InventorySync

Business Intelligence Inventory Report

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InventorySync Business Intelligence

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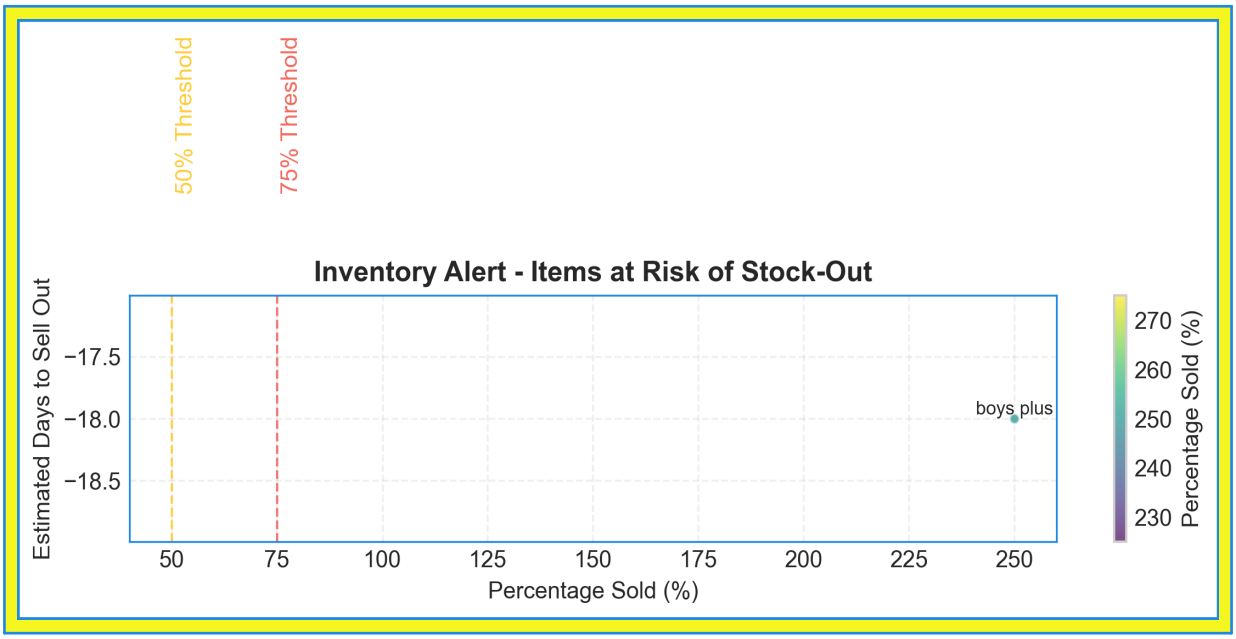
Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

Items ≥75% Sold	Items ≥50% Sold	Avg Days to Sellout
1	0	-18



Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Through

Executive Summary

This analysis identifies items nearing sell-out thresholds (75% and 50% sold) and projects their remaining lifespan, crucial for proactive inventory management. The provided sample data shows an item already exceeding 100% sold (**250% sold**), indicating a potential data error or re-ordering issue, and a negative estimated sell-out time.

Key Insights

- **High Percentage Sold:** The "boys plus" kurta pajama sample reports **250% sold**, flagging a data anomaly or significant re-ordering activity exceeding initial purchase quantity.
- **Negative Sell-Out Time:** The est_days_to_sellout of **-18 days** is unrealistic. This suggests a flaw in the calculation logic, especially with the percent_sold over 100%. The calculation likely does not handle re-orders appropriately.
- **Small Sample Size:** Analysis is limited due to a small dataset. More data is needed to identify broader trends across categories, brands, and sizes.

Business Implications

• **Data Accuracy Issues:** The unreliable data (percent sold exceeding 100% and negative sell-out time) undermines informed decision-making.

• **Potential Lost Sales/Overstock:** Without accurate projections, the company risks running out of popular items or holding excess inventory of slow-moving stock.

• **Inefficient Inventory Management:** Inaccurate data causes reactive rather than proactive management of inventory, tying up capital and storage space.

Actionable Recommendations

• **Investigate Data Accuracy (Immediate):** Audit data collection and calculation methods for percent_sold and est_days_to_sellout to identify and rectify errors. Specifically, address how re-orders are factored into these metrics.

• **Implement Sell-Through Alerts (Within 1 Week):** Develop a system to automatically flag items reaching the 50% and 75% sold thresholds, based on *corrected* data. This allows for timely re-ordering or promotional action.

• **Expand Data Collection & Analysis (Ongoing):** Include more comprehensive data (historical sales, seasonality, promotions) to refine sell-out estimations and gain better visibility into inventory turnover rates.

