

## Consumer Trust AI-Driven Digital Commerce Platforms: A Comparative Study of Urban and Rural Consumers in Jammu and Kashmir

Sawarna<sup>1\*</sup> & Dr. Manoj Kumar<sup>2</sup>

<sup>1</sup>Research Scholar, Department of Commerce, Desh Bhagat University, Mandi Gobindgarh, Punjab, India.

<sup>2</sup>Assistant Professor, Department of Commerce, Desh Bhagat University, Mandi Gobindgarh, Punjab, India.

\*Corresponding Author: swarnamanhas9@gmail.com

**Citation:** Sawarna, S. & Kumar, M. (2026). Consumer Trust AI-Driven Digital Commerce Platforms: A Comparative Study of Urban and Rural Consumers in Jammu and Kashmir. *Journal of Commerce, Economics & Computer Science*, 12(02(II)), 54–60. [https://doi.org/10.62823/JCECS/12.02\(II\).9091](https://doi.org/10.62823/JCECS/12.02(II).9091)

### Abstract

In recent years, Artificial Intelligence (AI) has played an important role in transforming digital commerce platforms through automation and personalized customer services. Many online commerce companies now use AI-based tools such as recommendation systems, virtual assistants and predictive analytics to improve customer experience and operational efficiency. Despite these technological developments, concerns regarding data privacy, cyber security, transparency and ethical use of consumer information continue to affect consumer trust toward online commerce platforms. The study focuses on consumer trust toward AI-driven digital commerce platforms with special reference to ethical and sustainable online business practices in urban and rural areas of Jammu and Kashmir. A descriptive and analytical research design was adopted for conducting the study using both primary and secondary sources of data. Primary data was collected through a structured questionnaire from 120 respondents belonging to both urban and rural areas of Jammu and Kashmir. Secondary information was gathered from journals, books, research articles, reports and relevant online sources related to artificial intelligence and digital commerce. Urban consumers demonstrated greater familiarity with online commerce applications such as Amazon, Flipkart, Myntra, Meesho and Nykaa because of better internet accessibility and digital awareness. In contrast, rural consumers showed comparatively lower confidence in online transactions due to concerns related to payment security, privacy and limited technological knowledge. On the other hand, rural consumers demonstrate lower awareness regarding online commerce systems and express concerns related to online payment security, misuse of personal information and lack of technological knowledge. Poor internet connectivity and inadequate digital infrastructure continue to remain major barriers affecting the adoption of digital commerce platforms in rural areas. The study indicates that transparent business operations, secure payment systems, genuine customer reviews and responsible AI practices play an important role in strengthening consumer trust and customer satisfaction. The findings also suggest that sustainable online business practices contribute toward improving long-term customer relationships and the credibility of digital commerce platforms.

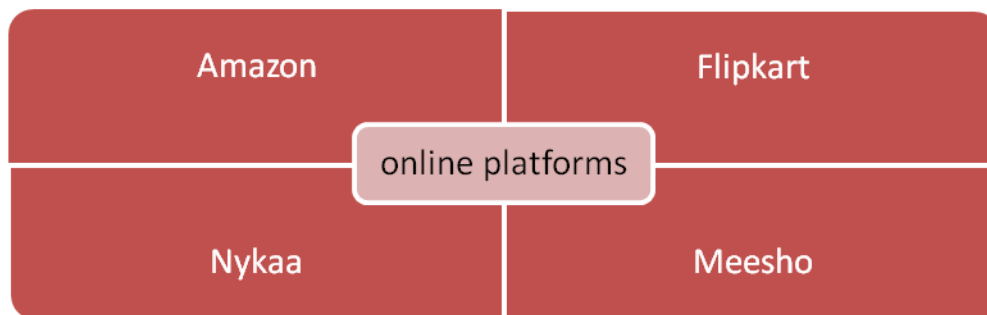
**Keywords:** Artificial Intelligence, Consumer Trust, Digital Commerce, Jammu and Kashmir, Sustainability.

### Introduction

The expansion of digital technology during recent years has influenced the functioning of modern business organizations and consumer markets. The widespread use of smartphones, internet services and digital payment applications has encouraged consumers to shift from traditional shopping

methods toward online commerce platforms. AI technologies are now widely used by digital commerce companies to improve online business operations and customer interaction. Digital commerce platforms use technologies such as machine learning, chatbots, predictive analytics and recommendation systems to improve customer experience and operational efficiency.

At present, many consumers prefer online platforms for purchasing fashion products, electronics, groceries, cosmetics products and household goods because of convenience and accessibility. Popular commerce platforms such as Amazon, Flipkart, Myntra, Nykaa and Meesho use AI-enabled systems to provide personalized recommendations and automated customer support services. These companies also attempt to maintain secure transactions and transparent business practices in order to strengthen customer trust and loyalty.



