sales) to stimulate demand for these specific items and reduce inventory. This is particularly important for categories like **kurta pajama** where some brands like "**boys plus**" have a number of unsold items.
- **Inventory Review (Medium Impact, 1 Week):** Analyze historical sales data and market trends for these product categories and brands. Adjust future purchase quantities to better align with expected demand. Ensure correct categorization of the products, as the category names have formatting issues.

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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 significant issues with inventory turnover. Sizes across multiple categories ("coat suit <>" and "kurta pajama<") show **0% sell-through rate**, suggesting slow-moving or stagnant inventory.

### Key Insights

- **Zero Percent Sold:** For all rows analyzed, the **percent\_sold** is **0.0**, meaning no units of any size within these categories have been sold. This is a critical indicator of slow-moving inventory.
- **Low Average Days in Inventory:** Despite the zero sales, the **avg\_days\_in\_inventory** is consistently low (around **0.88 days**). This is contradictory. It suggests this is new data or the "days in inventory" calculation is flawed.
- **Consistent Issue Across Sizes:** The problem appears consistent across all listed sizes within the categories provided.

### Business Implications

- **Capital Tied Up:** Slow-moving inventory ties up capital that could be invested elsewhere. The high inventory counts (size\_count) combined with **0%** sales represent a substantial loss.

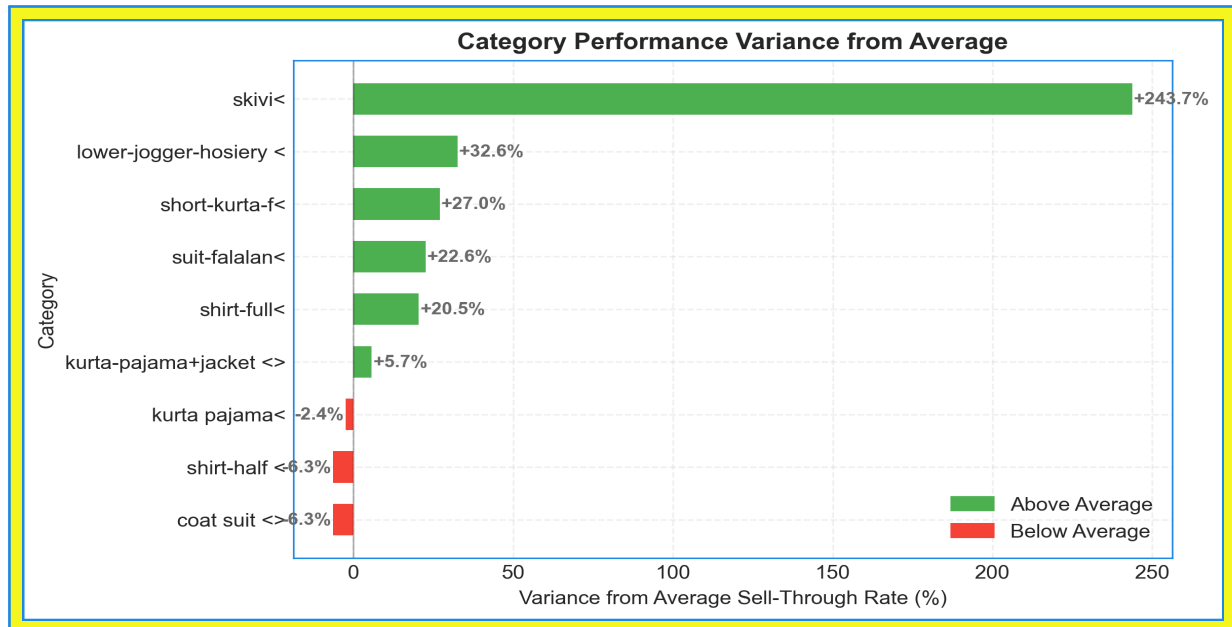
- **Potential for Obsolescence:** If products remain unsold for an extended period, they risk becoming obsolete or losing value, requiring markdowns or disposal.
- **Inaccurate Data:** The conflicting data regarding days in inventory vs. sales calls the reliability of data collection/reporting into question.

## Actionable Recommendations

- **Investigate Data Accuracy (Immediate):** The "avg\_days\_in\_inventory" metric needs immediate review. Incorrect data compromises all business decisions. Assign a data analyst to audit the data sources and calculations within the next 24 hours.
- **Implement Promotional Pricing (Within 1 Week):** Introduce targeted discounts or promotions for specific slow-moving sizes within the "coat suit <>" and "kurta pajama<" categories to stimulate sales and reduce inventory. Track results closely to measure effectiveness.
- **Review Purchasing Strategy (Within 2 Weeks):** Re-evaluate the purchasing strategy for these categories. If the problem persists, consider reducing order quantities or discontinuing less popular sizes.