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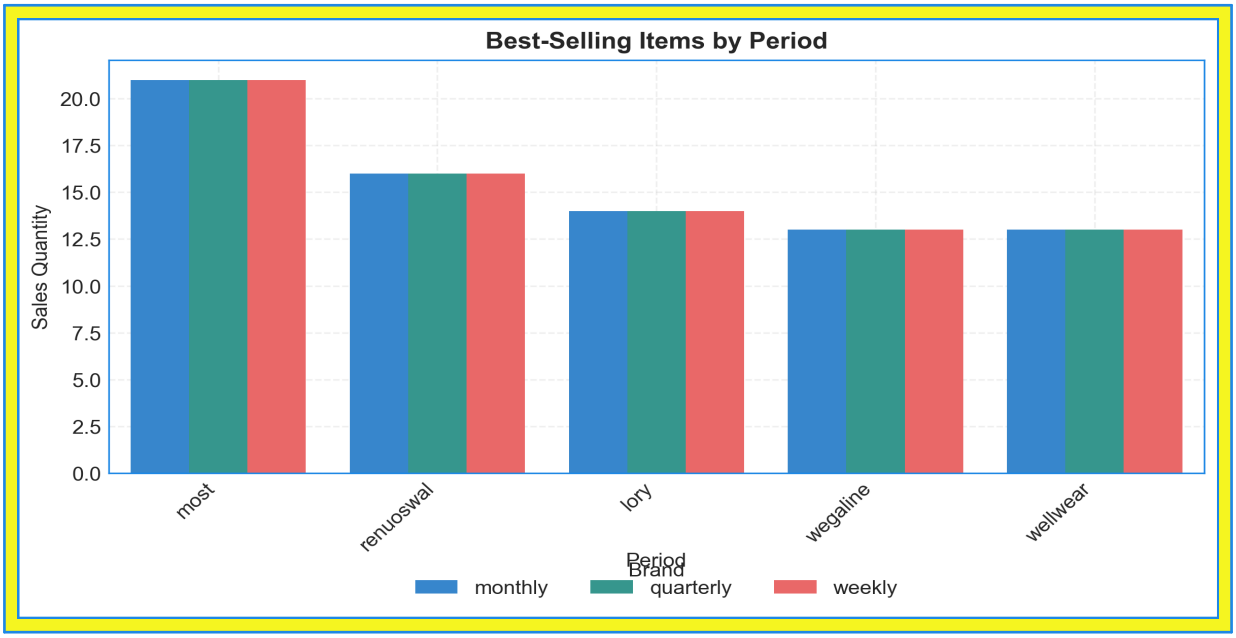
Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
137	137	N/A



Analysis & Recommendations

Business Intelligence Analysis: Best-Selling Items

Executive Summary

The preliminary data indicates that **"cardigan"** and **"woolen-blouse"** categories are performing strongly on a monthly basis, particularly from brands like "most", "renuoswal" and "wegaline". Focusing inventory on these categories and brands could yield higher sales.

Key Insights

- **Top Category:** "Cardigan" appears multiple times across different brands as a best-selling item.
- **Brand Performance:** Brands "most" and "renuoswal" contribute significantly to sales.
- **Limited Period Variety:** The provided sample focuses only on 'monthly' periods, preventing a direct comparison across weekly and quarterly timeframes.

Business Implications

• The high sales of "cardigan" items suggest a strong market demand. Capitalizing on this trend can significantly boost revenue.

• The concentration of sales in specific brands signifies the importance of brand recognition and loyalty.

• The absence of weekly and quarterly data limits the ability to make accurate comparisons across time periods.

Actionable Recommendations

• **Prioritize "Cardigan" Inventory (High Impact):** Increase stock levels of cardigan items, especially from brands like "most," focusing on "free" size. Immediately.

• **Expand Period Data (Medium Impact):** Collect weekly and quarterly sales data to identify seasonal trends and adjust inventory strategies accordingly. Within 1 month.