**Figure: major digital commerce companies**

Consumers using online commerce platforms are often required to share personal information, payment details and purchasing preferences. As a result, issues related to data privacy, secure transactions and ethical handling of customer information have become highly important for maintaining long-term customer relationships. Consumers usually show greater confidence in platforms that provide genuine reviews, transparent return, policies and secure payment systems.

Ethical use of AI technologies has become an important concern in the digital commerce environment. Problems such as misuse of consumer information, fake online reviews, cyber fraud and lack of transparency negatively affect consumer confidence toward online platforms. Therefore, digital commerce companies need to adopt responsible AI practices that ensure transparency, fairness and protection of customer data.

Sustainability has become an important factor influencing consumer perception toward online business operations. Practices such as eco-friendly packaging and responsible delivery systems help in improving customer satisfaction and brand image. Modern consumers are becoming more aware regarding environmental and social responsibility and therefore prefer businesses that follow sustainable practices.

In the context of Jammu and Kashmir, a clear difference can be observed between urban and rural consumers of Jammu and Kashmir regarding the adoption of AI-driven digital commerce platforms. Consumers living in urban regions of Jammu and Kashmir are comparatively more familiar with online commerce applications because of better internet facilities and digital awareness. They frequently use online platforms for shopping, digital payments, entertainment and household purchases. Rural consumers continue to face challenges such as slow internet connectivity, limited technological exposure and concerns regarding online fraud. Many rural respondents still hesitate to fully rely on online commerce systems because of security concerns related to personal and financial information.

The study focuses on examining consumer trust toward AI-driven digital commerce platforms with special reference to ethical and sustainable online business practices in urban and rural areas of Jammu and Kashmir.

### **Review of Literature**

Previous studies have highlighted that AI-enabled recommendation systems play an important role in improving online shopping experiences and customer satisfaction. Sharma and Gupta (2021) observed that Indian consumer increasingly prefer personalized services and automated customer

support while using digital commerce applications. Research conducted by Kumar and Singh (2021) emphasized that secure payment systems, transparency and timely delivery services significantly influence consumer trust and customer loyalty toward online commerce platforms. Patel (2021) highlighted that technological advancement and smartphone penetration have increased digital payment transactions among urban consumers. However, rural populations continue to face challenges associated with internet accessibility and digital literacy. Verma and Sinha (2022) discussed ethical concerns associated with AI-driven commerce platforms, particularly issues related to privacy protection, cyber security and misuse of customer information. The researchers stressed the importance of transparent and accountable business practices for strengthening consumer confidence. According to Reddy and Sharma (2022) personalized digital services contribute toward improving customer engagement and online purchasing intention. The study also reported that consumers show greater trust in platforms providing genuine reviews and transparent return policies. Kumar and Choudhary (2023) observed that eco-friendly packaging, green logistics and sustainable delivery systems positively contribute toward customer satisfaction and brand image. The researchers also noted increasing environmental awareness among Indian consumers. Mehta and Arora (2023) reported that transparent pricing policies, secure transactions and ethical handling of customer information strengthen consumer confidence toward digital commerce platforms. Jain and Kapoor (2023) highlighted that AI-enabled customer service systems such as chatbots and virtual assistants improve communication efficiency and customer interaction. The study further pointed out that consumers still expect human assistance during complex purchasing decision. Gupta and Mahajan (2024) found a noticeable difference between urban and rural consumers regarding awareness and usage of AI-driven commerce platforms. The study further indicated that rural consumers continue to face difficulties related to internet accessibility and technological awareness. In the context of Jammu and Kashmir, Bhat and Khan (2024) reported that urban consumers actively use platforms such as Amazon, Flipkart and Myntra for online shopping and digital payments. The researchers also observed comparatively lower awareness regarding online security and digital payment systems among rural consumers. Kaul and Ahmed (2025) highlighted that urban consumers are more comfortable using AI-enabled commerce applications because of better technological exposure and internet facilities. Rural consumers, however, still demonstrate hesitation because of security concerns and limited technological knowledge.

A report published by Reserve Bank of India in (2023) indicated a rapid increase in digital payment transactions due to growing smartphones usage, UPI services and internet accessibility across the country. The report further stressed the importance of cyber security and protection of consumer data for strengthening public trust toward digital payment platforms.

### **Gaps in Research**

Existing studies on AI-driven digital commerce have mainly concentrated on technology adoption, customer satisfaction and online purchasing behaviour. However, relatively less attention has been given to the relationship between ethical AI practices, sustainability and consumer trust, particularly in the context of urban and rural consumers of Jammu and Kashmir. Keeping this research gap in view, the present study focuses on examining consumer trust toward AI-driven digital commerce platforms with special reference to ethical and sustainable online business practices.