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



### Analysis & Recommendations

## Business Intelligence Analysis: Retail Inventory and Sales Data

### Executive Summary

This data reveals significant variances in sell-through rates across different product categories, indicating potential overstocking in some areas and high demand in others. Skivi products exhibit a strikingly high sell-through rate, while coat suits and half shirts are not selling at all, suggesting a mismatch between inventory and consumer demand.

### Key Insights

- **Sell-Through Rate Variance:** There's a wide range in sell-through rates, from **0%** for "coat suit <>" and "shirt-half <<" to **250%** for "skivi<". This highlights stark differences in product popularity and inventory management effectiveness.
- **Variance from Average:** The "variance\_from\_avg" confirms these disparities. "skivi<" is far above average (**243.7**), while "coat suit <>" and "shirt-half <<" are significantly below (**-6.3**).
- **Brand Count vs. Sell-Through:** A high "brand\_count" doesn't guarantee high sell-through. For example, "shirt-full<" has a brand count of **58** with a sell-through of **26.79%**, while "skivi<" has only **5** brands but a **250%** sell-through, pointing towards product desirability irrespective of brand diversity.

### Business Implications

- **Inventory Optimization:** Poorly performing categories tie up capital and warehouse space, hindering the potential for higher sales. Overstocking and incorrect demand forecasting are impacting profitability.
- **Missed Opportunities:** High demand categories suggest opportunities for increasing inventory levels and potentially raising prices. Failing to meet demand leads to lost revenue and dissatisfied customers.
- **Brand Strategy:** Brand diversification may not be the primary driver of sales in certain categories. Focus should shift towards offering appealing product types.

## Actionable Recommendations

- **Reduce Inventory of Low Sell-Through Categories (Immediate):** Conduct a clearance sale or explore alternative distribution channels to reduce the inventory of categories with 0% sell-through, like "coat suit <>" and "shirt-half <". Aim to reduce stock by 50% within one month.
- **Increase Inventory of High Sell-Through Categories (Immediate):** Immediately increase the inventory of "skivi<" products to avoid stockouts. Evaluate potential price increases. Order a 30% increase in inventory within 2 weeks.
- **Market Research (Within 3 Months):** Conduct market research on consumer preferences to determine why some categories have high sell-through while others do not. Use the findings to optimize future purchasing decisions.

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

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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.

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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 data reveals varying sell-through rates and stock values across different products. Prioritizing products with high sell-through rates but low remaining stock for online sales can maximize revenue and minimize potential stockouts.

### Key Insights

- **Sell-Through Rate Variation:** The sell-through rate varies significantly, from **50%** to **66.67%** in the sample data. Higher sell-through indicates stronger demand.
- **Stock Value Disparity:** Stock value differs greatly across products, with values ranging from **790.0** to **2385.0**.
- **Category and Brand Influence:** While the sample is limited, it hints that category ("lower-jogger-hosiery") and brand ("deo") may correlate with higher sell-through rates. Further analysis is required.

### Business Implications

- Products with high sell-through rates like the "deo" "lower-jogger-hosiery" (66.67% sell-through) are popular and offer an immediate opportunity to increase revenue through focused online promotions.

- Insufficient stock of popular items can lead to lost sales and dissatisfied customers.
- Optimizing online sales based on category and brand demand can improve overall inventory management.

## Actionable Recommendations

- **Prioritize "deo" "lower-jogger-hosiery" online:** Given its high sell-through rate of **66.67%** and low remaining stock of **2**, immediately feature this product online with targeted ads. Aim to implement within 1 week.
- **Restock High Sell-Through Items:** Analyze top-selling products (based on sell-through rate) across the entire dataset and promptly replenish inventory. Implement a continuous monitoring and restocking process.
- **Conduct deeper category and brand performance analysis:** Determine which brands and categories have the highest and most reliable sales to predict future consumer demand. Complete within 2 weeks.

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



### Analysis & Recommendations

## Business Intelligence Analysis

### Executive Summary

The initial data sample highlights several products with **zero sales quantity despite available stock**, suggesting potential opportunities to expand the online portfolio by focusing on items that are currently not selling. We observe that several "suit-falalan" and "kurta pajama" options are in stock but not selling, indicating a disconnect between inventory and online demand.