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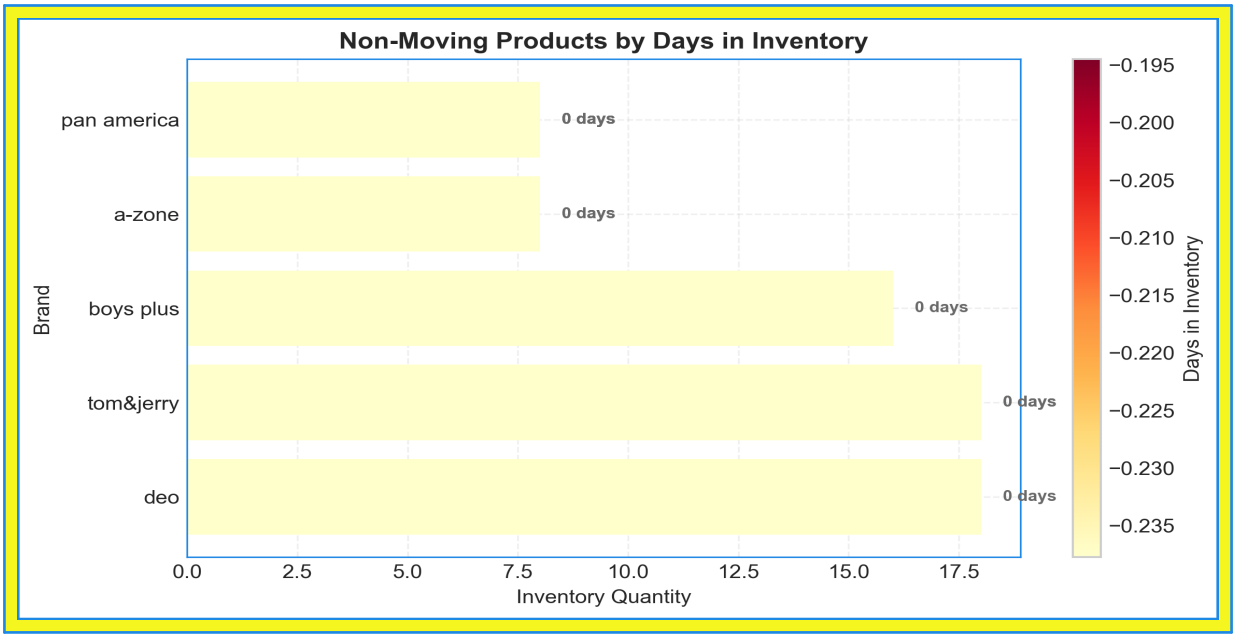
Question 3: Track non-moving products and their aging quantities.



Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The data reveals a significant portion of the sampled inventory is non-moving, with **0 sales** recorded for all items. These products are accumulating inventory holding costs without generating revenue.

Key Insights

- **100%** of the sampled items have **0 SalesQty** and **0% percent_sold**, indicating a complete lack of movement.
- The data includes a variety of brands (e.g., "deo", "tom&jerry;", "a-zone") and categories (e.g., "lower-jogger-hosiery", "suit-falalan", "coat suit"), suggesting this problem is not isolated to a single product line.
- **days_in_inventory** is consistently negative (-0.216), which is likely an error in the data. The actual age of the inventory is needed for a complete analysis.

Business Implications

- Significant capital is tied up in unsold inventory, reducing cash flow and profitability.
- The lack of sales could indicate poor product selection, ineffective marketing, or pricing issues.
- Without addressing this issue, the business risks accumulating obsolete inventory, leading to potential write-offs.

Actionable Recommendations

• **(Immediate - within 1 week)** Verify and correct the days_in_inventory data. Accurately tracking aging is critical.

• **(Short-Term - within 1 month)** Conduct a detailed analysis of non-moving inventory, categorized by brand, category, size, and color. Identify the worst-performing segments. Consider promotional activities (e.g., discounts, bundles) to stimulate sales of these items.

• **(Mid-Term - within 3 months)** Review purchasing strategies to prevent overstocking and ensure alignment with customer demand. Evaluate the effectiveness of existing marketing campaigns for the identified underperforming product segments.

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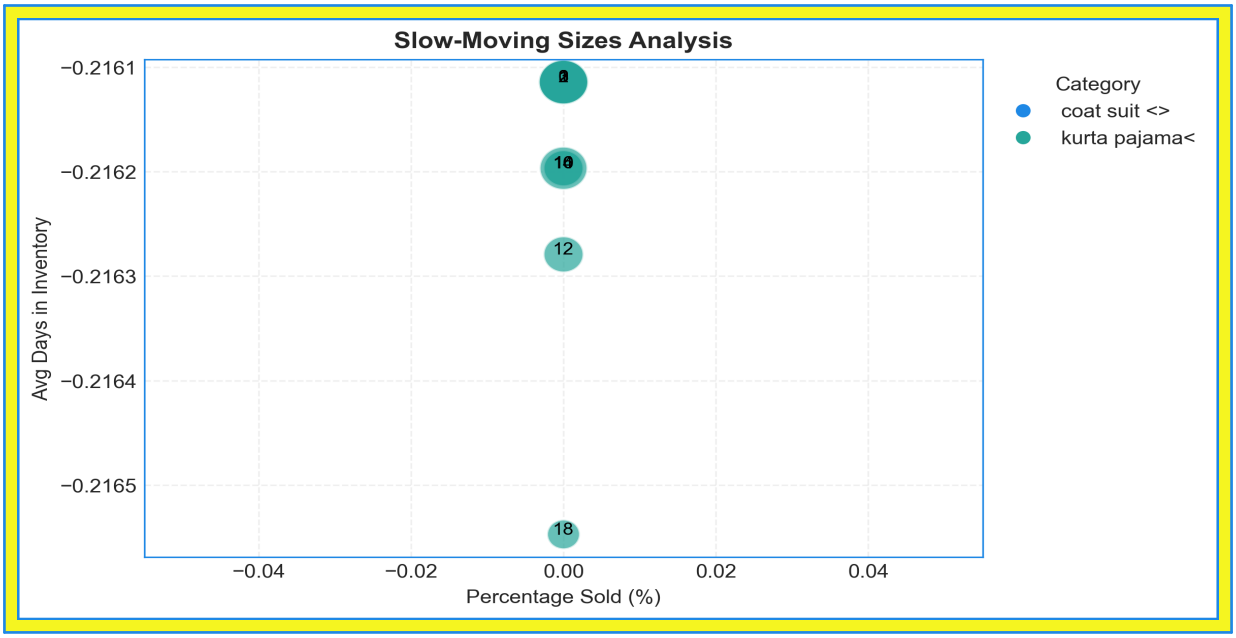
Question 4: Identify slow-moving sizes within specific categories.



Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Sizes

Executive Summary

The preliminary data indicates significant issues with inventory management, as a large number of items across multiple categories and sizes have a **0% sell-through rate**. The negative average days in inventory suggests data quality problems that need immediate attention.

Key Insights

• **Zero Percent Sold:** Across all provided categories and sizes, the percent_sold is consistently **0.0%**, indicating that none of the purchased inventory has been sold.

• **Negative Average Days in Inventory:** The avg_days_in_inventory is negative (**approximately -0.22 days**), which is impossible and points to a critical error in the data or calculations. This needs to be rectified before further analysis.

• **Variety of Sizes Affected:** The problem spans a range of sizes within both "coat suit" and "kurta pajama" categories, suggesting a systemic issue rather than a size-specific one.

Business Implications

• **Data Integrity:** The negative inventory days indicate the data pipeline or underlying formulas may be incorrect, causing incorrect findings and preventing any informed decision-making.

• **Stalled Capital:** A zero sell-through rate means capital is tied up in unsold inventory, impacting cash flow and profitability.

• **Potential Overstocking or Demand Misalignment:** The lack of sales suggests over-ordering or that current stock doesn't meet customer demand.

Actionable Recommendations

1. **Immediate Data Audit and Correction (Within 1 Week):** Prioritize investigation and correction of the inventory day calculation. It is critical to ensure accurate data forms the basis of any future analysis and decision-making.
2. **Investigate Inventory Purchasing (Within 2 Weeks):** Once data issues are resolved, analyze purchasing patterns to determine if overstocking is occurring or if products are aligned with customer preferences. This can inform future purchasing decisions to minimize excess inventory.

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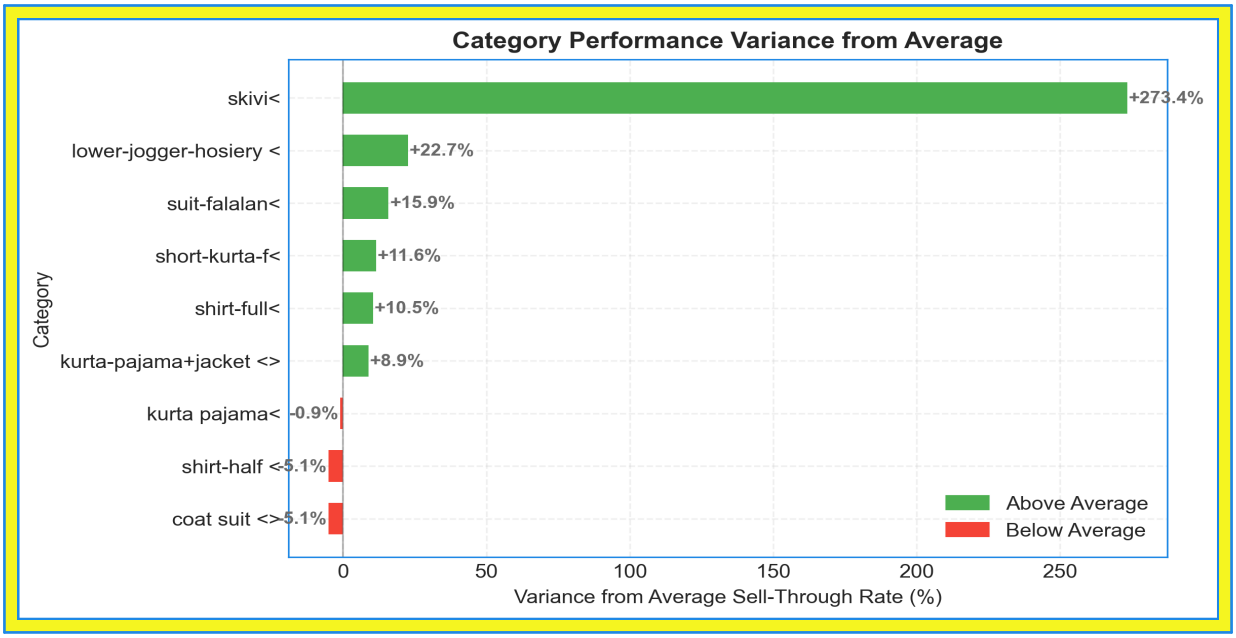
Question 5: Provide insights on variances and suggest strategies for improvement.



