



Analyzing Amazon sales and subscription KPI to improve Revenue & Retention

January 22, 2023 → May 1, 2024
(About **15 months** of sales + subscriptions)

Problem:

Amazon wants to boost revenue and reduce subscription cancellations.

Solution: Use sales and customer data to uncover key patterns and recommend actions

Analytical Goals:

Why?

To help Amazon grow revenue and keep more subscribers by understanding:

- What products make the most money
- Identify valuable customers
- Why customers stop their subscriptions
- How product ratings affect sales

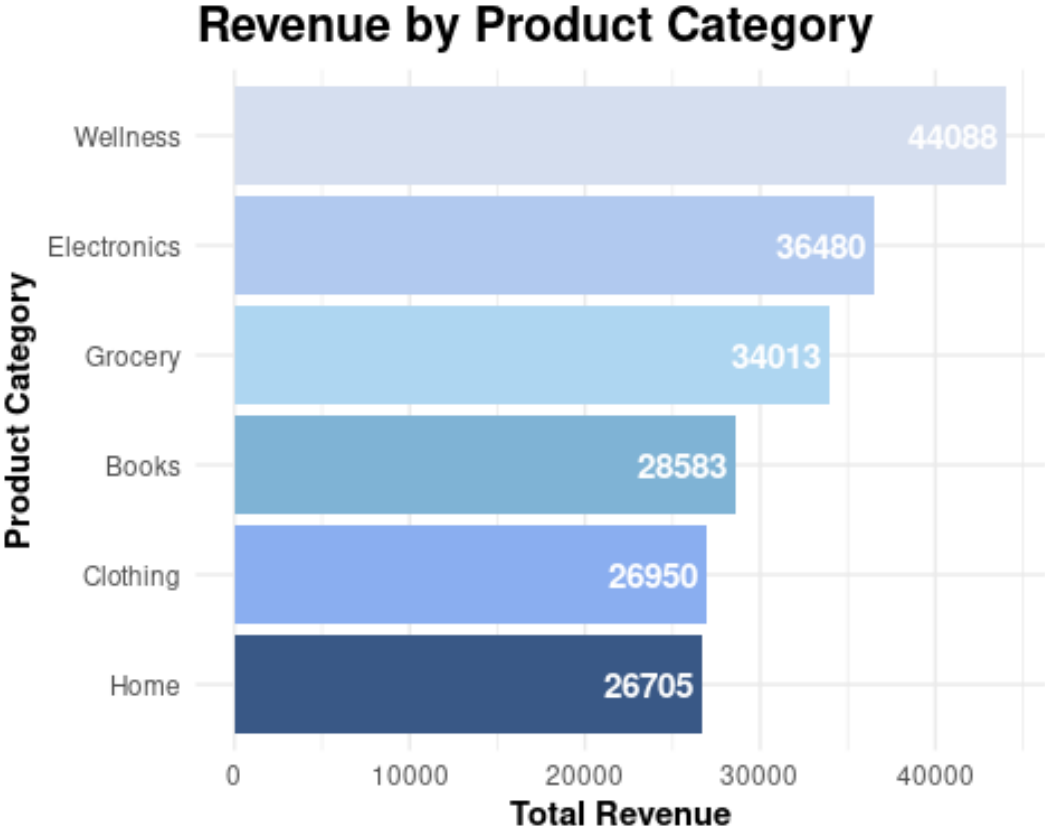
How?

We used customer and sales data to:

- Find top-selling product categories
- Identify valuable customers
- Spot trends in subscription cancellations
- Compare prices of high vs low-rated products

