

## **RetailTech Insights Ecommerce Analysis**

1. What is the average discount percentage by product category?

The highest average discount percentage by product category is Home Improvement with 58%. Other products category average discount percentage include: Car & Motorbike 42%; Computers & Accessories 53%; Electronics 49%; Health & Personal Care 53%; Home & Kitchen Appliances 40%; Musical Instruments 46%; Office Products 12%; Toys & Games 0%

2. How many products are listed under each category?

The total count of products per category include:

- Car & Motorbike: 1
- Computers & Accessories: 375
- Electronics: 476
- Health & Personal Care: 1
- Home & Kitchen Appliances: 448
- Home Improvement: 2
- Musical Instruments: 2
- Office Products: 31
- Toys & Games: 1

3. What is the total number of reviews per category?

Sum of rating count per product category:

- Car & Motorbike: 1,118 reviews
- Computers & Accessories: 6,335,177 reviews
- Electronics: 13,938,131 reviews
- Health & Personal Care: 3,663 reviews
- Home & Kitchen Appliances: 2,991,069 reviews
- Home Improvement: 8,566 reviews
- Musical Instruments: 88,882 reviews
- Office Products: 149,675 reviews
- Toys & Games: 15,867 reviews

4. Which products have the highest average ratings?

The products with the highest average rating (all achieving 5 stars) are:

- Amazon Basics Wireless Mouse | 2.4 GHz Connection, 1600 DPI | Type C Adapter | Up to 12 Months of Battery Life | Ambidextrous Design | Suitable for PC/Mac/Laptop
- REDTECH USBC to Lightning Cable 3.3FT, [Apple MFi Certified] Lightning to Type C Fast Charging Cord Compatible with iPhone 14/13/13 pro/Max/12/11/X/XS/XR/8, Supports Power Delivery White
- Syncwire LTG to USB Cable for Fast Charging Compatible with Phone 5/ 5C/ 5S/ 6/ 6S/ 7/8/ X/XR/XS Max/ 11/12/ 13 Series and Pad Air/Mini, Pod & Other Devices (1.1 Meter, White)

5. What is the average actual price vs. the discounted price by category?

The average actual and discounted prices per category are:

- Car & Motorbike: Actual Price: \$4,000.00, Discounted Price: \$2,339.00
- Computers & Accessories: Actual Price: \$1,857.75, Discounted Price: \$947.49
- Electronics: Actual Price: \$10,275.16, Discounted Price: \$6,247.48
- Health & Personal Care: Actual Price: \$1,900.00, Discounted Price: \$899.00
- Home & Kitchen Appliances: Actual Price: \$4,162.07, Discounted Price: \$2,330.62
- Home Improvement: Actual Price: \$799.00, Discounted Price: \$337.00
- Musical Instruments: Actual Price: \$1,347.00, Discounted Price: \$638.00
- Office Products: Actual Price: \$397.19, Discounted Price: \$301.58
- Toys & Games: Actual Price: \$150.00, Discounted Price: \$150.00

6. Which products have the highest number of reviews?

The products with the highest number of reviews are:

- Amazon Basics High Speed HDMI Cable, 6 Feet (2Pack), Black with a total number of 426,973
- Amazon Basics High Speed HDMI Cable, 6 Feet Supports Ethernet, 3D, 4K video, Black with a total number of 426,973

- Amazon Basics Flexible Premium HDMI Cable (Black, 4K@60Hz, 18Gbps), 3Foot with a total of 426,973

7. How many products have a discount of 50% or more?

A total number of 653 products had a discount of 50% and more. One product had a discount of 94%, and 91%, 89% respectively. 53 products were rated 50%; 7 products with a discount of 90%; 14 products with a discount of 51%, 13 products with a discount of 52%; 23 products with a discount of 53%; 22 products with a discount of 54%

8. What is the distribution of product ratings (e.g., how many products are rated 3.0, 4.0, etc.)?

The distribution of product ratings is as follows:

2.0 Stars: 1 product  
2.3 Stars: 1 product  
2.6 Stars: 1 product  
2.8 Stars: 2 products  
2.9 Stars: 1 product  
3.0 Stars: 4 products  
3.1 Stars: 4 products  
3.2 Stars: 2 products  
3.3 Stars: 14 products  
3.4 Stars: 10 products  
3.5 Stars: 26 products  
3.6 Stars: 34 products  
3.7 Stars: 41 products  
3.8 Stars: 84 products  
3.9 Stars: 114 products  
4.0 Stars: 159 products  
4.1 Stars: 221 products  
4.2 Stars: 201 products  
4.3 Stars: 206 products  
4.4 Stars: 114 products

- 4.5 Stars: 68 products
- 4.6 Stars: 16 products
- 4.7 Stars: 6 products
- 4.8 Stars: 3 products
- 5.0 Stars: 3 products

9. What is the total potential revenue ( $\text{actual\_price} \times \text{rating\_count}$ ) by category?

Car & Motorbike with a total revenue of \$ 4,472,000.00  
 Computers & Accessories with a total revenue of \$4,413,430,325,567.74  
 Electronics with a total revenue of \$68,171,050,267,725.00  
 Health & Personal Care with a total revenue of \$6,959,700.00  
 Home & Kitchen Appliances with a total revenue of \$5,577,174,177,021.00  
 Home Improvement with a total revenue of \$13,688,468.00  
 Musical Instruments with a total revenue of \$239,448,108.00  
 Office Products with a total revenue of \$1,842,948,275.00  
 Toys & Games with a total revenue of \$2,380,050.00

10. What is the number of unique products per price range bucket (e.g., <₹200, ₹200–₹500, >₹500)?

The number of unique products per price range bucket is as follows:

\$1,000–\$5,000: 581 products  
 \$10,001–\$20,000: 83 products  
 \$20,001–\$50,000: 73 products  
 \$5,001–\$10,000: 117 products  
 \$50,001–\$100,000: 19 products  
 < \$1,000: 463 products  
 > \$100,000: 1 product

11. How does the rating relate to the level of discount?

The average discount percentage for different rating levels is:

2.0 Stars: 48%  
2.3 Stars: 55%  
2.6 Stars: 46%  
2.8 Stars: 82%  
2.9 Stars: 72%  
3.0 Stars: 68%  
3.1 Stars: 62%  
3.2 Stars: 50%  
3.3 Stars: 61%  
3.4 Stars: 51%  
3.5 Stars: 56%  
3.6 Stars: 50%  
3.7 Stars: 56%  
3.8 Stars: 49%  
3.9 Stars: 50%  
4.0 Stars: 48%  
4.1 Stars: 45%  
4.2 Stars: 46%  
4.3 Stars: 44%  
4.4 Stars: 40%  
4.5 Stars: 39%  
4.6 Stars: 47%  
4.7 Stars: 57%  
4.8 Stars: 49%  
5.0 Stars: 68%

Generally, there isn't a simple linear relationship across all rating levels; some lower rated products (e.g., 2.8, 2.9, 3.0, 3.1 stars) show high average discounts, while some 5star products also have high average discounts (68%). Products with ratings between 4.1 and 4.5 seem to have slightly lower average discounts compared to the overall average.

12. How many products have fewer than 1,000 reviews?

307 products have fewer than 1,000 reviews

13. Which categories have products with the highest discounts?

The categories with products featuring the highest individual discounts (Maximum discount percentage within the category) are:

Computers & Accessories: 94%

Electronics: 91%

Home & Kitchen Appliances: 90%

Musical Instruments: 60%

Office Products: 75%

Grand Total (Highest single discount): 94%

14. Identify the top 5 products in terms of rating and number of reviews combined.

The top 5 products in terms of combined rating and number of reviews are:

- Amazon Basics High Speed HDMI Cable, 6 Feet Supports Ethernet, 3D, 4K video, Black
- Amazon Basics Flexible Premium HDMI Cable (Black, 4K@60Hz, 18Gbps), 3Foot
- Amazon Basics High Speed HDMI Cable, 6 Feet (2Pack), Black
- boAt Bassheads 100 in Ear Wired Earphones with Mic (Taffy Pink)
- boAt Bassheads 100 in Ear Wired Earphones with Mic (Furious Red)