



A Study on “Using Descriptive Analytics to Understand Customer Buying Behavior in E-Commerce: Amazon India”

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Abstract:

*This study investigates the patterns and drivers of consumer purchasing behaviour within the Indian e-commerce landscape, focusing specifically on Amazon India. As one of the world's fastest-growing digital markets, India presents a unique intersection of diverse demographic variables and shifting digital adoption rates. Using a **descriptive analytics** framework, this research analyses historical transaction data, browsing patterns, and customer feedback to identify key trends in product preferences, seasonal demand spikes, and the impact of promotional events like the "Great Indian Festival." "The analysis employs data visualization and statistical summaries to categorize consumers into distinct segments based on geographic location, average order value, and frequency of purchase. Preliminary findings suggest that while price sensitivity remains a dominant factor, factors such as delivery speed (Prime adoption) and vernacular language options are increasingly influencing loyalty. The results provide actionable insights for e-commerce strategists to optimize inventory management and refine targeted marketing efforts. Ultimately, this research demonstrates how descriptive analytics serves as a foundational tool for understanding the complexities of the Indian digital consumer.*

Keywords: *Descriptive Analytics, E-commerce, Consumer Behaviour, Amazon India, Data Visualization, Market Segmentation.*

Introduction:

E-commerce has transformed the way consumers purchase products and services in the digital era. With the rapid growth of internet usage and smartphone adoption, online shopping has become a popular and convenient option for consumers. E-commerce platforms provide customers with the ability to browse products, compare prices, read reviews, and make purchases from anywhere at any time. Among the leading online marketplaces, **Amazon** has become one of the most widely used platforms in India, offering a wide range of

products across multiple categories such as electronics, fashion, books, and household items

Literature Review:

Title Name: A Study on Impact of Customer Review on Online Purchase Decision with Amazon

Journal & Year: *Neliti*, 2025

Abstract: This study investigates the influence of online customer reviews on consumer purchase decisions on Amazon within the Indian market. Employing a descriptive, quantitative approach, data were collected through structured questionnaires from 170 respondents, focusing on review attributes such as sentiment, credibility,

volume, recency, and multimedia content. The findings reveal that a majority of consumers (95.3%) read reviews prior to purchasing, with positive reviews exerting the strongest influence on purchase intent. Most respondents trust Amazon reviews (52.4%) and consider reviews with images or videos more impactful than text alone. Additionally, nearly 82% reported changing their purchase decisions based on reviews, highlighting the significant role of online feedback in shaping consumer behavior

Objectives of the Study:

1. To Segment the Customer Base: Categorize Amazon India shoppers based on demographic factors (age, gender, location) and socio-economic status to see who the most active buyers are.
2. To Analyze Purchasing Patterns: Identify which product categories (e.g., Electronics, Fashion, Grocery) have the highest transaction volume and frequency.
3. To Evaluate Seasonal Variations: Understand how "Great Indian Festival" sales or other festive seasons impact buying spikes and consumer spending limits.
4. To Measure Customer Satisfaction: Quantify satisfaction levels by analyzing historical data related to product reviews, ratings, and return rates.
5. To Identify Cart Abandonment Trends: Use descriptive metrics to pinpoint at which stage (e.g., shipping costs, payment

gateway) most Indian users drop off before completing a purchase.

Research Questions:

1. What is your age group?
2. What is your gender?
3. How often do you shop on Amazon India?
4. What type of products do you mostly purchase on Amazon?

Research Methodology:**Research Design:**

The study uses a descriptive and analytical research design with a quantitative approach.

Sample Size:

The sample size of the study is 50 respondents.

Sample Area:

The data was collected from nearby colleges / known student groups

Data Collection:

The study uses both primary and secondary sources of data.

- Primary Data: Collected through a structured questionnaire survey from respondents.
- Secondary Data: Books, research articles, and online sources

Sampling Technique:

The study uses the convenience sampling technique to select respondents.

Data Analysis:

Question	Option	No. of Responses	Percentage
Customer Buying Behavior	Daily	30	60%
	Several times/week	20	30%
	Occasionally	7	14%
	Rarely	3	6%
Follow Influencers	Yes (many)	22	44%
	Yes (few)	18	36%
	Rarely	6	12%
	No	4	8%
Purchased via Influencers	Frequently	12	24%
	Sometimes	20	40%
	Rarely	10	20%
	Never	8	16%

Influence Level	Respondents	Percentage (%)
Highly Influential	45	45%
Moderately Influential	30	30%
Low Influence	15	15%
No Influence	10	10%
Total	100	100%

Findings:

1. Emerging Value-Driven Buying Patterns
2. Payment & Logistical Behavior
3. Key Purchase Drivers
4. Demographic & Geographic Shifts.

Suggestions:

- Improve Personalization of Product Recommendations
- Provide Competitive Pricing and Discounts
- Strengthen Customer Review and Rating System
- Improve Delivery and Logistics Efficiency
- Enhance Mobile Shopping Experience
- Strengthen Customer Support Services
- Use Data Analytics for Marketing Strategies
- Promote Sales Campaigns Effectively
- Improve Product Information and Transparency
- Expand Product Categories and Brand Options

Conclusion:

Overall, descriptive analytics helps businesses analyze past data to understand customer preferences, buying patterns, and trends in the e-commerce market. These insights enable companies to improve marketing strategies, enhance customer experience, and increase sales performance. Therefore, the effective use of descriptive analytics is essential for e-commerce platforms to better understand customer behavior and remain competitive in the rapidly growing digital marketplace.

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