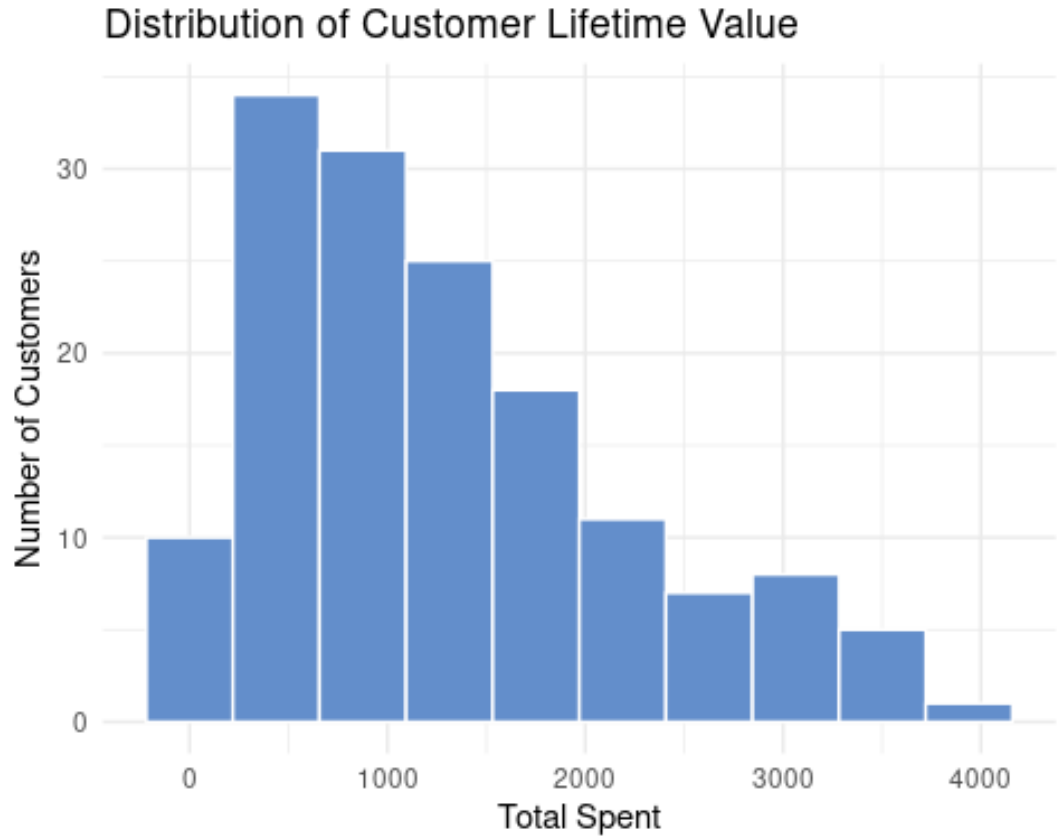
Wellness products generate the highest revenue among all categories (₹44,088)

We expected traditional categories like **Electronics** or **Clothing** to drive most revenue, but surprisingly, **Wellness** products led the charts. This could signal a **consumer shift toward self-care and lifestyle products**, reflecting changing priorities post-pandemic or during seasonal trends.



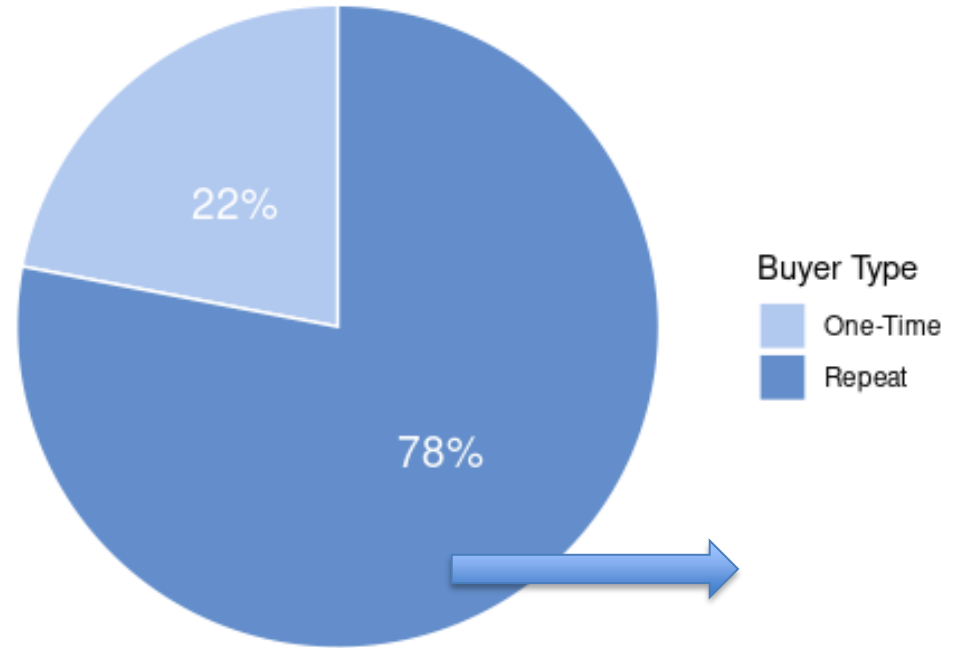
A large number of customers have low **total_spent** — under ₹1000, with only a small group crossing ₹3,000.

