



Amazon Product Analytics

Ratings, Discounts & Price Relationships



Our team:

Elena Moysidou

Antonis Karousis

Christos Karlaftis

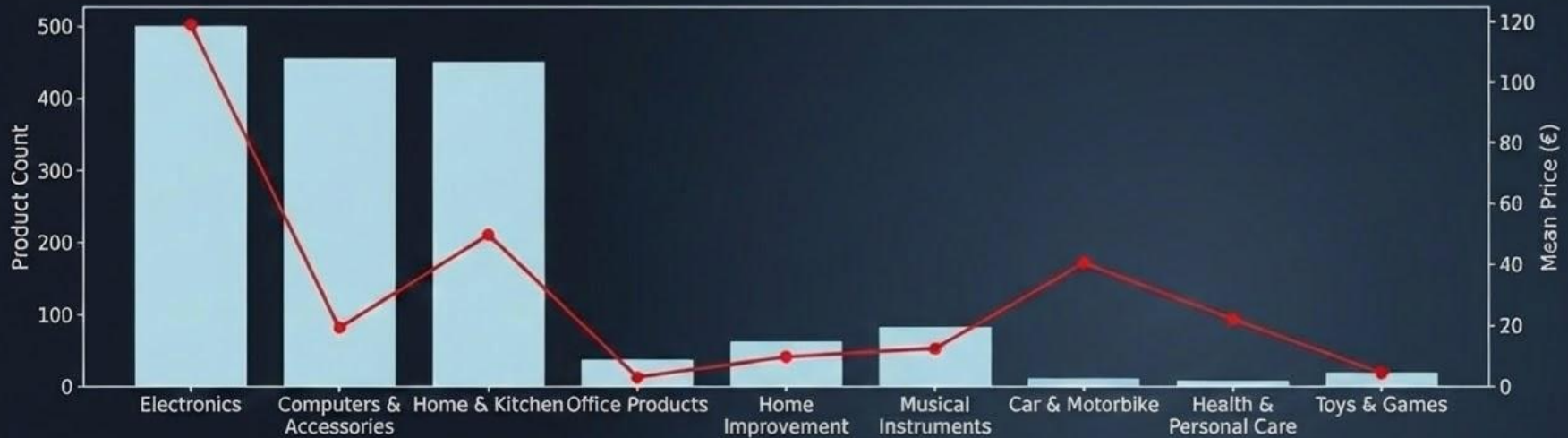


Project Overview & Key Insights

- Dataset from **2022**
- Ratings, Discounts & Price Relationships
- Our dataset contains **1,348** Amazon products across multiple categories.
- The largest categories are Electronics, Computers & Accessories, and Home & Kitchen.
- Most discounts fall between **35–60%**, showing Amazon uses moderate discounting overall.
- Ratings are generally high across all categories, with no clear link between price and customer satisfaction.