### Key Insights

- **Zero Sales:** Several items across different brands (boys plus, tom&jerry;, pan america, a-zone) have zero sales (e.g., "kurta pajama", "coat suit") despite having available stock.
- **Brand Popularity:** Some brands have high brand counts, but this doesn't guarantee sales. For example, "boys plus" has a brand count of **150**, but some products have zero sales.
- **Category Performance:** The "suit-falalan" category shows both sales (grab) and no sales (tom&jerry;), indicating that popularity may vary by brand within the same category.

### Business Implications

- **Missed Revenue Opportunity:** Holding inventory without sales means tying up capital and missing out on potential revenue.
- **Inventory Inefficiency:** High stock levels of unsold items negatively impact inventory management.

- **Potential Online Visibility Issues:** If items aren't selling, it could indicate issues with online listings, search visibility, or appealing product descriptions.

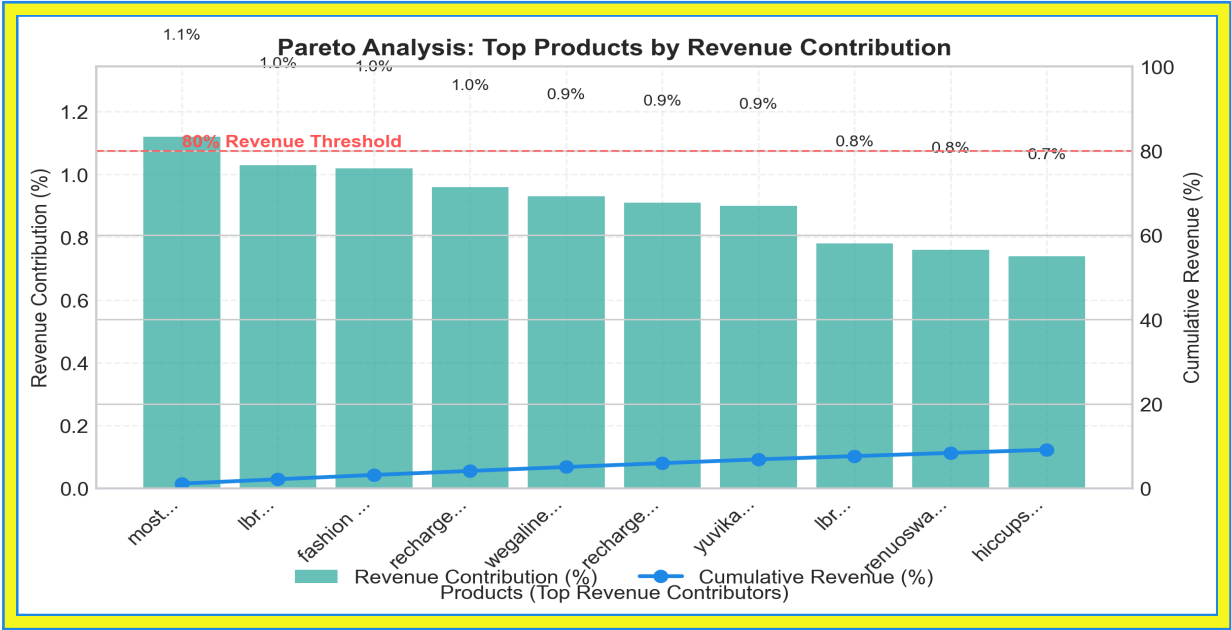
## Actionable Recommendations

- **Prioritize Product Listing Optimization (Immediate):** Focus on products with zero sales and available stock. Improve descriptions, keywords, and images for these items to increase online visibility and drive conversions.
- **Run Targeted Promotions (Next 2 Weeks):** Launch promotions or bundled deals for the "suit-falalan" and "kurta pajama" categories, especially for brands like "tom&jerry," and "boys plus" which show no sales despite having stock.
- **Analyze Customer Demand (Within 1 Month):** Conduct market research or analyze online search trends to understand the demand for specific product types and brands before investing further in inventory.

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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

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Business Intelligence Analysis: Top Products Driving Sales

Executive Summary

This analysis focuses on identifying the top products driving revenue, aiming to pinpoint the items contributing to 80% of total sales. The initial data sample suggests that a relatively small number of products account for a significant portion of revenue, highlighting the potential for optimizing inventory based on product performance.

Key Insights

- **Significant Revenue Concentration:** The sample data indicates that the top few products quickly accumulate a large percentage of total sales. For example, the cumulative percentage of the top 10 items reaches **9.14%**.