But that doesn't automatically mean they're all **one-time buyers**.



Customer Types: One-Time vs Repeat Buyers

78% of customers are repeat buyers, showing strong customer retention and satisfaction. However, the **22% one-time buyers** signal an opportunity to improve first-time user experience, they may require better onboarding, post-purchase nudges, or incentives to return.

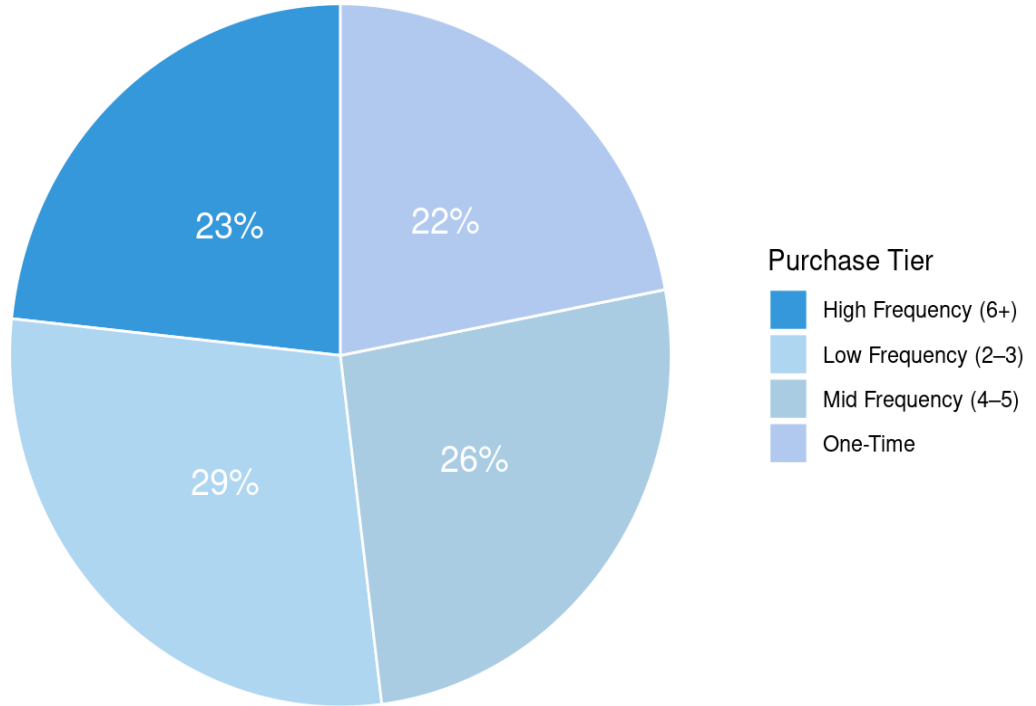


Among the **78% repeat customers**, how often did they actually shop?

Customer Purchase Frequency Segments

Among the **78%** repeat purchases, **23%** are highly engaged customers making **6+ purchases**, indicating a strong loyal base.

This suggests opportunities for **targeted loyalty programs or upselling** to mid-frequency shoppers (26%) to increase retention and revenue.

