

AMAZON DATA

Background:

Amazon is one of the largest e-commerce platforms, offering a wide range of products with frequent discounts and promotions. However, despite providing significant discounts across various categories, data suggests that higher discounts do not always result in better customer satisfaction. Some products with bigger discounts still receive lower ratings, which raises important questions about customer perception, product quality, and purchasing behavior.

Additionally, Amazon wants to optimize its discount strategies for high-ticket items (expensive products) and ensure that customers are satisfied with their purchases. They also need insights into which product categories benefit the most from discounts and how customer feedback can help improve overall sales and shopping experiences.

Project Objectives:

Analyze Discount Distribution Across Categories

- Examine how discounts are distributed across different product categories and their impact on sales.

Understand the Relationship Between Ratings and Discounts

- Investigate why bigger discounts don't always lead to better ratings and explore other influencing factors.

Evaluate Discounts in Different Categories

- Identify which product categories gain the most value from discounts and how they influence customer behaviour.

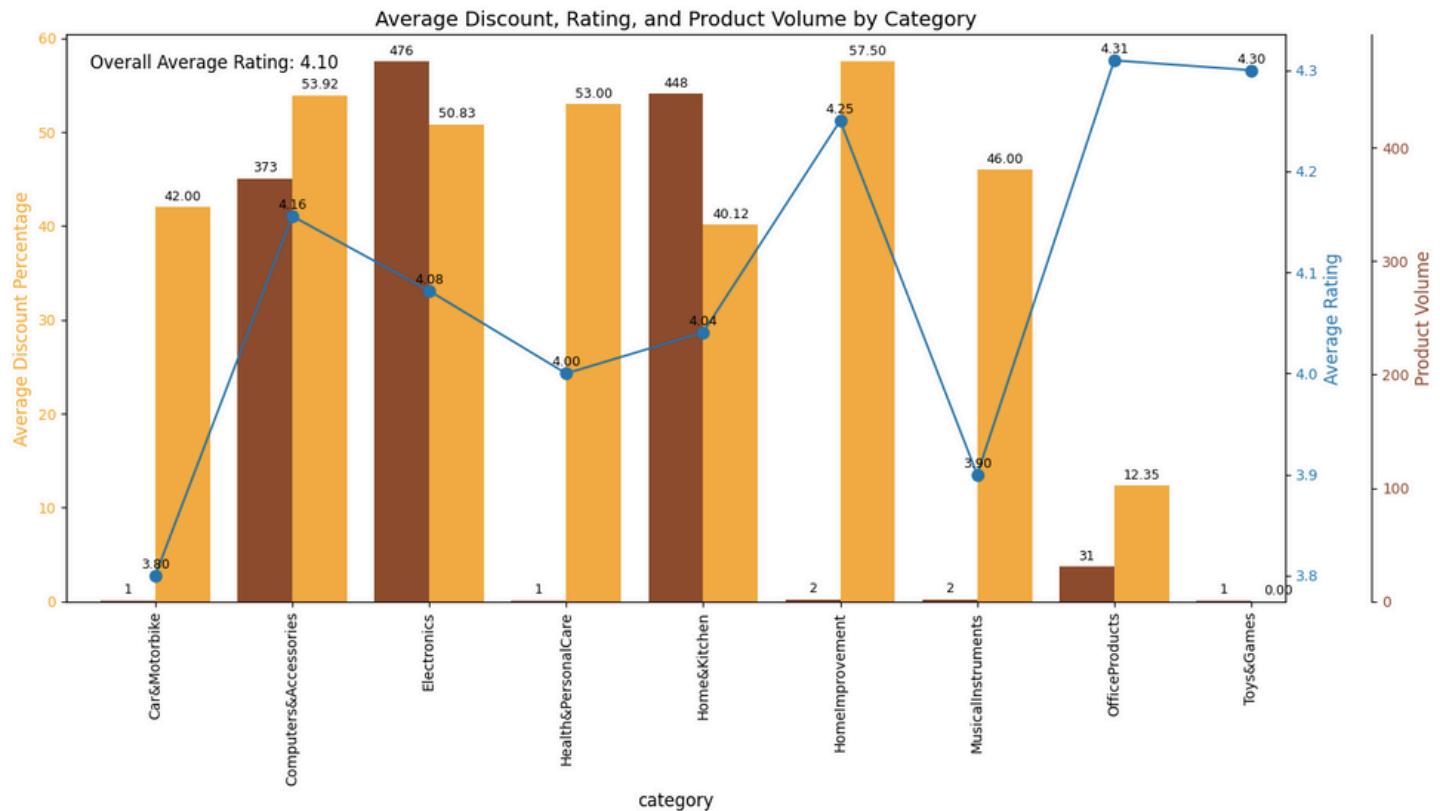
Strategize Marketing for High-Ticket Items

- Develop insights and strategies to effectively market expensive products with large discounts.

