

Consumer Behaviour in E-commerce: Understanding Consumers' Online Grocery Shopping Behaviours and Examining the Influence of User Experience Design

Sneha Tiwari¹, Dr. Arpita Pandey²
ITM Skills University, Navi Mumbai

Abstract—The burgeoning landscape of e-commerce has witnessed a significant surge in online grocery shopping, transforming how consumers procure their daily necessities. This research endeavours to understand the intricate facets of consumer behaviour within this digital marketplace, specifically focusing on the online shopping behaviours for food and groceries. Furthermore, it investigates the critical role of user experience (UX) design in shaping consumers' purchasing decisions. By examining user preferences, pain points, and the perceived importance of various website and app design elements, this study aims to elucidate how a well-crafted digital experience can influence consumer engagement and drive purchasing outcomes in the online grocery sector.

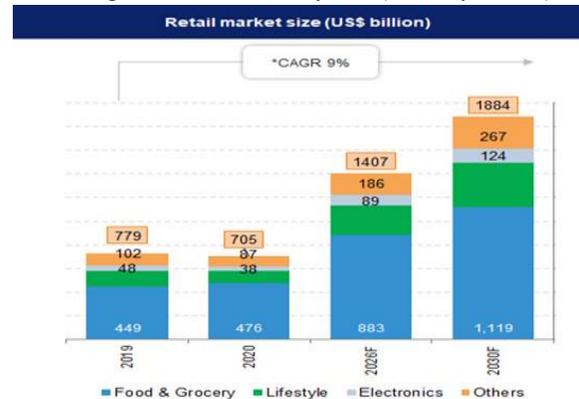
Index Terms—E-commerce, Consumer Behaviour, Online Grocery Shopping, UI/UX Design, Online Purchasing Decisions

1. INTRODUCTION

The digital revolution has profoundly impacted the retail sector, with e-commerce emerging as a dominant force in modern commerce. Among the various segments within e-commerce, online grocery shopping has experienced remarkable growth, particularly in recent years. This shift in consumer behaviour can be attributed to factors such as increased internet penetration, the convenience offered by online platforms, and evolving consumer lifestyles. Understanding how consumers navigate and interact with online grocery platforms is crucial for businesses operating in this dynamic market. Moreover, the user experience (UX) design of these platforms plays a pivotal role in shaping consumer perceptions, influencing their purchasing decisions, and ultimately determining the success of online grocery retailers. This research seeks to delve into the intricacies of

consumer behaviour in the context of online food and grocery shopping and to specifically examine the impact of user experience design on their purchasing decisions. The findings of this study aim to provide valuable insights for e-commerce businesses to optimize their online platforms and enhance customer engagement.

Sectoral growth for last few years (industry trends)



Source – India e-commerce growth 2023

2. LITERATURE REVIEW

Online grocery shopping in India has gained significant traction due to the increasing penetration of digital platforms and the growing preference for convenience-driven consumer experiences. Various studies explore the factors influencing online grocery shopping behavior, highlighting the interplay between convenience, trust, and technology-driven personalization.

Research by Gupta et al. (2019) identifies key motivations for Indian consumers to adopt online grocery shopping, emphasizing time-saving benefits, avoidance of traffic congestion, and the availability of

a broader product range compared to local retail outlets. Despite these advantages, concerns related to trust, particularly in secure online transactions, and the inability to physically inspect fresh produce remain notable barriers.

The relationship between convenience and consumer purchase intention has been further examined by Singh and Rani (2020), who analyze how factors such as product availability, ease of navigation, and transaction simplicity influence shopping preferences. Their findings indicate that optimizing these convenience elements can significantly enhance consumer engagement and conversion rates for online grocery platforms.

Consumer attitudes toward online grocery shopping have been broadly discussed by Abdullah et al. (2018), who synthesize various studies to understand general perceptions and behavioral patterns. While not specific to India, their insights offer valuable parallels that can be contextualized to Indian consumers, addressing concerns related to product quality assurance, trustworthiness, and perceived service reliability.

A critical component of online grocery shopping is payment preferences, explored in-depth by Jain and Singh (2017). Their study highlights the growing inclination toward mobile wallets, the sustained reliance on cash on delivery (COD), and the increasing adoption of debit and credit card transactions. These findings underscore the importance of offering diverse payment methods to accommodate consumer preferences and reinforce trust in digital transactions.

The integration of value-added services in online grocery platforms is another significant trend observed by Kumar et al. (2021). Their study investigates emerging services such as meal kit deliveries, pre-cut and pre-washed vegetables, and personalized recipe recommendations. By catering to the evolving demands of busy urban consumers, platforms can enhance the shopping experience, increase order values, and foster greater customer loyalty. Artificial intelligence (AI) is increasingly shaping personalized shopping experiences, as discussed by

Singh et al. (2022). AI-driven strategies, including personalized product recommendations, targeted promotions, and AI-powered customer service chatbots, significantly enhance user engagement and satisfaction. By leveraging AI technology, grocery platforms can refine shopping journeys, improve product discovery, and optimize marketing initiatives.

