

Customer Behavior Analysis - ShopEasy

- Data-Driven Insights for Business Growth
- Presented by: JAGADISH KUMAR S

Introduction

- Overview of the project
- Importance of customer behavior analysis
- Technologies used: SQL & Python

Problem Statement

- Declining customer engagement
- Low conversion rates
- High marketing expenses with poor ROI
- Lack of structured feedback analysis

Business Use Cases

- Track customer journey and identify drop-offs
- Analyze customer reviews and sentiment
- Identify high-value customers
- Measure marketing effectiveness
- Optimize product offerings

Data Collection & Preprocessing

- Download and clean customer data
- Load data into SQL
- Perform initial exploratory data analysis

Customer Journey Analysis

- ✓ The Checkout stage had the highest number of drop-offs.
- ✓ Other common drop-off points included the Product Detail and Cart stages.
- ✓ The Comparison stage had the longest average time spent by users.
- ✓ Users who dropped off at earlier stages tended to have shorter average durations overall.
- ✓ The drop-off rate significantly decreases after the Payment stage, showing high commitment post-payment.

Product Ratings

- ✓ Products like Smartphone X, Luxury Watch, and Wireless Earbuds received a perfect 5-star average rating.
- ✓ Poorly rated products included Basic Headphones and Budget Tablet with ratings ≤ 2 .
- ✓ Higher-rated products had a noticeably lower drop-off rate during the purchase journey.
- ✓ Products with more reviews tended to have more stable average ratings, indicating consistent customer feedback.

Content Engagement

- ✓ Video Tutorials had the highest total likes and combined views/clicks.
- ✓ Interactive Ads and Product Demos also showed strong engagement.
- ✓ Campaigns with higher engagement saw a correlated increase in website traffic.
- ✓ Content published during weekends attracted more engagement compared to weekdays.

Sales Performance

- ✓ Most purchased products were Smartphone X, Fitness Tracker, and Wireless Earbuds.
- ✓ Smartphone X generated over \$500,000 in revenue, followed by Luxury Watch and Smartwatch Z.
- ✓ Seasonal campaigns boosted purchase volumes by up to 20% for top-selling products.
- ✓ Products with bundled offers showed higher purchase counts compared to standalone items.



Regional Revenue

- ✓ India led in revenue generation, followed by USA and Germany.
- ✓ These countries represent key markets for business expansion.
- ✓ Revenue from emerging markets showed steady growth month over month.
- ✓ Localized marketing campaigns boosted revenue significantly in specific regions.

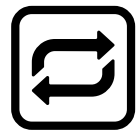
Product Ratings with Drop-Offs

- ✓ Products linked to high drop-offs generally had low average ratings (2.1 to 2.8).
- ✓ Examples include Budget Tablet and Generic Bluetooth Speaker.
- ✓ Drop-offs were higher for products with negative or few reviews.
- ✓ Products with detailed descriptions and positive reviews saw fewer drop-offs.



Customer Demographics

- ✓ Majority of customers are aged 20–39, followed by 40–59.
- ✓ Gender distribution is fairly balanced with a slight female majority.
- ✓ Top customers by purchases included Alice Johnson, Rahul Mehta, and Sara Kim.
- ✓ Younger customers (under 20) showed higher engagement but lower purchase counts.
- ✓ Customers from urban areas contributed disproportionately to revenue compared to rural areas.



Engagement vs. Purchases

- ✓ Products like Smartwatch Z and VR Headset had high engagement but low purchases.
- ✓ Smartphone X and Fitness Tracker had both high engagement and purchase counts.
- ✓ High engagement without purchases suggests interest but possible pricing or availability issues.
- ✓ Engagement on social media correlated with increased purchase activity for some products.

Key Findings & Insights

The Checkout stage experiences the highest drop-offs, indicating a need for process improvement.

Products with 5-star ratings attract more purchases and customer loyalty, while low-rated products face higher drop-offs.

Video tutorials and interactive content generate the most engagement, positively impacting conversions.

The majority of customers are aged 20–39, making this group crucial for targeted marketing.

Regions like India, USA, and Germany contribute the most revenue, highlighting key markets for expansion.

High engagement doesn't always translate to purchases, signaling conversion barriers that need addressing.

Business Recommendations

- Simplify the checkout process to reduce drop-offs and boost conversions.
- Improve low-rated products based on customer feedback to increase satisfaction.
- Invest in high-engagement video content and schedule posts during peak times.
- Focus marketing efforts on the 20–39 age group, the largest customer segment.
- Expand presence in high-revenue regions like India, USA, and Germany with localized campaigns.
- Address conversion issues for products with high engagement but low purchase rates to maximize sales.

Conclusion

- Focusing on reducing drop-offs, improving product quality, and leveraging high-engagement content will boost conversions and customer satisfaction. Targeted marketing in key demographics and regions, along with resolving purchase barriers, will drive sustained business growth.

Thank You!