Address Customer Feedback for Improvement

- Analyze customer reviews and identify recurring complaints in low-rated products to recommend solutions.

1. Categories-Specific Insights



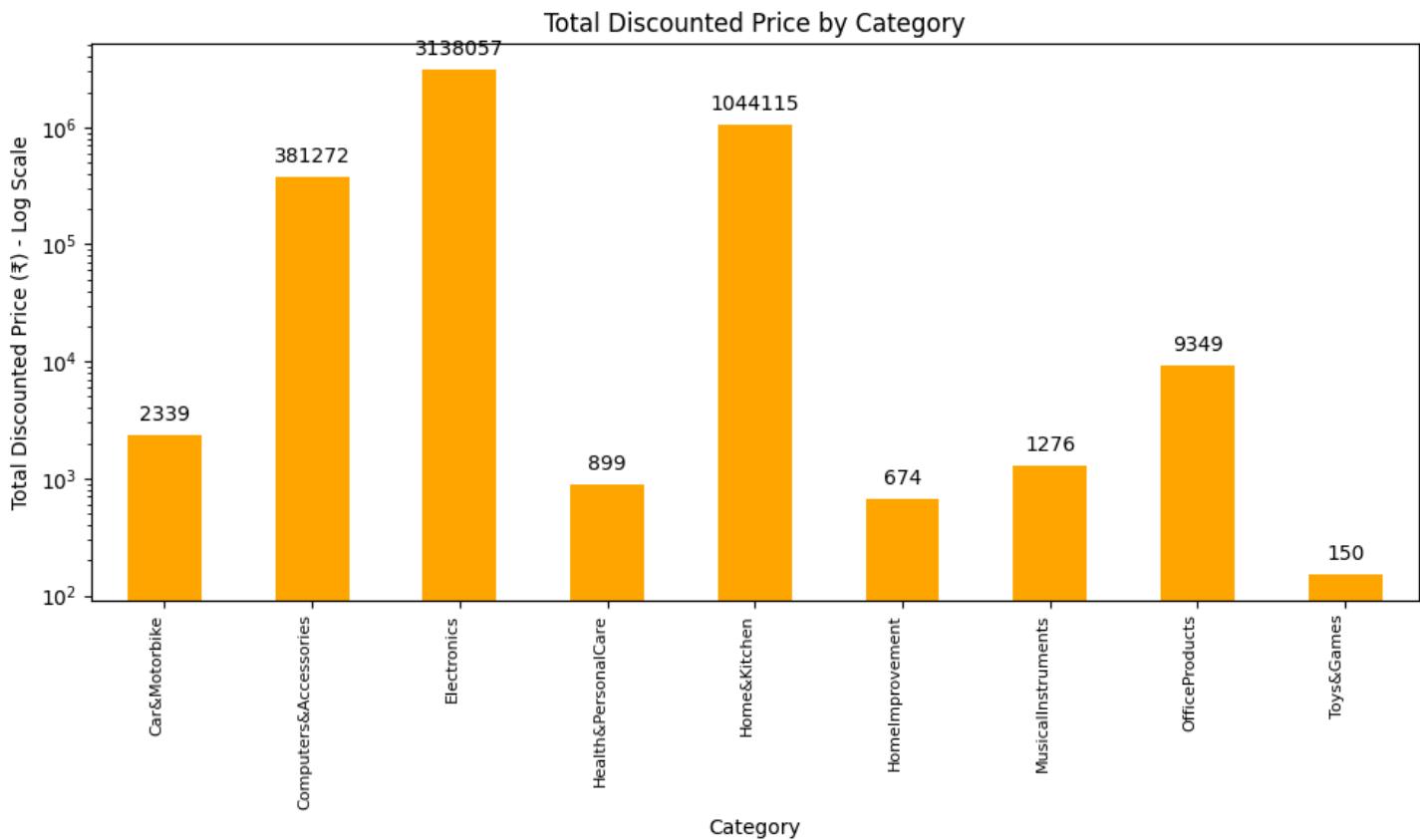
A. Correlation Between Discounts & Sales Volume