Additional studies emphasize the role of digital adoption in transforming grocery retailing, including emerging trends in omnichannel retail, consumer preference modeling, and sustainable shopping behaviors. As online grocery shopping continues to evolve, future research must explore the intersection of digital innovation, supply chain efficiency, and shifting consumer expectations to further refine platform strategies and enhance user experience

3. RESEARCH METHODOLOGY

This research employs a quantitative research design, utilizing a survey method to gather data from consumers who have experience with online grocery shopping. The survey instrument includes a series of questions aimed at understanding their online shopping behaviours, preferences regarding website/app design, encountered pain points, and the influence of user experience on their purchasing decisions.

The primary data collection instrument is a structured online questionnaire. It is assumed that the survey would be distributed to a sample of individuals who regularly or occasionally shop for food and groceries online. The sampling method would ideally aim for a representative sample of the target population. The data would likely be collected through an online survey platform to facilitate widespread reach and efficient data collection.

4. FINDINGS AND ANALYSIS

Most respondents are aged 18-35 and shop for groceries online weekly or monthly using smartphones. Dedicated grocery apps are preferred over e-commerce platforms and offline stores, with minimal participation from those under 18 or over 45.

Table 1

Preferred Platform	Percentage of Responses
Dedicated grocery apps (e.g., BigBasket, Blinkit, Zepto, etc.)	74.30%
E-commerce platforms with grocery sections (e.g., Amazon)	16.20%
Direct-to-consumer brand websites	8.30%
D Mart, Big Basket, Blinkit, Kisan Konnect	1.20%

The result indicates that most of the respondents (81%) are buying grocery from those platforms which are dedicated for grocery. Whereas very less percentage of the people are buying directly from the brand's website (1.2%)(Table 1).

Table - 2

Factors Considered While Shopping Online	Most Important
Discounts and offers	17.09%
Fast delivery options	15.27%
Variety of products	16%
Product quality	20.36%
Easy return policy	15.27%
Brand trust	16%

From the table 2 it is evident that while doing grocery shopping customers are more likely to see the quality of the products (20%) and followed by discounts and offers (17.09%).

Results also indicate that most of the respondents (33%), say that user experience of the application plays important role in choosing platform for shopping. And they might switch to other platform if they provide better experience.

Table -3

Pain Points in Online Grocery Shopping	Adjusted Percentage (Out of 100%)
Pain Points	
Limited product availability	27.95%
Delivery delays	20.79%
Unclear product descriptions	21.45%
Difficulty in navigating the platform	16.27%
Payment issues	10.37%
Comparing products based on looks	0.65%
Stock finished / non-availability	0.65%
Lack of physical touch	0.65%
NA	0.65%

From the table 3 we can infer that the main pain point for dissatisfaction from the platform is the limited availability of the product (27.9%), followed by unclear product descriptions (21.45%). Customers do not pay much attention to touch and feel (0.65%) as far as grocery is concerned.

5. DISCUSSION

The potential findings of this research suggest that user experience design plays a crucial role in shaping consumer behaviour and influencing purchasing decisions in the online grocery sector. The emphasis on "Easy navigation and product search" and "Clear

product descriptions and images" highlights the importance of usability and information accessibility for online grocery shoppers. A well-designed user interface appears to significantly impact the likelihood of purchase completion, underscoring the need for intuitive and visually appealing platforms.

Payment security and multiple payment options" and "Easy navigation and product search" were most frequently ranked as the 1st most important aspect. "Personalized recommendations" generally received lower importance rankings.

The varying preferences for personalized experiences suggest that while Most respondents appreciate platforms offering personalized experiences, although some still prefer to browse independently This indicates the need for a balanced approach to personalization, allowing users to customize their experience without being overly intrusive. The identified pain points, such as delivery delays or difficulty in navigation, represent key areas where online grocery retailers need to focus their efforts to enhance customer satisfaction. The likelihood of switching providers for a better user experience emphasizes the competitive nature of the online grocery market and the importance of UX as a differentiator. Finally, the overall user experience ratings provide a snapshot of current satisfaction levels and highlight areas for potential improvement.

6. CONCLUSION

The study highlights the growing reliance on e-commerce platforms for food and grocery shopping, particularly among young adults aged 18-35. Convenience, discounts, product quality, and fast delivery emerge as the primary factors influencing online grocery shopping decisions. User experience design significantly impacts purchasing behaviour, with features like easy navigation, user-friendly checkout, and clear product descriptions driving satisfaction and engagement. Consumers value platforms that offer personalization but prioritize functional design and reliable service over advanced features. The findings also reveal low brand loyalty, with many consumers willing to switch providers if a better user experience is offered.

7. Scope for Future Study

Future research in this field could broaden its scope by including more diverse demographics, such as older adults and those in rural areas, to gain a more comprehensive understanding of online grocery shopping behaviors. It could also investigate the influence of emerging technologies like AI, augmented reality (AR), and voice-assisted shopping on consumer choices. Comparative studies across different regions or countries could reveal interesting cultural and geographical trends in e-commerce grocery shopping. Additionally, longitudinal studies could track the evolution of consumer behavior over time, especially in response to technological advancements and market changes. Further exploration of specific UX elements, such as gamification and chatbots, and their impact on user engagement and retention would be valuable. Finally, research into consumer attitudes towards environmental and ethical factors, like sustainable packaging and ethical sourcing, could provide insights for platforms looking to leverage these trends

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IMRB provides market research reports on various sectors in India, including e-commerce