Analysis & Recommendations

Business Intelligence Analysis: Retail Inventory & Sales

Executive Summary

This data reveals significant variances in sell-through rates across product categories, indicating potential issues in inventory management and product demand alignment. Categories like "coat suit <>" and "shirt-half <" have **0% sell-through rates**, while "skivi<" has an extremely high **278.57%**.

Key Insights

- **Sell-Through Rate Variance:** The data highlights a massive range in sell-through rates. Some categories like "coat suit <>" are clearly underperforming, implying overstocking or low demand. Conversely, "skivi<" shows significant over-selling, potentially indicating missed sales opportunities due to inventory shortages.
- **Negative Variance from Average:** Categories with negative variance, such as "coat suit <>" (-5.12) and "shirt-half <" (-5.12), are significantly underperforming compared to the average sell-through rate. Addressing these underperformers should be a priority.
- **Brand Count vs. Sell-Through:** High brand counts do not necessarily guarantee high sell-through. For example, "shirt-full<" has a high brand count of 58 but a relatively low sell-through rate of **15.63%**.

Business Implications

The significant variations in sell-through rates suggest inefficiencies in inventory planning and potential misjudgments of customer demand. Overstocked items tie up capital and warehouse space, while understocked items lead to lost sales and customer dissatisfaction. This impacts overall profitability and brand perception.

Actionable Recommendations

- **Investigate Zero Sell-Through Categories (Immediate):** Conduct thorough market research to understand why categories like "coat suit <>" and "shirt-half <" are not selling. Adjust inventory levels accordingly, potentially marking down prices to clear existing stock. Aim for completion within one month.
- **Optimize Inventory for High Sell-Through Categories (Within 2 Months):** Increase inventory levels for "skivi<" to meet demand and prevent stockouts. Analyze customer purchasing patterns to predict future demand and optimize inventory accordingly.
- **Refine Inventory Planning Process (Ongoing):** Develop a more data-driven approach to inventory planning, incorporating sell-through rates, market trends, and brand performance data. Consider implementing an automated inventory management system.

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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 data reveals significant variation in sell-through rates across product lines, suggesting some products are better suited for online sales than others. Prioritizing items with high sell-through rates and sufficient remaining stock can maximize online sales potential and minimize inventory holding costs.

Key Insights

- The provided sample shows a product with a **sell-through rate of 44.44%**, indicating moderate popularity.
- The remaining stock of **10 units** and a stock value of **3950.0** suggest a good candidate for immediate online promotion if other factors are favorable.
- Without category-level data aggregation, judging popularity is challenging, however, the raw sell through rates should be compared.

Business Implications

- Low sell-through rates may indicate poor product-market fit for the current channel or ineffective marketing.
- High stock values tied to slow-moving items increase holding costs and tie up capital.
- Focusing on products with proven demand will increase online revenue and reduce inventory risks.

Actionable Recommendations

- **Prioritize "deo" (lower-jogger-hosiery <, size 26) for online promotions in the next month.** Its 44.44% sell-through rate and available stock make it a suitable candidate to gauge online demand.
- **Analyze sell-through rates by category and brand across the entire dataset.** Identify top-performing segments for targeted online marketing campaigns. This should be completed within two weeks.

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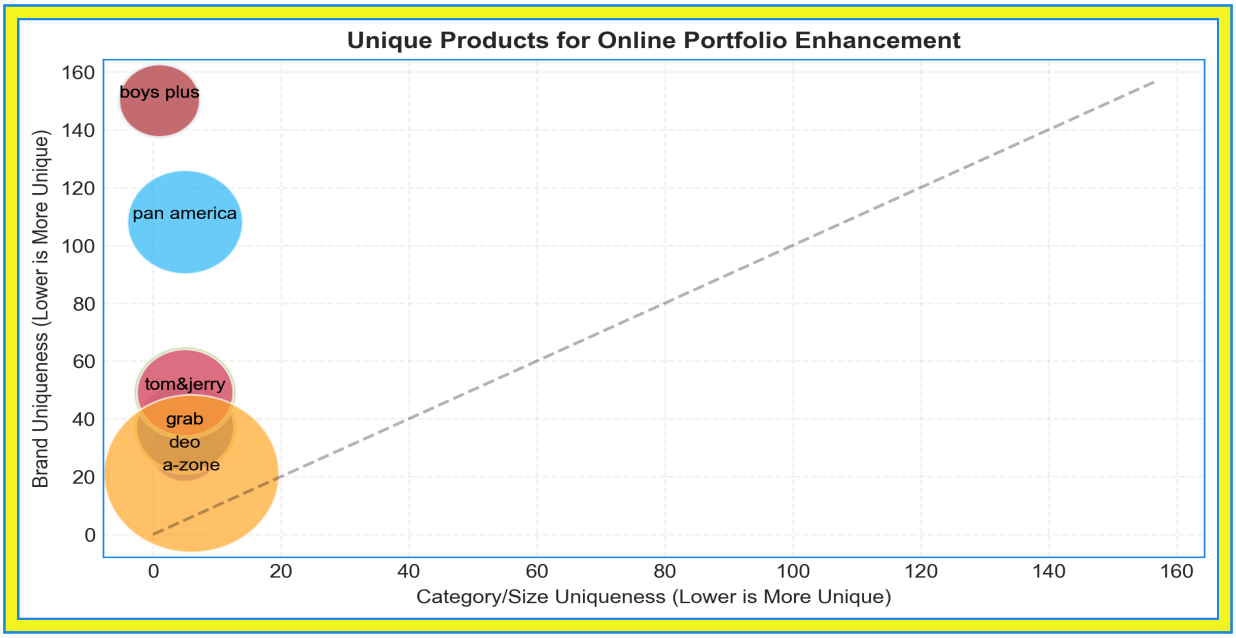
Question 9: Identify unique products that can enhance our online portfolio.