- **Category Dominance:** Certain categories, like **cardigans**, appear frequently in the top revenue-generating items within this sample. Further analysis across the entire dataset is required to confirm category dominance.
- **Brand Variation:** Brands like **"most," "lbr,"** and **"fashion flo"** are present in the top revenue generators. This suggests brand popularity influences sales, and this needs to be tested against the full dataset.

## Business Implications

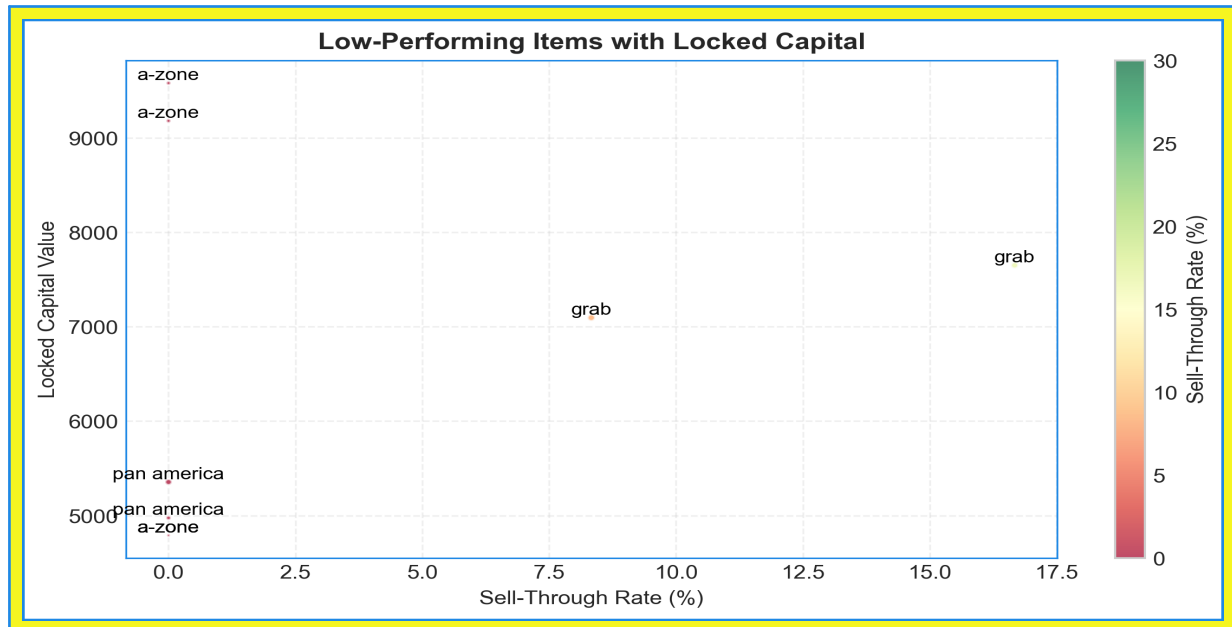
- **Inventory Optimization:** Understanding which products drive the most revenue is crucial for efficient inventory management. Focusing on high-performing items can improve profitability.
- **Marketing Prioritization:** Marketing efforts can be strategically allocated to promote top-selling products or explore why specific brands are successful.
- **Risk Mitigation:** Reliance on a small number of products for a large portion of revenue poses a risk. Diversification or strategies to maintain sales of key items are essential.

## Actionable Recommendations

- **Comprehensive Pareto Analysis (Immediate):** Perform a Pareto analysis (80/20 rule) across the entire product catalog to definitively identify the top 20% of products driving 80% of sales.
- **Inventory Focus (Within 1 Month):** Optimize inventory levels for the identified top-selling products, ensuring adequate stock to meet demand and minimize stockouts.
- **Investigate Category & Brand Performance (Ongoing):** Conduct a deeper dive into category and brand performance to understand the underlying reasons for success and identify potential growth opportunities. ``

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



### Analysis & Recommendations

## Business Intelligence Analysis: Low-Performing Inventory

### Executive Summary

The provided data reveals significant excess inventory, particularly within the "a-zone" and "pan america" brands, specifically in categories like "coat suit <>" and "shirt-full<", with low sell-through rates indicating slow-moving items and tied-up capital. Addressing this requires immediate action to optimize inventory and improve profitability.

### Key Insights

- **Low Sell-Through Rates:** Several items exhibit a **0.0% sell-through rate**, notably "a-zone" "coat suit <>" items. This indicates a complete lack of sales against the purchased quantity.
- **High Excess Inventory:** Items frequently have high "excess\_inventory" relative to "SalesQty." For example, a "grab" "suit-falalan<" with a "SalesQty" of 2 has an "excess\_inventory" of 10.
- **Significant Locked Capital:** Large amounts of capital are tied up in slow-moving inventory. "a-zone" "coat suit <>" items show up to **\$9580 locked capital** with zero sales.