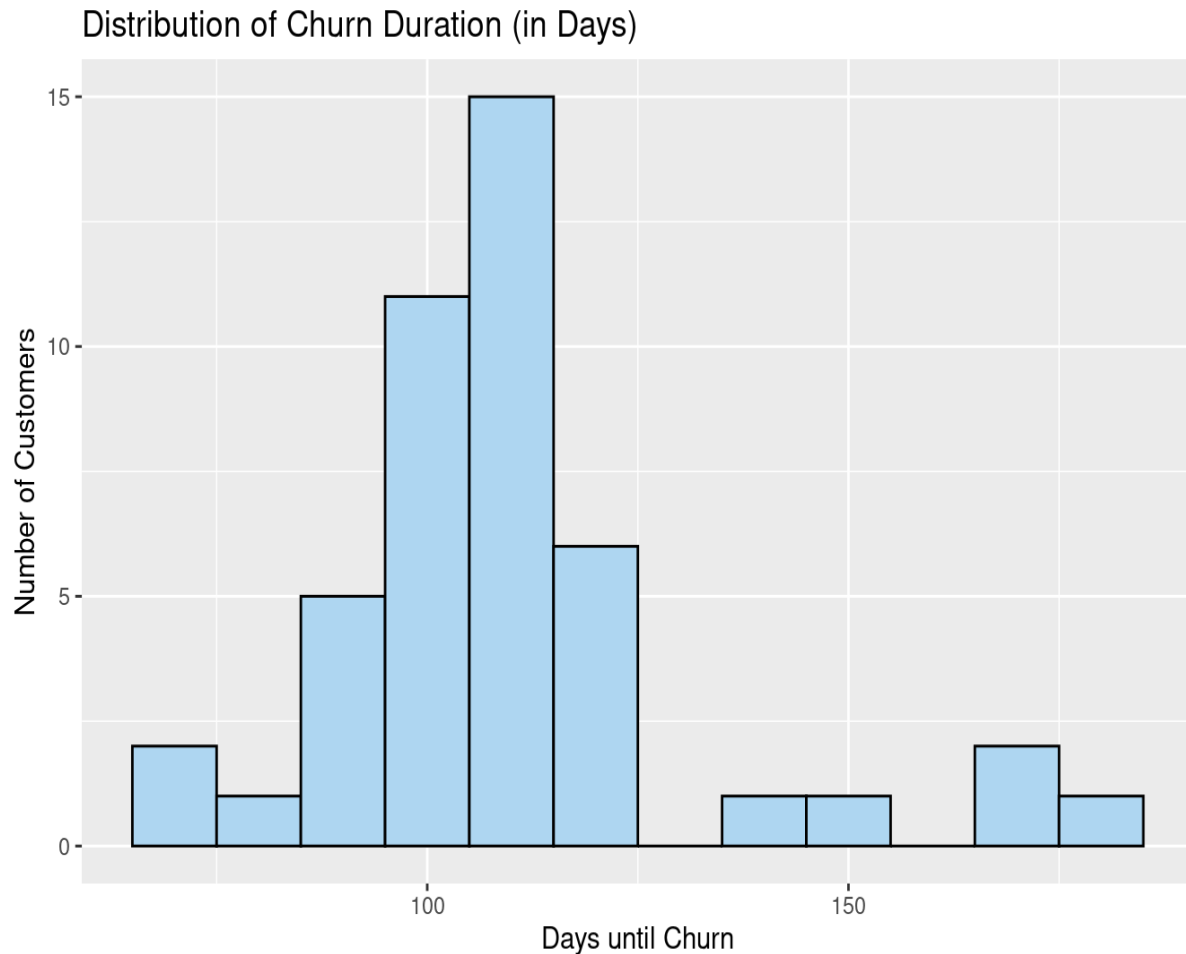


Most customers churn around 100–120 days.

There's a **peak** at ~110 days, meaning that's the most common point of churn.

Very few customers stay beyond **150+ days** or churn before 70 days.

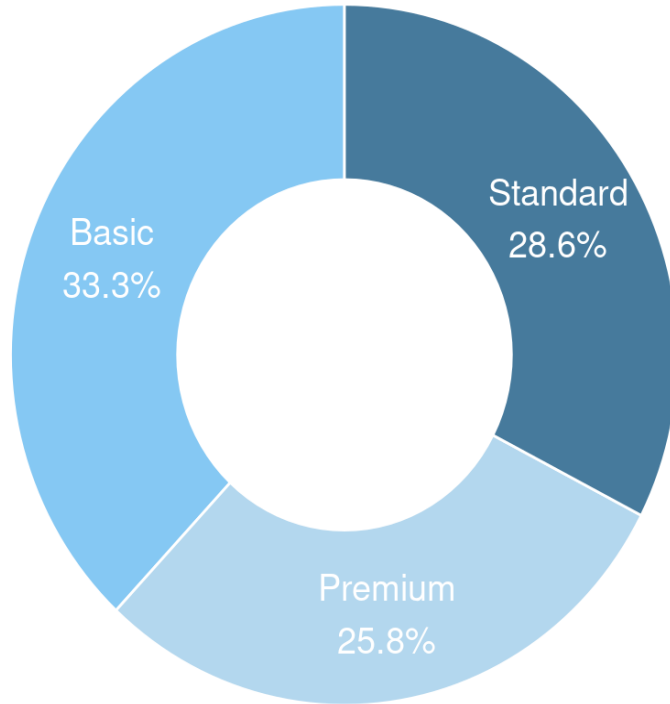
Note: This plot includes only customers who have churned, identified by non-missing values in the `subscription_end_date` field.



Churn Rate by Subscription Tier

Customers on the **Basic subscription** churn more frequently (33.3%) compared to **Standard (28.6%)** and **Premium (25.8%)** tiers.