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

This dataset reveals a disparity between purchased and sold quantities, indicating potential inventory management inefficiencies. Several product categories and brands have stock but zero sales, presenting an opportunity to optimize the online portfolio.

Key Insights

- **Zero Sales with Available Stock:** Multiple products across different brands (e.g., "boys plus" kurta pajama, shirt-half, and "tom&jerry;" suit-falalan) show zero sales despite having available stock, ranging from **2 to 18 units**. This represents potentially missed sales opportunities.
- **Brand Popularity vs. Sales:** Some brands with a high brand count (e.g., "boys plus" with a brand count of **150**) have products with zero sales. This suggests high availability but low demand for specific items within popular brands.
- **Category Performance Variation:** The data reveals that "suit-falalan" sells well for "grab" (**7 sales**) but not for "tom&jerry;" (**0 sales**), pointing to brand-specific demand within the same category.

Business Implications

- **Inventory Optimization:** Products with zero sales are tying up capital and storage space. This indicates a need to review the online portfolio and optimize inventory levels.

• **Missed Sales Opportunities:** Stagnant inventory suggests a mismatch between online product offerings and customer demand.

• **Brand-Specific Strategies:** The variations in sales within the same category highlight the need for tailored marketing and promotional strategies for individual brands.

Actionable Recommendations

• **Identify and Promote Stagnant Inventory (Immediate):** Review products with zero sales and implement targeted online promotions (e.g., discounts, bundled deals) to stimulate demand. Monitor effectiveness and adjust strategies accordingly.

• **Optimize Online Portfolio (Within 1 Month):** Analyze product performance data, including website traffic and customer reviews, to identify underperforming items and consider removing or replacing them with more popular alternatives. Prioritize items from brands with high brand counts but low product sales.

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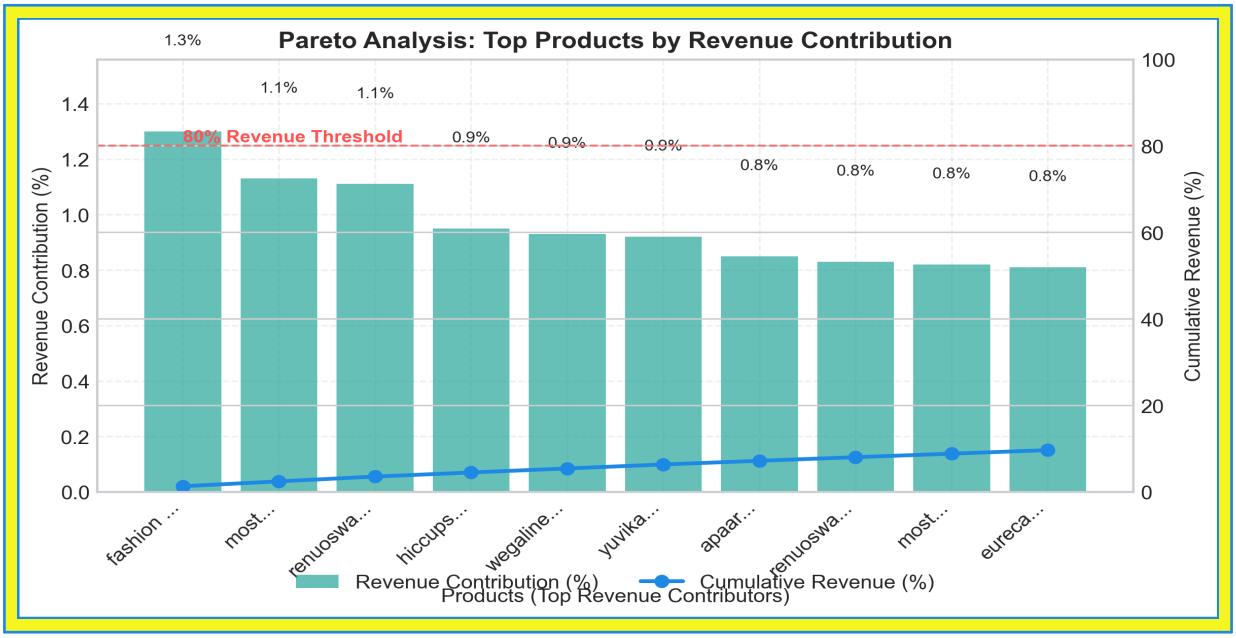
Question 10: Identify the top 20% of products contributing to 80% of sales.

