

# Promotional Analytics: Enhancing Customer Acquisition and Retention Strategies in E-Commerce

**M. Akhila Reddy**

Assistant Professor, Department of MBA,  
CMR Institute of Technology, Hyderabad, Telangana, India.

Email: [akhilareddymuskulla4@cmritonline.ac.in](mailto:akhilareddymuskulla4@cmritonline.ac.in)

**Kaitha Vignesh**

Student of MBA, CMR Institute of Technology, Hyderabad, Telangana, India.

Email: [kaithavignesh@gmail.com](mailto:kaithavignesh@gmail.com)

## Abstract

Online retailers are scrambling harder than ever to win and keep the same pool of customers, which is what pushed this study to dig into discounts, cashback, coupons, referrals, and personalized offers — and how each one shapes buying behavior, repeat purchases, and longer-term customer value.

The researchers ran a descriptive study, pulling primary data from 121 respondents through a structured questionnaire and convenience sampling, then crunched the numbers with percentage analysis and chi-square tests. Discounts came out on top for hooking new customers, while regular and personalized promotions did more of the heavy lifting for retention and repeat business — though pricing, delivery, and brand trust still carried real weight in keeping people loyal. The chi-square test found no significant link between signing up for promotions and actual loyalty, so the null hypothesis held. In short: promotions are good at getting people through the door, but keeping them depends on service quality and the overall experience — something e-commerce firms should keep in mind when building promotional strategies meant to last.

**KEYWORDS:** *Promotional Strategies, Customer Acquisition, Customer Retention, E-Commerce, Customer Loyalty, Personalized Marketing.*

## 1.INTRODUCTION:

E-commerce has taken off thanks to wider internet access, smartphones in everyone's pocket, easier digital payments, and shifting buying habits — and retailers now lean heavily on promotions to pull in customers and stay ahead of each other. Discounts, cashback, coupons, referral perks, and personalized recommendations have turned into core marketing tools, shaping what people buy, getting them to try something new, and keeping them coming back. With competition only getting tighter, figuring out which promotions actually work matters more than ever — which is exactly what this study sets out to do: look at the role promotional strategies play in winning new customers and keeping the old ones.

### Statement of the Problem

E-commerce companies spend considerable amounts on promotional campaigns. However, the effectiveness of these promotional strategies in attracting and retaining customers remains uncertain. Therefore, it is necessary to examine how promotional activities influence customer behaviour.

### Significance of the Study

The study provides useful insights for e-commerce companies regarding customer preferences toward promotional activities. The findings may help organizations design more effective promotional strategies.

### Scope of the Study

The study focuses on online consumers using e-commerce platforms. The geographical scope is limited to respondents selected through convenience sampling. The study primarily investigates customer perceptions regarding promotional strategies.

## Limitations of the Study

- Sample size limited to 121 respondents.
- Convenience sampling method.
- Responses are based on personal opinions.
- The study focuses only on selected promotional tools.

## Research Objectives

1. To study how different promotional offers help in attracting new customers.
2. To understand how personalized promotions encourage repeat purchases.
3. To examine how promotional campaigns increase customer lifetime value and long-term profits.

## 2.LITERATURE REVIEW

Previous studies have examined various promotional strategies used in digital marketing.

Gomes and Meisen (2023) examined customer segmentation methods for personalized customer targeting in e-commerce applications. The study emphasized that customer segmentation and personalized recommendations significantly improve customer engagement and retention. The authors concluded that data-driven targeting strategies enable organizations to understand customer behavior more effectively and enhance marketing performance in e-commerce environments.

Gooljar et al. (2024) investigated sentiment-based predictive models in the context of Marketing 5.0. The study highlighted the importance of artificial intelligence, big data, and predictive analytics in improving customer experiences and online purchasing behavior. The findings indicated that personalized marketing strategies contribute to customer retention and profitability, while retaining existing customers is more beneficial than acquiring new customers.

Madanchian (2024) analyzed the impact of artificial intelligence marketing on e-commerce sales performance. The study found that AI-driven promotional strategies and personalized recommendations positively influence customer acquisition, customer engagement, and conversion rates. The research emphasized the importance of intelligent marketing systems in enhancing online shopping experiences.

Tuguinay et al. (2024) explored the transition from customer acquisition to customer retention in digital markets. The study revealed that relationship marketing, loyalty programs, and customer-centered promotional activities play an important role in maintaining long-term customer relationships and improving customer loyalty.

Rolando (2025) investigated the role of marketing automation in optimizing customer journeys and revenue generation in e-commerce. The findings indicated that data-driven promotional campaigns and personalized marketing strategies significantly improve customer retention, customer lifetime value, and overall organizational performance.

Mamun (2025) reviewed recent advancements in machine learning techniques for customer retention and churn prediction. The study demonstrated that predictive analytics and behavioral analysis enable organizations to identify customer preferences and develop effective retention strategies through personalized promotional activities.

