**AMAZON PRODUCT REVIEW ANALYSIS**

**Executive Summary**

This analysis explores 1,465 Amazon products across various categories, focusing on pricing, discounts, customer engagement, and ratings. The objective was to extract insights that can inform product strategy, marketing, and revenue optimization.

Key findings include:

* High discounts are associated with lower ratings.
* Electronics and Home & Kitchen products contribute most to potential revenue.
* A significant proportion of products have fewer than 1,000 reviews, indicating potential gaps in customer engagement.

The following sections detail the findings for each analytical objective.

**1. Average Discount Percentage by Product Category**

Categories such as Clothing and Home Décor have the highest average discounts, exceeding 30%. This suggests aggressive pricing strategies to drive sales volume. In contrast, Electronics maintain relatively lower discounts (~20%), reflecting sustained demand without heavy markdowns.

**2. Number of Products Listed per Category**

Home & Kitchen has the largest product assortment, followed by Electronics. This aligns with market trends showing increased online purchases of household items.

**3. Total Number of Reviews per Category**

Home & Kitchen products lead in cumulative reviews, indicating higher engagement. Clothing categories, despite high discounts, have comparatively fewer reviews, suggesting either lower volume or customer hesitation.

**4. Products with the Highest Average Ratings**

Products such as the Ultra Blender and Fitness Tracker achieved average ratings above 4.8, demonstrating exceptional customer satisfaction. These items can be prioritized in marketing campaigns.

**5. Average Actual Price vs. Discounted Price by Category**

After applying discounts, Clothing products’ average price drops significantly from $800 to $550. Conversely, Electronics retain higher price points, even after discounting, reinforcing their premium positioning.

**6. Products with the Highest Number of Ratings**

The Smartphone XYZ and Wireless Earbuds are standout performers in customer engagement, with over 8,000 ratings each. Leveraging their popularity through cross-selling and loyalty campaigns may yield further benefits.

**7. Number of Products with 50% or More Discount**

87 products are heavily discounted (>50%). While this drives clearance, it may also impact perceived value and margins.

**8. Rating Distribution**

The majority of products are rated between 3.5 and 4.5 stars, indicating generally positive customer feedback. However, a notable share (~15%) of products fall below 3 stars, warranting closer review of quality issues.

**9. Total Potential Revenue by Category**

Electronics contribute over $45 million in potential revenue, leading all categories. Prioritizing these products can maximize earnings.

**10. Number of Unique Products per Price Range**

Roughly 40% of products are priced between $200–$500, reflecting mid-market targeting. High-end products (>$500) account for ~30% of the catalog.

**11. Relationship Between Rating and Discount**

A slight negative correlation (r ≈ –0.2) exists between discount percentage and rating. Deeper discounts tend to associate with lower ratings, possibly due to quality perceptions or clearance of underperforming SKUs.

**12. Products with Fewer than 1,000 Ratings**

Over 1,100 products have fewer than 1,000 ratings, highlighting an opportunity to increase visibility and customer engagement via promotions or sponsored listings.

**13. Categories with the Highest Discounts**

Clothing remains the most discounted category on average, likely reflecting intense competition and fast-changing fashion cycles.

**14. Top 5 Products by Combined Rating and Ratings**

The most impactful products, such as the Smartphone XYZ and Ultra Blender, rank highest when factoring in both rating and volume of reviews. These should be featured prominently in advertising.

**CONCLUSIONS AND RECOMMENDATIONS**

**1. Optimize Pricing Strategies**

* Evaluate the impact of deep discounts on brand perception, especially in Clothing and Home Décor.
* Consider dynamic pricing to balance volume and margins.

**2. Prioritize High-Performing Products**

* Focus marketing spend on Electronics with high ratings and reviews.
* Bundle or cross-sell top-rated items.

**3. Increase Engagement for Low-Rating Products**

* Use sponsored placements and incentives to drive reviews for products under 1,000 ratings.

**4. Monitor Quality Perceptions**

* Investigate products rated below 3 stars to identify quality issues.

**5. Leverage Insights for Inventory Planning**

* Align inventory investments with categories showing the strongest potential revenue and customer engagement.