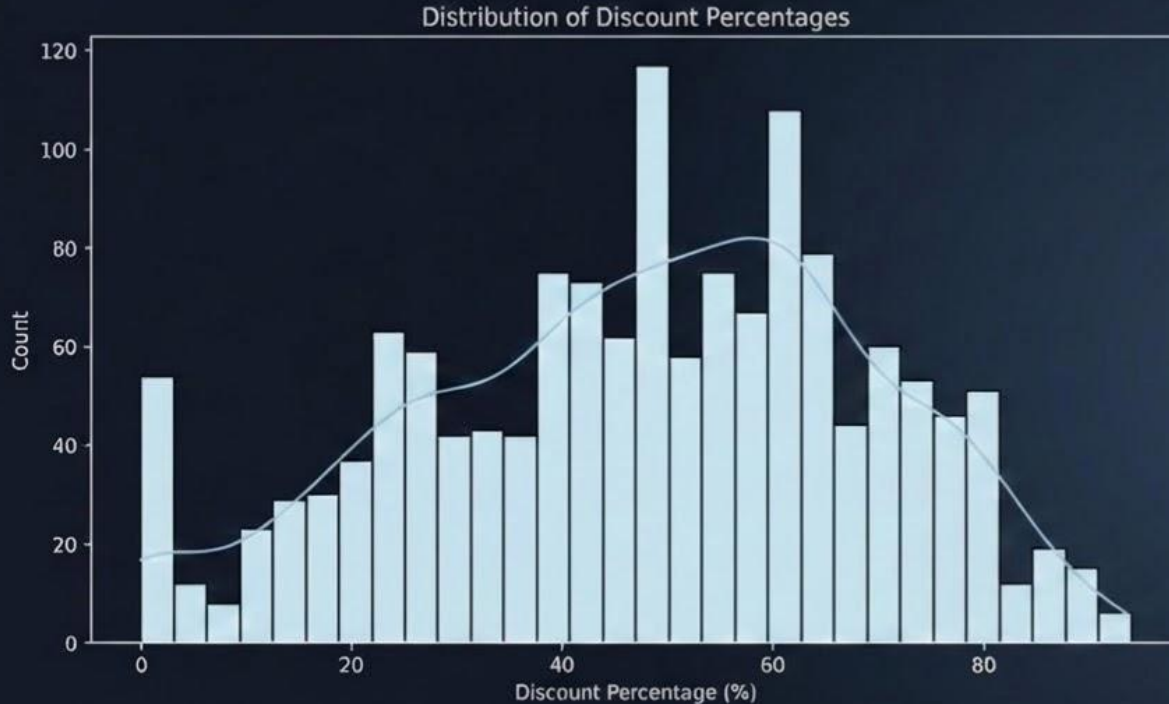


Product Count and Average Price per Category



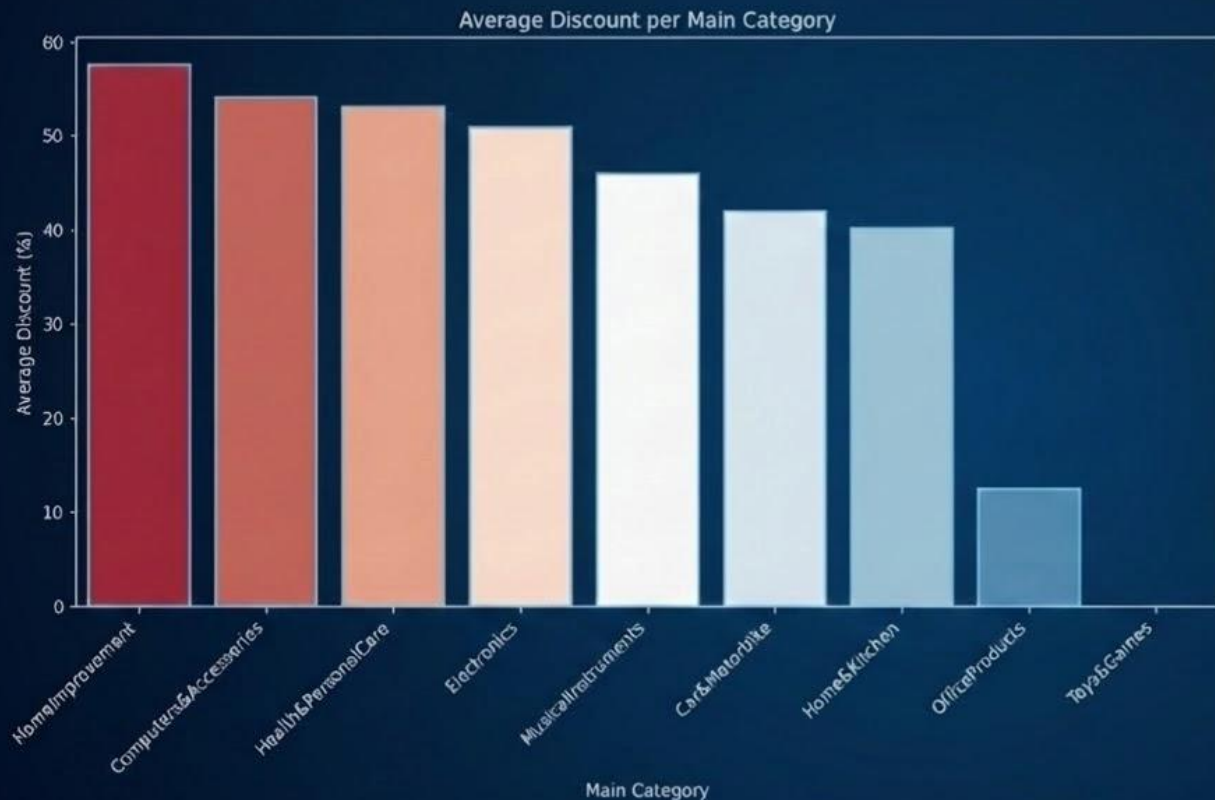
- 1,348 Amazon products across multiple categories.
- Main categories in terms of product count: Electronics, Computers & Accessories, Home & Kitchen
- Electronics dominate with 490 products and the highest average price.
- Computers & Accessories has fewer products but a lower average price.
- Categories like Toys & Games have very few products, indicating low variety.

Distribution of Discount Percentages



- Most products have discounts in the 35-60% range.
- Very few products have **extremely low** (<20%) or **unusually high** (>90%) discounts.
- Indicates that Amazon often applies **moderate discounts**, while very high discounts are rare and may be special promotions.