### **Research Problem**

AI-enabled digital commerce platforms have considerably influenced the online purchasing behaviour of consumers in recent years. However, concerns related to data privacy, cyber security, fake reviews and unethical use AI technologies continue to affect consumer trust toward online commerce platforms. Consumers living in rural areas of Jammu and Kashmir also face challenges such as limited digital awareness, slow internet connectivity and hesitation regarding online payment systems. In this context, the study focuses on examining how ethical and sustainable online business practices influence consumer trust toward AI-driven digital commerce platforms in urban and rural areas of Jammu and Kashmir.

### **Objectives of the Study**

- To explore the role and significance of AI-driven technologies in digital commerce platforms across both urban and rural areas of the Jammu and Kashmir regions.

- To understand and analyze consumer perception regarding ethical of AI and overall online business operations among consumers in Jammu and Kashmir.
- To assess how sustainable business practices influence consumer trust toward AI-based digital commerce platforms in region.
- To compare the level of awareness, accessibility and usage of online commerce platforms among consumers living in urban and rural areas of Jammu and Kashmir divisions.
- To identify the key challenges and barriers faced by rural consumers in adopting AI-driven digital commerce platforms in Jammu and Kashmir.
- To suggest practical measures for improving ethical standards, security and sustainability in online business practices across both urban and rural areas of Jammu and Kashmir.

#### **Benefits of AI-Driven Digital Commerce Platforms and Ethical Online Business Practices**

- AI-driven digital commerce platforms offer significant convenience to consumers by enabling them to purchase goods and services anytime and form anywhere through mobile applications and websites.
- Major Online commerce platforms such as Amazon, Flipkart, Myntra, Nykaa, Ajo, Alibaba and Meesho provide consumers with a wide range of products, attractive discounts, personalized recommendations and efficient delivery services.
- Digital payment systems have enhanced transaction speed, reduced dependence on cash-based payments and made online shopping more convenient, secure and user-friendly.
- Ethical AI practices including transparency in algorithms, secure payment systems, authentic customer reviews and strong data protection policies, play a crucial role in building customer trust and confidence in digital platforms.
- Sustainable business practices such as eco-friendly packaging, green logistics and responsible operations strategies contribute to customer satisfaction and promote environmentally conscious consumption behaviour.

#### **Research Methodology**

The present study is both descriptive and analytical in nature. It is based on a combination of primary and secondary data sources. The Primary data was collected through a structured questionnaire administered to consumers from both urban and rural areas of the Jammu and Kashmir regions. The Secondary data was gathered from various sources including journals, books, research articles, reports, websites and earlier studies related to artificial intelligence, consumer trust, ethical practices, sustainability and digital commerce. Convenience sampling technique was adopted for selecting the respondents. A total of total 120 respondents were included in the study for data collection and analysis.

#### **Data analysis and Interpretation**

**Table 1: Area- wise Distribution of Respondents**

<b>Area</b>	<b>Respondents</b>	<b>Percentage</b>
Urban Areas	72	60%
Rural Areas	48	40%
Total	120	100%

Percentage = numbers of respondents / total respondents × 100

#### **Interpretation**

The data shows that urban consumers use and understand online platforms more than rural consumers. Better internet facilities and digital awareness in urban areas are the main reasons behind this difference.

**Table 2: Awareness Regarding Online Commerce Platforms**

<b>Awareness Level</b>	<b>Urban Respondents</b>	<b>Rural Respondents</b>
High Awareness	58	16
Moderate Awareness	18	10
Low Awareness	4	14

**Interpretation**

The table indicates that consumers from urban areas are more aware of online commerce platforms than rural consumers. Lack of digital knowledge and limited internet access are some of the major reasons for lower awareness among rural respondents.

**Table 3: Consumer Trust Factor**

Factors	Total Score	Mean Score	Rank
Secure Payment Systems	488	4.06	I
Transparency	482	4.01	II
Genuine Customer Reviews	474	3.95	III
Eco-friendly Packaging	466	3.88	IV
Attractive Advertising	460	3.83	V

Formula

$$\text{Mean Score} = \sum fx / N$$

Where:

- $f$  = Frequency
- $x$  = Assigned Weight
- $N$  = Total Respondents

**Hypothesis Testing**

**H<sub>0</sub>:** There is no significant relationship between ethical AI practices and consumer trust.

**H<sub>1</sub>:** There is a significant relationship between ethical AI practices and consumer trust.

**Chi-Square test analysis**

Variables	Chi-Square Value	Table Value	Result
Ethical AI practices and consumer trust	15.61	3.84	Significant

**Chi-Square Formula**

$$\chi^2 = \sum (O - E)^2 / E$$

total value:  $\chi^2 = 2.08 + 3.12 + 4.16 + 6.25 = 15.61$

degree:  $df = (r - 1) (c - 1) = (2 - 1) (2 - 1) = 1$

**Interpretation**

The calculated chi-square value 15.61 is higher than the table value 3.84 at 5 % level of significance. Therefore, the null hypothesis is rejected and it can be understood that ethical AI practices such as transparency, secure transactions and protection of customer information have a significant impact on consumer trust toward AI-driven digital commerce platforms.