- **Computers & Accessories** (53.92%), **Electronics** (50.83%), **Home & Kitchen** (53.00%) → **High** discounts → **high** product volume (373-476 products).
- **Toys & Games:** **no** discount → **Very few** products (only 1).
- Home Improvement, Car & Motorbike, Health & Personal Care: **High** Discounts → **Low** product volume (only 1-2)
- **Office Products:** **Lower** discount → **Medium** product volume

B. Correlation Between Discounts & Customer Ratings

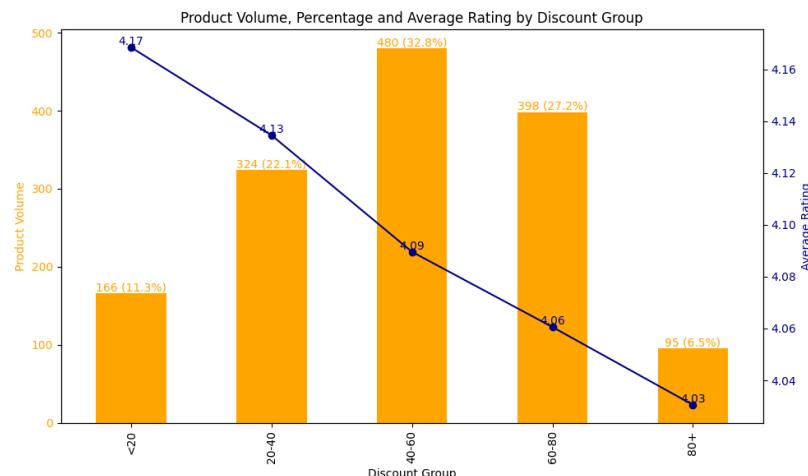
- **Weak/Negative Correlation:**
 - **Musical Instruments** (57.50% discount) has a poor rating (3.90), **Car & Motorbike** (42.00% discount) has the lowest rating (3.80), **Toys & Games** (0% discount) has one of the highest ratings (4.30).
- **High Ratings Without High Discounts:**
 - **Office Products** (12.35% discount) maintains the highest rating (4.31), **Toys & Games** (0% discount) has a very high rating (4.30).
- **Conclusion:**
 - Discounts do not directly improve customer satisfaction.
 - Low-rated categories may have quality or service issues despite discounts.

2. Profit of Categories



- Total discounted price across all categories: **4578132.43**
- **Electronics** Dominate Discounts (₹3,138,057), Electronics receive the highest overall price reductions. This suggests strong demand, high product value, and frequent discount strategies.
- **Home & Kitchen** (₹1,044,115) and **Computers & Accessories** (₹381,272) are among the top discounted categories, likely due to competitive pricing and seasonal sales.
- Lower Discounts in **Health & Personal Care, Musical Instruments** (₹899), **and Toys & Games** (₹150) – have the lowest total discounts, indicating fewer promotional activities or lower-priced products.