This suggests that **higher-value tiers may foster stronger retention**, possibly due to better features or perceived value.

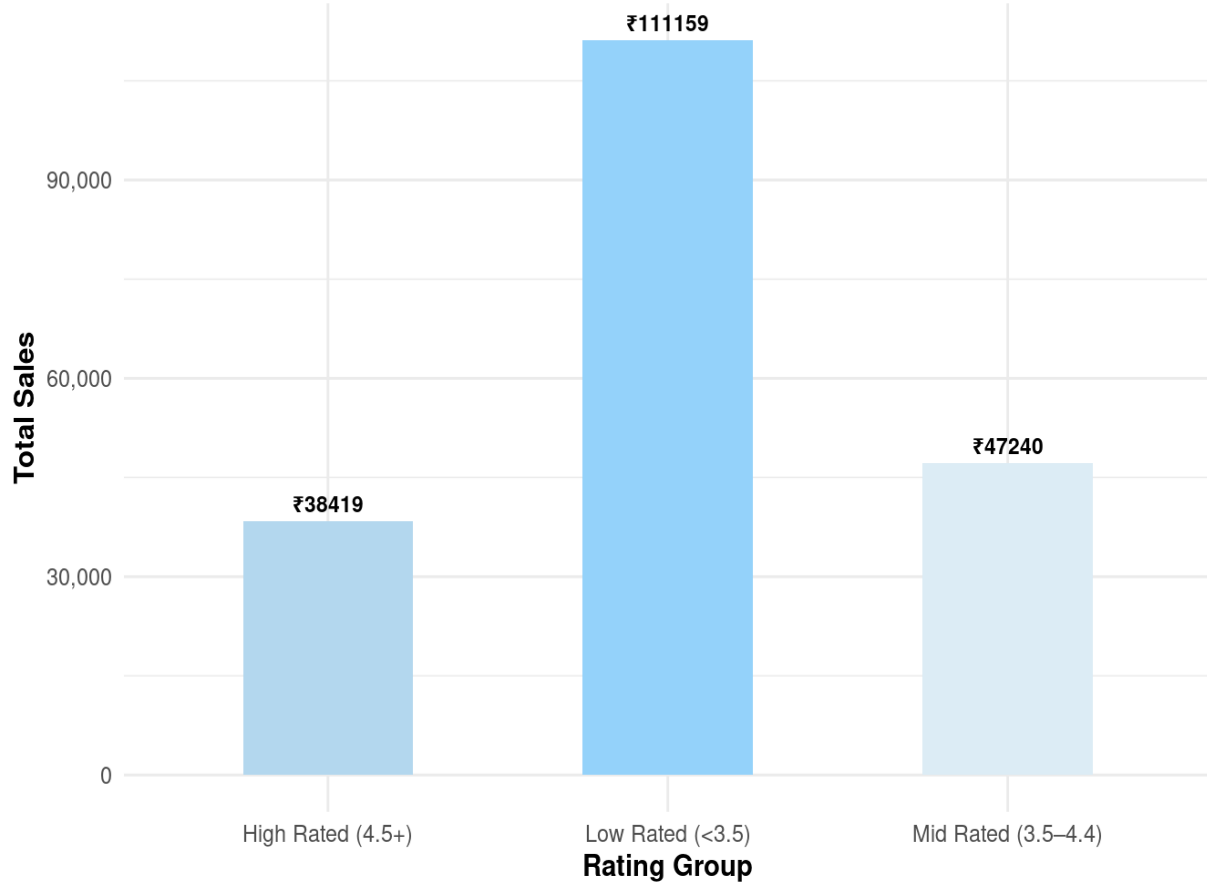


Impact of Product Reviews on Total Sales

Surprisingly, **Low Rated products (<3.5)** drove the **highest total sales**, contributing more than ₹1L in revenue.