**Findings of the Study**

- Urban consumers regularly use online platforms for shopping, digital payments, cosmetics, fashion products, groceries and household items due to convenience and attractive offers.
- Rural consumers possess comparatively lower awareness regarding AI-driven digital commerce platforms due to limited digital literacy and technological exposure.
- Slow internet connectivity and poor digital infrastructure negatively affect online platform usage in rural areas.
- Many rural respondents expressed concern regarding security of personal information and online payment systems.
- Consumers prefer platforms that maintain transparency, secure payment systems and genuine customer reviews.
- Attractive advertising and promotional strategic positively influence online purchasing behaviour.

- Ethical AI practices such as transparency, accountability and responsible handling of customer data significantly improve consumer trust and loyalty.

#### **Suggestions**

- Government and digital commerce companies should organize awareness programs in rural areas regarding online shopping and digital payment systems.
- Internet connectivity and digital infrastructure should be improved in rural regions of Jammu and Kashmir.
- Digital commerce companies should strengthen customer data privacy and cyber security systems.
- Fake reviews and misleading advertisements should be strictly controlled.
- Online platforms should maintain transparency regarding product information, return policies, payment systems and customer reviews.

#### **Recommendations**

- Government and private organizations should work together to increase digital awareness among rural consumers.
- E-commerce companies should design user-friendly applications for first-time digital users.
- AI systems should be transparent, accountable and secure for improving long-term consumer trust.
- Companies should continue promoting sustainable online business operations and green delivery systems.

#### **Conclusion**

The study shows that Artificial Intelligence has changed the way people use online commerce platforms by making shopping easier, faster and more convenient. Consumers from urban areas of Jammu region and Kashmir region are more familiar with platforms like Amazon, Myntra, Meesho, Nykaa and Flipkart because of better internet facilities and digital awareness. On the other hand, many consumers from rural areas still hesitate to use online platforms due to slow internet connectivity, lack of technical knowledge and fear regarding online fraud and privacy issues. The study further found that factors such as secure payment systems, transparency, genuine customer reviews and eco-friendly business practices help in increasing consumer trust toward AI-driven digital commerce platforms.

#### **References**

1. Ahmed, R. (2022). Ethical AI practices in digital commerce platforms and consumer trust. *Journal of Business Ethics and Technology*, 14(2), 112-126.
2. Bhat, S., & Khan, F. (2024). Digital commerce adoption in urban and rural areas of Jammu and Kashmir. *International Journal of Commerce and Management Research*, 10(1), 45-53.
3. Chopra, A., & Malhotra, S. (2025). Sustainable online business practices and customer satisfaction in India. *Indian Journal of Sustainable Business Studies*, 9(1), 88-101.
4. Gupta, R., & Mahajan, P. (2024). Online purchasing behaviour among urban and rural consumers in India. *Journal of Retail and Consumer Studies*, 16(2), 140-152.
5. Jain, A., & Kapoor, M. (2023). AI-enabled customer service systems in Indian e-commerce platforms. *Asian Journal of Digital Innovation*, 11(4), 66-79.
6. Kaul, R., & Ahmed, N. (2025). Artificial intelligence adoption in digital commerce platforms in Jammu and Kashmir. *South Asian Journal of Business Research*, 13(2), 54-69.
7. Khan, M., Ali, S., & Rehman, T. (2021). Ethical principles of artificial intelligence and consumer acceptance. *International Journal of Technology and Ethics*, 8(3), 133-148.
8. Kumar, A., & Choudhary, R. (2023). Sustainable business practices in Indian e-commerce companies. *Indian Journal of Management Studies*, 12(2), 97-110.
9. Kumar, P., & Sharma, R. (2023). Consumer loyalty and ethical AI adoption in digital commerce. *Asian Business Review*, 19(1), 72-86.

10. Patel, V. (2021). Digital payment systems and online commerce growth in India. *Journal of Financial Technology and Innovation*, 7(2), 55-67.
11. Rana, D., & Joshi, K. (2025). Consumer trust toward AI-driven commerce platforms in India. *International Journal of E-Commerce Research*, 17(1), 103-118.
12. Reddy, S., & Sharma, N. (2022). Customer perception toward online retail platforms in India. *Journal of Contemporary Business Research*, 10(4), 120-134.
13. Sharma, V., & Gupta, P. (2021). Artificial intelligence and consumer behaviour in Indian digital commerce platforms. *International Journal of Marketing and Technology*, 13(3), 41-56.