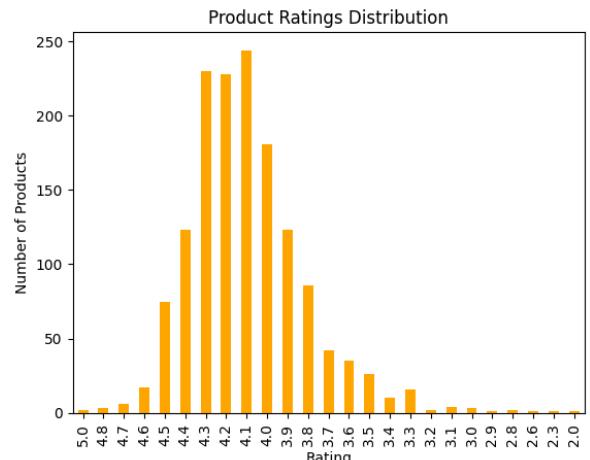
3. Discount group



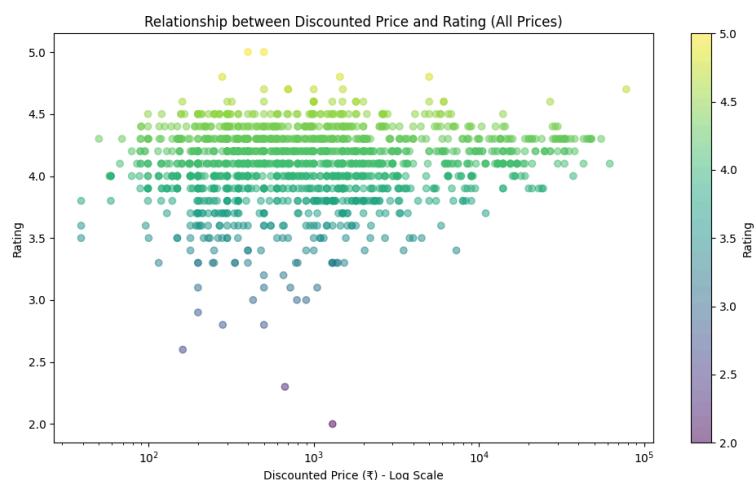
- **Lower Discounts (<20%) = Higher Ratings**
(4.17 avg) → It is possible that these products have higher quality.
- **40-60% Discount is the Sweet Spot** → This range has the highest product volume and maintains decent ratings.
- **Extreme Discounts (>60%) May Hurt Perception** → Products with bigger discounts tend to have lower customer ratings, possibly due to quality.

4. Ratings

- Most products have ratings between **3.8 and 4.3**, with the **highest** concentration around **4.1-4.3**.
- Very **few** products have **extreme ratings** (2.0 or 5.0) → Suggests most items are perceived as average to good quality.
- **Slight left skew** → Some lower-rated products exist but aren't dominant between 3.8 and 4.3, with the highest concentration around 4.1-4.3.

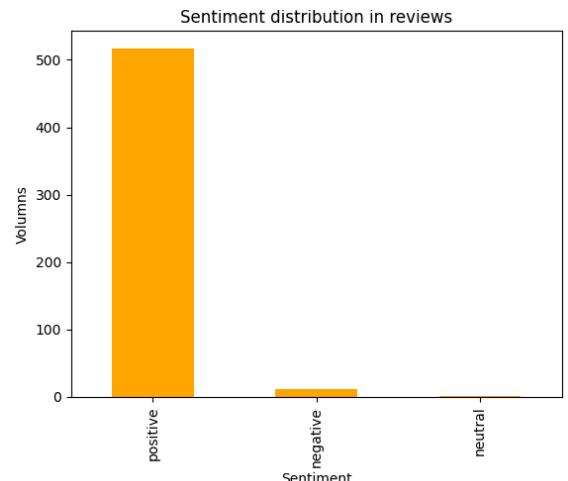


[?] Does Discounted Price Affect Rating



- **Ratings (3.5 - 4.5)** are consistent across all price ranges, meaning expensive products aren't always rated higher.
- **Premium items (>₹10,000)** get mixed reviews, proving price alone doesn't ensure satisfaction.
- **Budget products (<₹1,000)** vary, with some highly rated (4.5+) and others poorly received (~2.5).
- **Most products (₹100 - ₹5,000)** range, where ratings also fluctuate.

5.Customer Sentiment/ Feedbacks



- The sentiment analysis reveals that the vast majority of reviews are **positive**, with very few **negative or neutral** opinions. This indicates high customer satisfaction and suggests that the product is well-received by most users.

KEY INSIGHTS & RECOMMENDATION

A. KEY INSIGHTS

1. Discounted Price Doesn't Strongly Influence Ratings
 2. Majority of Products Fall in ₹100 - ₹5,000 Range
 3. Quality & Customer Expectations Play a Bigger Role

B. RECOMMENDATION

Prioritize Quality Over Deep Discounts

- Focus on maintaining high-quality standards rather than just cutting prices.
 - Encourage sellers to highlight durability, reliability, and premium features.

Leverage Smart Pricing & Dynamic Discounts

- Use data-driven price optimization to adjust discounts based on demand, competition, and behavior.
 - Offer time-limited deals to create urgency while ensuring profitability.

Enhance Product Pages for High-Ticket Items

- Improve descriptions, images, and customer testimonials to justify the price.
 - Highlight unique selling points and warranty details to build trust.

Highlight Best-Value Budget Products

- Identify and promote low-cost, high-rated items to attract budget-conscious shoppers.
 - Use “Amazon’s Choice” or “Best Seller” labels for increased visibility

Personalized Discounts & Loyalty Programs

- Offer targeted discounts based on customer purchase history.
 - Introduce exclusive rewards for frequent buyers to boost retention.