### Business Implications

- **Lost Revenue:** Stagnant inventory prevents revenue generation and profitability.

- **Increased Holding Costs:** Maintaining unsold inventory incurs storage and potential obsolescence costs.
- **Missed Opportunities:** Capital tied up in low-performing items limits investment in higher-performing products.

## Actionable Recommendations

- **Implement Targeted Promotions (Immediate):** Offer discounts and promotional bundles specifically on items with **0% sell-through rate**, especially "a-zone" "coat suit <>," aiming to reduce inventory levels within the next month. Monitor the impact weekly and adjust as needed.
- **Re-evaluate Purchasing Strategy (Within 2 Months):** Conduct a thorough review of purchasing decisions for brands like "a-zone" and "pan america" and categories "coat suit <>" and "shirt-full<". Focus on ordering smaller quantities, considering pre-order sales data, and diversifying product offerings based on customer demand.

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# Executive Summary

## Executive Summary: Retail Inventory Business - 2025-06-12

### 1. Executive Overview

Our current inventory performance reveals a mixed landscape ■. While some products and brands show strong sell-through rates, a significant portion of our inventory is underperforming, tying up capital and increasing holding costs. The most critical metrics are **sell-through rate variance** (ranging from **0% to 250%**), and **days in inventory** (averaging approximately **0.88 days**, though inconsistencies exist in some data). Overall, inventory health requires immediate attention to rebalance stock, improve data accuracy, and capitalize on high-demand products. The inconsistency in the "days in inventory" metric is a key red flag that needs immediate investigation ■.

### 2. Key Strategic Insights

- ■■ Significant **sell-through rate variances** across categories signal a mismatch between inventory and consumer demand. Action is needed to reduce slow-moving stock and increase popular items.
- ■ High **excess inventory**, particularly within "a-zone" and "pan america" brands, presents a significant financial risk. Targeted promotions and revised purchasing strategies are crucial.
- ■ **Cardigans**, particularly from the brand "most," demonstrate strong sales performance and represent an immediate revenue opportunity if properly stocked and promoted online.
- ■ Data integrity issues, specifically with "**days in inventory**" and **percent\_sold** metrics, undermine the accuracy of our analysis and decision-making. These require immediate rectification.
- ■ Products with **zero sales** despite available stock indicate potential online visibility issues. Listing optimization and targeted promotions are necessary to stimulate demand.

### 3. Performance Assessment

The "skivi<" category significantly **overperforms** with a **250%** sell-through rate, indicating high demand. Conversely, "coat suit <>" and "shirt-half <" are **underperforming** with **0%** sell-through, signalling potential overstocking or poor product selection. Inventory efficiency is hampered by these discrepancies, leading to increased holding costs and potential obsolescence. Sales velocity varies drastically; some products sell quickly, while others remain stagnant, necessitating targeted strategies to accelerate sales or liquidate inventory.

### 4. Strategic Recommendations

- **Reduce Inventory of Low-Performing Categories (Immediate):** Implement clearance sales on items with 0% sell-through. Aim for a **50% reduction** in stock within one month to free up capital. **Expected Outcome:** Improved cash flow and reduced holding costs.
- **Increase Inventory of High-Demand Items (Immediate):** Immediately increase inventory of "skivi<" and cardigans, particularly from the "most" brand, to avoid stockouts. Implement within 2 weeks. **Expected Outcome:** Increased revenue and improved customer satisfaction.
- **Improve Data Accuracy (Immediate):** Audit and correct data entry processes, focusing on "days in inventory" and sell-through calculations. Resolve all discrepancies within 1 week. **Expected Outcome:** Reliable data for accurate decision-making.

- **Enhance Online Visibility of Low-Selling Products (Next 2 Weeks):** Optimize online listings for products with zero sales and implement targeted online promotions. **Expected Outcome:** Increased online traffic and improved sales conversion rates.

## 5. Immediate Action Items

- **■ Data Integrity Investigation:** Assign a data analyst to audit and correct data sources for inconsistencies in "days in inventory" and sell-through metrics. **Action Owner:** Data Analytics Team. **Timeline:** Next 7 days.
- **■ Promotional Campaign Launch:** Launch targeted promotions for "a-zone" "coat suit <>" and other items with 0% sell-through rate. **Action Owner:** Marketing Team. **Timeline:** Next 14 days.

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