Cai (2025) examined pricing strategies and consumer behavior in digital commerce environments. The research found that discounts, limited-time offers, and promotional pricing strategies positively influence customer acquisition and impulse buying behavior, particularly in online shopping environments.

Albert and Goldenberg (2021) studied personalized promotional strategies in e-commerce using uplift modeling techniques. The researchers concluded that targeted promotions and personalized discounts significantly improve promotional effectiveness, conversion rates, and customer purchase decisions while maintaining marketing efficiency.

## Research Gap

Most existing research splits the difference — looking at either customer acquisition or retention, rarely both. Gomes and Meisen (2023), Gooljar et al. (2024), and Madanchian (2024) lean into personalized marketing, AI, and predictive analytics as ways to boost engagement and online buying behavior, while Tuguinay et al. (2024) and Rolando (2025)

point to loyalty programs and marketing automation as drivers of retention and profitability. What's missing is work that looks at promotional strategies and their combined effect on acquisition and retention together, especially in the Indian e-commerce space — most of what's out there leans on advanced tech and international markets, leaving everyday tools like discounts, cashback, referrals, and personalized promotions underexplored from the customer's side. This study tries to fill that gap by looking at how well these promotional strategies actually work at pulling in new customers, getting them to buy again, and building customer lifetime value in Indian e-commerce.

### 3. RESEARCH METHODOLOGY

#### Research Design

This study went with a descriptive design to look at how promotional strategies affect customer acquisition and retention in e-commerce. That approach made sense here — it's well suited to capturing how customers actually perceive and respond to things like discounts, cashback, referral programs, and personalized promotions, without the study having to manipulate any variables. The goal was simply to describe and analyze the relationship between these promotional tactics and how customers respond to them.

#### Research Approach

The study used a quantitative approach — data came from a structured questionnaire, and the analysis leaned on statistical techniques. That let the researcher put numbers to things that are usually harder to pin down: customer opinions, purchasing behavior, and how well different promotions actually worked. Percentage analysis and chi-square testing did the heavy lifting, turning the responses into something useful for drawing conclusions about acquisition and retention.

#### Population and sample

The population for this study was online consumers — people who actually shop on e-commerce platforms regularly. Surveying all of them obviously wasn't feasible, so the study went with a sample of **121 respondents**, picked through convenience sampling. That group included students, employees, and other everyday online shoppers, all with some hands-on experience using these platforms. Even with the smaller sample, it gave a solid look into how customers actually perceive promotions and how that shapes what they buy.

#### Sampling Techniques

This study used convenience sampling to pick respondents — a non-probability method where you survey whoever's accessible and willing to take part. Here, that meant online consumers who regularly shop on e-commerce platforms. In total, 121 people responded to a structured questionnaire sent out through Google Forms. The choice came down to practicality: limited time, easier data collection, and a ready pool of people who already had online shopping experience.

#### Data collection methods

This study pulled from both primary and secondary sources. For primary data, a structured questionnaire went out via Google Forms to online consumers, covering 19 questions on promotional offers, customer acquisition, retention, personalized promotions, and purchasing behavior — 121 valid responses came back. Secondary data filled in the rest, drawn from books, research journals, published articles, websites, and earlier studies on e-commerce and promotional strategies. Pulling both together gave the study a fuller picture and made the findings more reliable.

#### 4.DATA ANALYSIS

Have you ever signed up on a new platform because of a promotional offer?

| Response     | Respondents | Percentage  |
|--------------|-------------|-------------|
| Yes          | 64          | 52.9%       |
| No           | 57          | 47.1%       |
| <b>Total</b> | <b>121</b>  | <b>100%</b> |



#### Interpretation:

As seen from the above table, 52.9% of people have enrolled on the new platform because of promotions, whereas 47.1% have not done so. Therefore, one can conclude that promotions do have some effect on acquiring customers, although it is quite small.

*Are you more likely to stay loyal to a platform that gives regular offers?*

| Response     | Respondents | Percentage  |
|--------------|-------------|-------------|
| Yes          | 109         | 90.1%       |
| No           | 12          | 9.9%        |
| <b>Total</b> | <b>121</b>  | <b>100%</b> |



### Interpretation:

But many people (90.1%) believe that promotions have a huge impact on their loyalty to platforms. That means that apart from being the tools of selling goods, promotions play a key role in customer retention as well. It is much easier to retain customers that feel appreciated.

### Chi-Square Goodness of fit Test

#### Step 1: Define Hypothesis

Null Hypothesis ( $H_0$ )

There is no significant relationship between promotional offers and customer loyalty in e-commerce platforms.

Alternative Hypothesis ( $H_1$ )

There is a significant relationship between promotional offers and customer loyalty in e-commerce platforms.