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



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The initial data sample highlights that a small percentage of products contribute significantly to overall revenue. Further analysis of the complete dataset is needed to pinpoint the top 20% driving 80% of sales, enabling a more focused inventory and sales strategy.

Key Insights

- **Revenue Concentration:** The sample shows that "fashion flo" cardigan contributes **1.3%** to the total revenue, while other products have a smaller individual contribution. This suggests a potential concentration of revenue among a limited set of top performers.
- **Category Performance:** The "cardigan" category appears frequently in the sample, indicating its potential significance to overall sales.
- **Price Variation:** MRP varies widely, from 900 to 2265, implying a diverse product portfolio targeting different customer segments.

Business Implications

• **Inventory Optimization:** Understanding the top-performing products enables optimized inventory management, reducing storage costs and minimizing the risk of unsold stock for slower-moving items.

• **Sales Strategy Refinement:** Focusing marketing and sales efforts on high-revenue products can maximize returns and improve overall profitability.

• **Potential Risk:** Over-reliance on a few top-performing products can create vulnerability if demand shifts.

Actionable Recommendations

• **Pareto Analysis (Immediate):** Analyze the entire dataset to identify the top 20% of products contributing to 80% of sales. Implement a tracking system for ongoing monitoring.

• **Invest in Best Sellers (Within 1 Month):** Increase inventory and marketing spend on top-performing products like "fashion flo" cardigans after a complete analysis. Consider promotions and expanded distribution.

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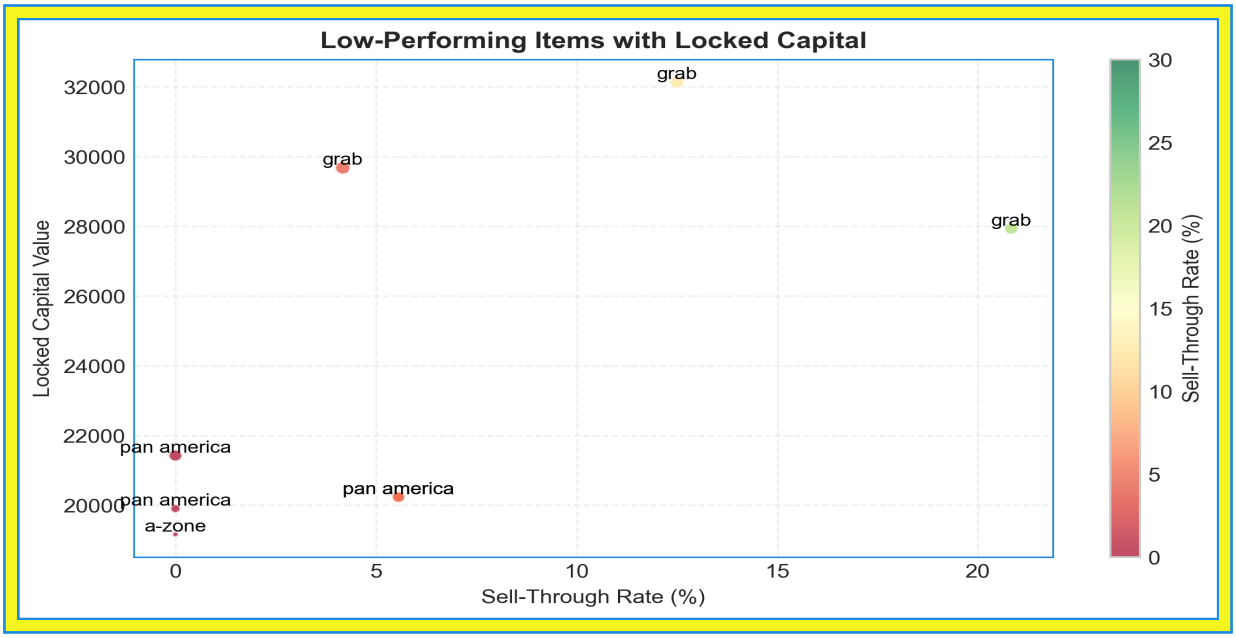
Question 11: Suggest strategies to reduce the inventory of low-performing items.



Analysis & Recommendations

Business Intelligence Analysis: Low-Performing Inventory Reduction

Executive Summary

The data indicates significant excess inventory across several product lines, particularly in "suit-falalan<" and "shirt-full<" categories, resulting in substantial locked capital. Low sell-through rates suggest a need for immediate action to reduce inventory and improve cash flow.