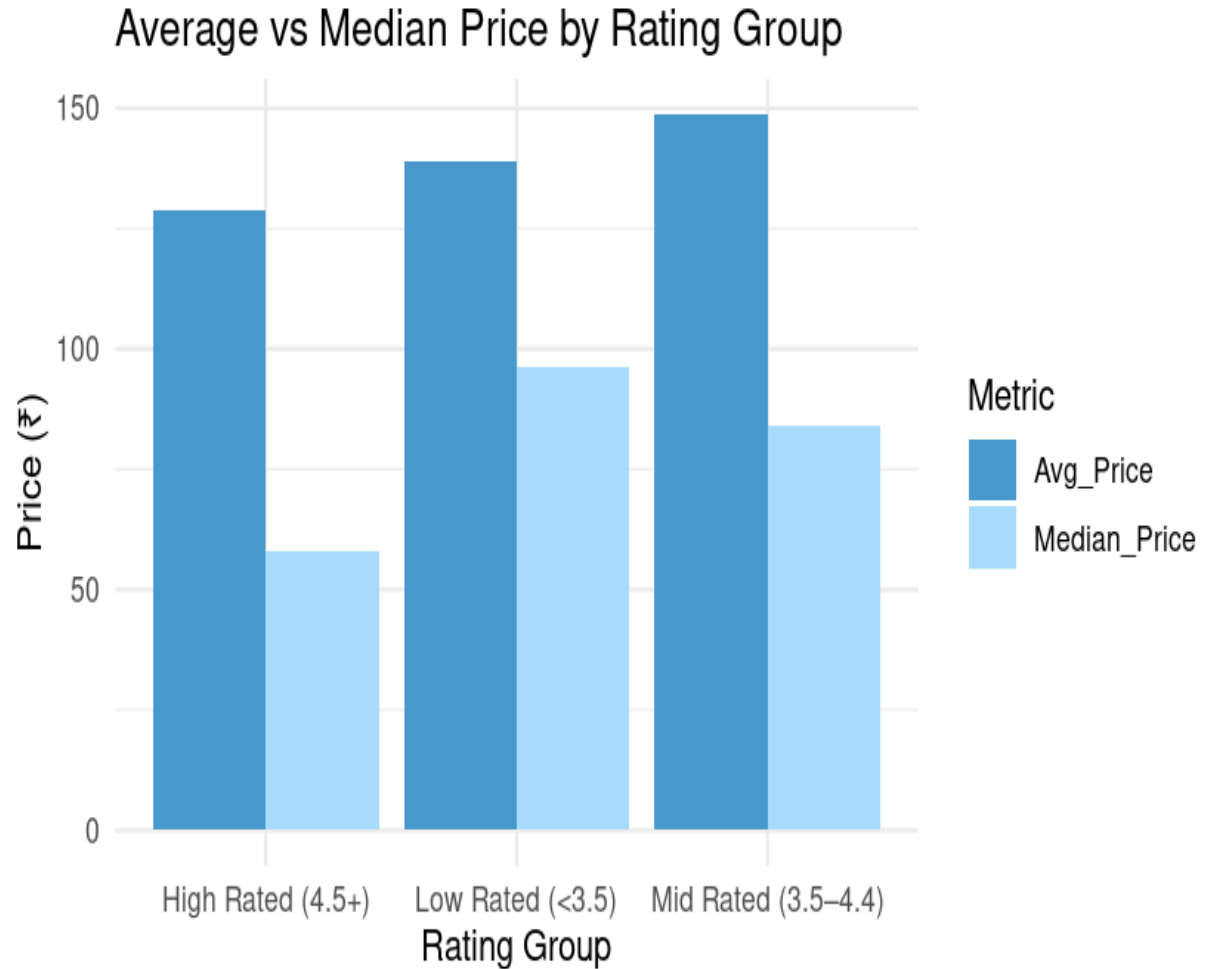
This suggests that **factors beyond review scores**—like price, demand, or product necessity—may be influencing purchase decisions more heavily than perceived quality.

While Low Rated products drive the most revenue, further analysis reveals they are also priced significantly lower and bought in bulk suggesting utilitarian purchases where reviews matter less.



Low-rated and mid-rated products have a **higher average and median price** to high-rated ones. compared

High-rated products tend to be lower priced, suggesting customers are more satisfied when the product meets or exceeds expectations for its price. In contrast, **low-rated products are priced higher**, indicating a possible mismatch between price and perceived value.



In Summary

- **Focus on High-Revenue Categories:**
Wellness & Electronics contribute the most to revenue — prioritize them in promotions.
- **Target Mid & High-Frequency Buyers:**
49% of repeat customers buy 4+ times — ideal for personalized offers or exclusive deals.
- **Improve Retention in Basic Tier:**
Highest churn rate observed — consider loyalty rewards or simplified upgrade options.
- **Encourage More Product Reviews:**
High-rated products generate less revenue; incentivize honest reviews to balance perceptions and drive conversions.
- **Monitor Low-Rated Price Ranges:**
Low-rated products are priced high (avg ₹139) — reassess pricing or quality to reduce customer dissatisfaction.

Thank You