Average Discount per Product Category



- **Home Improvements** show the **highest discount percentage**, likely due to **strong competition**
- Smaller categories have **lower to no discount**, which is an interesting insight.
- Shows which product categories are **prioritized for discounts**, reflecting marketing strategy.

Best vs. Worst

Quality (Subtitle: Analysis of products with >500 reviews)

- **The Winners (Top 5):**
 - They combine exceptional ratings (~4.6) with high sales volume.
 - Dominance of practical tech accessories (Cables, Adapters, etc.).
- **The "Worst" Paradox:**
 - Even the lowest-ranked popular products maintain a ~3.0 - 3.5 rating.
- **Key Insight: "Survival of the Fittest."**
Products with ratings below 3 stars rarely survive long enough to accumulate 500+ reviews.



The 4-Star Phenomenon

- The Dominance of “4”:
 - The vast majority of products fall into the **4-star** category.
 - The “Perfect 5” is a rarity in mass-market e-commerce.
- Customer Sentiment:
 - Shoppers are generally satisfied, but rarely “thrilled”.
 - Extreme dissatisfaction (1-2 stars) represents a **negligible fraction** of the total data.
- **Conclusion:** The market landscape is “Good, not Great.” Products fulfill their purpose without necessarily exceeding expectations.



PRICE VS RATING

Does the price affects the ratings or the other way around?



- Average product ratings remain consistently high across all price categories, showing that price does not negatively affect customer satisfaction.

PRICE VS RATING

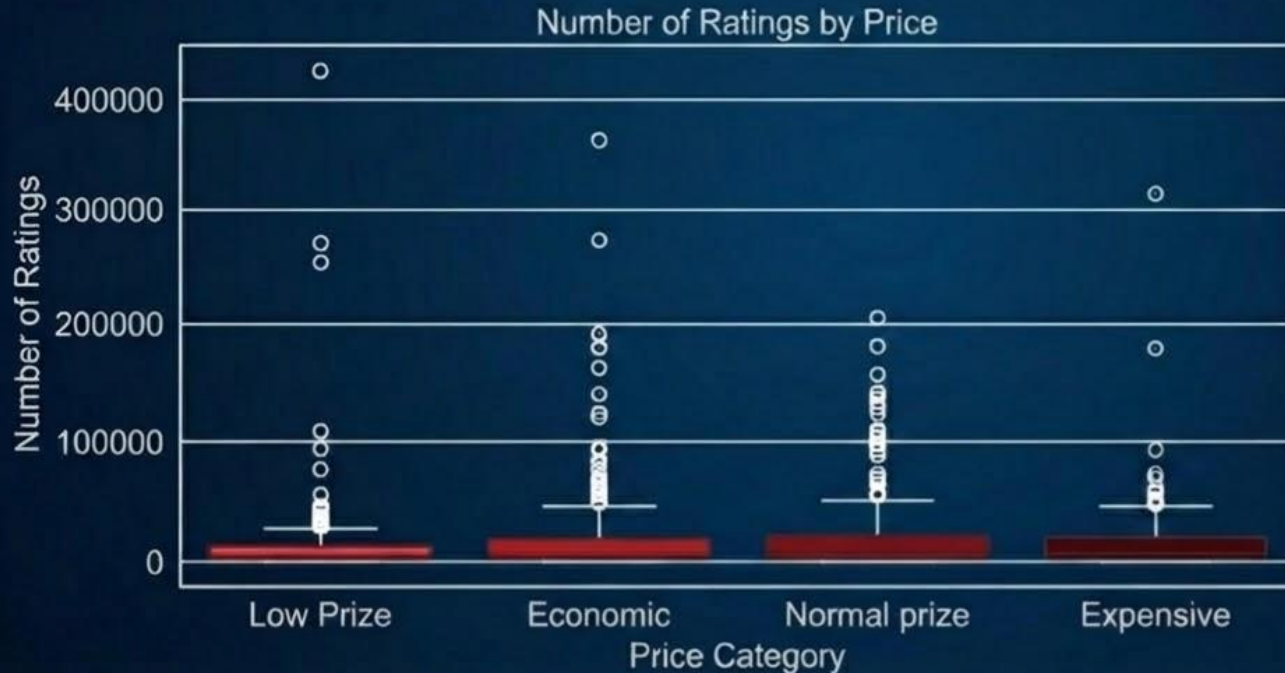
Does the price affects the ratings or the other way around?



In this box plot we can see the price category and the ratings.

PRICE VS RATING

Does the price affects the ratings or the other way around?



In this box plot we can see the price category and the number of ratings.

There is little to no correlation between prices and ratings





Thank You
Questions?