Key Business Insights from Exploratory Data Analysis

Five Key Insights

1. **Category Performance:**
   Books emerges as the dominant category with approximately 190,000 units in sales, closely followed by Electronics at around 180,000 units. This distribution strongly indicates that the company's core competency lies in books and electronics merchandise. This insight should directly inform future inventory management strategies and guide targeted marketing initiatives.

2. **Regional Distribution:**
   North America demonstrates market leadership with sales exceeding 200,000 units, substantially outperforming other regions including Europe, Africa, and Asia. This regional disparity highlights both our strong North American market presence and identifies significant growth opportunities in other regions, particularly in the Asian market which currently shows the lowest sales figures.

3. **Sales Seasonality:**
   The 2024 sales trend exhibits notable peaks in July and September (approximately 70,000 units) with significant troughs in November (around 40,000 units). This distinct cyclical pattern emphasizes the necessity for seasonal inventory planning and suggests the implementation of targeted marketing campaigns during identified peak periods.

4. **Customer Acquisition:**
   New customer signup patterns show increasing volatility throughout 2024, with monthly peaks reaching 10-11 new signups. The trend demonstrates greater irregularity compared to 2022-2023, indicating an urgent need to develop and implement strategies for stabilizing customer acquisition rates.

5. **Product Concentration:**
   The leading product ('watch') accounts for nearly 40,000 sales units, representing almost double the volume of the second-highest selling product. While this indicates a strong market position, it also presents a potential risk concentration. This suggests the need for product portfolio diversification strategies to mitigate potential demand fluctuations in the primary product.