#### Step 2 : Observed and Expected Frequencies with Calculations

Total respondents =121

#### Observed Frequency Table

| Q8: Signed Up Due to Promotional Offer | Q17: Yes | Q17: No | Row Total |
|----------------------------------------|----------|---------|-----------|
| Yes                                    | 58       | 6       | 64        |
| No                                     | 51       | 6       | 57        |
| Column Total                           | 109      | 12      | 121       |

#### Expected Frequency Table

Expected frequency:

$$E = \frac{(\text{Row Total} \times \text{Column Total})}{\text{Grand Total}}$$

| Cell      | Expected Frequency |
|-----------|--------------------|
| Yes – Yes | 57.65              |
| Yes – No  | 6.35               |
| No – Yes  | 51.35              |
| No – No   | 5.65               |

### Chi-Square Calculation

| Cell                             | O  | E     | (O-E) <sup>2</sup> /E |
|----------------------------------|----|-------|-----------------------|
| Yes–Yes                          | 58 | 57.65 | 0.002                 |
| Yes–No                           | 6  | 6.35  | 0.019                 |
| No–Yes                           | 51 | 51.35 | 0.002                 |
| No–No                            | 6  | 5.65  | 0.022                 |
| <b>Total <math>\chi^2</math></b> |    |       | <b>0.045</b>          |

### Decision Rule

- Calculated  $\chi^2$  value = 0.045
- Degrees of freedom = 1
- Table value at 5% significance level = 3.841

Since the calculated value (0.045) is less than the table value (3.841), the null hypothesis is accepted

### Interpretation

The Chi-square test found no statistically significant relationship between signing up for a new e-commerce platform over promotional offers and loyalty to platforms that keep the promotions coming. So the null hypothesis stands. Promotions clearly move people to act, but that's not the full story — price, trust, service quality, and delivery performance matter just as much when it comes to keeping customers around.

### 5.Results / Findings:

Discounts win when it comes to getting people to try a new platform. 62% of respondents said a discount was what got them to sign up. Price, not loyalty or brand, is what gets the door open.

Promotions get people through the door. They don't make people stay. 52.9% of respondents signed up because of an offer — but less than 40% of them were still using the platform after their first purchase.

Price is the biggest reason people come back. 36.4% of respondents named better prices as the main driver of repeat purchases. Fast delivery and brand trust mattered too, just not as much.

Personalization barely moves the needle on repeat purchases. 67.8% of respondents said they'd gotten personalized offers — but when it came down to actually returning, price and service quality mattered more to most of them.

The Chi-square test found no significant relationship between signing up for promotions and customer loyalty. The calculated value, 0.034, was well below the table value of 3.841. So the null hypothesis stands. Promotions on their own just aren't enough to explain loyalty or retention.

## 6. Suggestions

Keep using discounts to bring people in — the data backs that up. But getting someone to sign up and getting them to stay are two different problems. Loyalty comes down to price, product quality, delivery speed, and trust, and a good discount doesn't fix any of those if the rest of the experience falls flat.

A few practical moves: use purchase history to make personalized offers actually relevant instead of generic. Add a loyalty program or reward points so customers have a reason to come back beyond the first discount. Invest in faster delivery, clearer returns, and better support — the stuff that determines whether someone trusts you the second time around. None of this replaces promotions. It's what happens after the promotion that decides whether the customer sticks.

## 7. Conclusion

Discounts and special offers were the clear favorite here — promotions get people to try a new platform and make that first purchase. That part isn't in question. Keeping them is harder. Price, service quality, delivery speed, and trust matter more than whatever offer got someone through the door, and the numbers back this up: the Chi-square test found no significant link between signing up because of a promotion and actually staying loyal, so the null hypothesis stands. A discount can get someone to buy once. It can't make them stay. Which points to a fairly simple takeaway: promotions and good service aren't substitutes for each other. Companies need both — one to bring people in, the other to keep them.

## Reference

- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing: Strategy, implementation and practice* (7th ed.). Pearson Education.
- Gomes, M. A., & Meisen, T. (2023). A review on customer segmentation methods for personalized customer targeting in e-commerce use cases. *Journal of Electronic Commerce Research*, 24(3), 210–225.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Kumar, V., & Reinartz, W. (2018). *Customer relationship management: Concept, strategy, and tools* (3rd ed.). Springer.
- Laudon, K. C., & Traver, C. G. (2022). *E-commerce: Business, technology, society* (18th ed.). Pearson.
- Madanchian, M. (2024). The impact of artificial intelligence marketing on e-commerce sales. *Journal of Digital Business and Marketing*, 18(2), 87–101.
- Mamun, M. N. H. (2025). Advancements in machine learning for customer retention. *International Journal of Data Analytics and Business Intelligence*, 7(1), 55–69.
- Solomon, M. R. (2018). *Consumer behavior: Buying, having, and being* (12th ed.). Pearson Education.
- Tuguinay, J., et al. (2024). A journey from customer acquisition to retention. *International Journal of Business and Management Studies*, 16(3), 120–134.
- Amazon (India): <https://www.amazon.in>
- Flipkart: <https://www.flipkart.com>
- Meesho: <https://www.meesho.com>
- Ajio: <https://www.ajio.com>