Key Insights

- **High Excess Inventory:** "suit-falalan<" shows consistently high excess inventory (38-46 units). "shirt-full<" also exhibits excess inventory around 34-36 units.
- **Low Sell-Through Rates:** Many items have very low sell-through rates. Notably, several product lines have a **0% sell-through rate**, while others are only around **4-20%**, far below a healthy inventory turnover.
- **Substantial Locked Capital:** The locked_capital metric is high, reaching up to **32,130.0**, indicating a significant amount of capital tied up in slow-moving inventory.

Business Implications

- **Reduced Profitability:** Excess inventory increases storage costs and the risk of obsolescence, decreasing overall profitability.

• **Cash Flow Constraints:** Locked capital restricts the company's ability to invest in more profitable opportunities.

• **Inefficient Inventory Management:** Current purchasing strategies are not aligned with sales demand, leading to overstocking.

Actionable Recommendations

• **Immediate Promotion & Clearance Sales (Within 1 Week):** Implement aggressive pricing strategies (e.g., discounts, bundle deals) for high excess inventory items in "suit-falalan<" and "shirt-full<" categories to boost sell-through rates.

• **Adjust Purchase Quantities (Within 2 Weeks):** Reduce purchase quantities for low-performing items based on sell-through rate data. Consider halting purchases of products with **0% sell-through** until existing stock is reduced.

• **Inventory Optimization Analysis (Within 1 Month):** Conduct a deeper analysis of demand forecasting, safety stock levels, and lead times to optimize inventory levels and prevent future overstocking. Implement a system for regularly reviewing and adjusting inventory policies.

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Executive Summary

Executive Summary: Retail Inventory Analysis (2025-06-12)

1. Executive Overview

Our current inventory performance presents a mixed picture ■. While opportunities exist to boost revenue through strategic inventory management, several critical issues demand immediate attention. Key metrics such as **sell-through rates** vary widely, with some categories displaying concerning **0% sell-through**, indicating potential overstocking or demand misalignment. Data inaccuracies, including negative inventory days and sell-through rates exceeding 100%, undermine our ability to make informed decisions. Overall, our inventory health is at risk, impacting cash flow and potentially leading to lost sales opportunities. We must swiftly address these data integrity and inventory management inefficiencies to ensure optimized business performance.

2. Key Strategic Insights

- ■■ **Data Integrity Crisis:** Widespread data anomalies (negative inventory days, sell-through > 100%) require *immediate* investigation and correction before any decisions can be made.
- ■ **Cardigan Opportunity:** "Cardigan" category is consistently a top seller; prioritize inventory, online promotion, and marketing investment here. This also applies to **"fashion flo" cardigan**.
- ■ **Low-Performing Inventory Drag:** Significant capital is tied up in low-performing items, particularly in "suit-falalan" and "shirt-full" categories, necessitating immediate clearance strategies. This excess should be addressed with fire sales/aggressive price strategies.
- ■ **Pareto Principle in Action:** A significant portion of revenue is driven by a small percentage of products; identify the top 20% for focused investment and optimization.

3. Performance Assessment

- **Overperforming:** "Cardigan" category shows strong sales; "skivi" has excessively high sell-through (278%), suggesting potential stock-outs and missed revenue.
- **Underperforming:** "Coat suit" and "shirt-half" display **0% sell-through**, highlighting significant overstocking or product-market mismatch.
- **Inventory Efficiency:** Inaccurate days of inventory for products are affecting efficiency metrics. Data validation has to be a priority.
- **Sales Velocity:** Wide variance across categories; optimize slow-moving stock through discounts and marketing; ensure sufficient inventory for high-velocity items.

4. Strategic Recommendations

- **(Data Driven) ■ Improve Data Accuracy:** Conduct a comprehensive audit of data collection and calculation methods to rectify anomalies. Expected Outcome: Reliable data for informed decision-making. Timeline: *Immediate*.
- **(Prioritize and promote) ■ Focus on High-Performing Items:** Invest in inventory and marketing for top-selling items and categories, leveraging online channels. Expected Outcome: Increased revenue and optimized inventory turnover. Timeline: *Within 1 month*.
- **(Address Inventory) ■ Reduce Low-Performing Inventory:** Implement aggressive clearance sales and adjust future purchase quantities for slow-moving items. Expected Outcome: Reduced holding costs and improved cash flow. Timeline: *Ongoing*.

• **(Analyze and Investigate) ■ Refine Inventory Planning:** Develop a data-driven approach to inventory planning, incorporating market trends and sell-through rates. Expected Outcome: Improved inventory efficiency and reduced overstocking. Timeline: *Within 3 months*.

5. Immediate Action Items (Next 7-14 Days)

• **■■ Initiate Data Accuracy Audit:** Assign the data engineering team to investigate and correct data errors in percent_sold and avg_days_in_inventory. Timeline: *Within 7 days*.

• **■ Cardigan Promotion:** Launch targeted online promotions for "Cardigan" and "fashion flo" (if it emerges as a top seller) to capitalize on existing demand. Assign this initiative to the Marketing Team. Timeline: *Within 14 days*.