

REPORT WITH BUSINESS INSIGHTS

1. Supply Chain Optimization for Seasonal Peaks:

June/December transaction spikes correlate with high demand for Electronics/Home Decor. Partner with suppliers to reduce lead times during these periods and avoid stockouts. Pre-stock inventory for mid-range (200–400) products, which dominate sales density, to meet volume-driven demand efficiently.

2. Volume Over Premium Pricing:

A strong correlation (0.72) between *Quantity* and *Total Value* confirms revenue is driven by bulk sales, not premium pricing. Introduce tiered discounts (e.g., 24+ units) to incentivize volume purchases.

3. Mid-Range Price Optimization:

Products priced at 200–200–400 (70% of density plots) dominates sales. Market these as “best value” to attract budget-conscious buyers while maintaining margins.

4. High-Value Customer Retention:

A small subset of customers contributes transactions above \$15,000. Implement loyalty programs or personalized offers to retain these high spenders.

5. Dynamic Pricing for Underperforming Products:

Products like P017/P037 (low sales volume) could benefit from AI-driven dynamic pricing. Test small price reductions or flash sales to gauge demand elasticity. Pair with high-performing products (e.g., bundle P017 with P045) to clear stagnant inventory while boosting cross-category visibility.

6. Upsell Low-Value Transactions:

Frequent sub-300 transactions suggest bundling opportunities (e.g., *pair* 100 Books with \$200 Clothing) to increase average order value.

7. Premium Product Validation:

Items priced above \$600 (low-density outliers) may represent pricing errors or niche luxury goods. Audit their demand and adjust strategies accordingly.

8. Customer Lifetime Value (CLV) Enhancement:

The 1–2 year gap between signups (2022–2023) and peak spending (2024) indicates a delayed conversion window. Implement onboarding campaigns (e.g., welcome discounts, personalized recommendations) to accelerate first purchases. Use predictive analytics to identify high-CLV customers early and nurture them with tailored engagement strategies.

9. Category-Specific Strategies:

Focus on Electronics/Home Decor (high price, high demand) for inventory priority, while keeping Books/Clothing prices competitive to avoid margin erosion.

10. Anomaly Management:

Monitor rare high-quantity purchases (>40 units) and high-value outliers (>\$20k) for fraud risks or untapped B2B opportunities.

11. Post-Purchase Behaviour & Retention:

Analyse return rates or repeat purchases linked to TransactionIDs. High returns for premium products (>\$600) may signal quality mismatches or buyer remorse. Introduce post-purchase surveys to refine product descriptions and reduce

returns. For loyal customers (frequent low-value buyers), offer subscription models for recurring revenue.

Conclusion:

The data underscores a **volume-driven revenue model** fuelled by seasonal demand (peaks in June/December) and mid-tier pricing (200–400). Prioritize bulk sales via tiered discounts, align inventory with high-margin categories (Electronics/Home Decor), and retain high-value customers through loyalty programs. Revitalize underperforming products (e.g., P017/P037) via bundling, validate premium-priced items (>\$600), and upsell low-value transactions. By focusing on volume incentives, seasonal inventory planning, and customer retention, the business can achieve predictable growth, operational efficiency, and margin stability in a competitive market.