Study Of Consumer Preferences Towards Online Food Delivery Apps and the Role of Artificial Intelligence

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Abstract

As the food industry rapidly embraces digitization, numerous consumers are utilizing online food delivery (OFD) platforms like Swiggy, Zomato, and Uber Eats, among others. The movement towards this evolution was accelerated via Artificial Intelligence (AI) being incorporated into virtually all elements of the customer journey, including personalization recommendations, automated customer service, etc.; thus, this paper seeks to understand consumer preferences regarding OFD platforms, and how consumers select which platforms to use, based upon AI functionality provided by those applications. To achieve this, a mixed-methods approach was employed to gather both quantitative data from 210 surveyed participants in large urban areas and qualitative data through structured interviews. The results indicate that consumers make choices based upon factors such as convenience, discounts, speed of delivery, and ease of use. However, personalization through AI-enabled recommendation engines, chatbots, and prediction engines, provides an additional incentive to use a particular platform repeatedly. This study ultimately supports our assertion of the importance of Artificial Intelligence as an essential element of customer experience and the differentiation of products/services within the OFD marketplace. Further implications for application developers and marketers will be elaborated upon.

1. Introduction

Over the past ten years, service industries have accelerated their digital transformation, with food service at the forefront of this transformation through online food delivery (OFD) applications that are transforming how people discover food, order food, and receive food. Factors driving this trend include the increased penetration of smartphones, improved access to the internet, and changing consumer lifestyles, leading to a growing reliance on mobile applications for quick and easy meal options. In India, the widespread adoption of mobile OFD apps, including Swiggy and Zomato, is now an integral part of the urban lifestyle.

Artificial Intelligence (AI) has driven much of the growth or increase in momentum toward innovation with its capabilities to automate operational functions and improve the customer experience through dynamic features such as personalised recommendations, automated delivery

641

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route optimisation, and more, which include analytical insights about customer sentiment and chatbots for assistance. As competition in the digital space continues to evolve, AI gives the delivery services an advantage by providing faster, intelligent, personalised offerings compared to other service providers.

Even though many people use these apps as tools for ordering food, one of the key areas of study will be to understand how the app's AI driven capabilities will impact user preferences. Preference drivers for consumers when ordering food today include convenience, price consciousness, trust, functional usability of the app, the experience of receiving and interacting with a delivery person, as well as the perceived sophistication intelligence of the platform. In addition to an increased expectation by consumers regarding the capabilities of AI in OFD apps, consumers expect an app to allow for a more natural interaction (i.e., more intuitive), and will expect faster resolution of their complaints and recommendations tailored to their specific needs.

This study explores how consumers choose among OFD apps, what factors influence their loyalty, and how AI contributes to shaping their preferences.

2. Objectives Of the Study

i. To perform a study on what consumers prefer related to food delivery apps online.
ii. To study how artificial intelligence (AI) features affect the decisions and satisfaction of consumers when using food delivery apps.
iii. To identify important factors influencing how often a consumer uses the OFD app.
iv. To evaluate how a consumer views the recommendations made by an AI and chatbots.
v. To make recommendations for enhancing AI-based service delivery through OFD applications.

3. Review of Literature

i. Kumar (2018)

According to Kumar (2018), convenience and saving time were two important motivating factors encouraging consumers to adopt OFD products and services. While the study results showed that young adults living in urban areas are using OFD apps more than ever due to the hectic pace of life within those communities.

ii. Saxena & Jain (2019)

According to Saxena and Jain (2019), price discounts and promotional offers significantly influence consumers' app selection. They argue that price-sensitive consumers prefer platforms to offer frequent deals.

iii. Mehta (2020))

Research quantified OFD app service quality and found three main aspects of service quality to be critical components of user satisfaction: reliability, delivery timing, and customer support; Delays

642

were found to contribute to negative customer reviews and inhibit customer retention. The role of artificial intelligence (AI) in the food delivery process is becoming more important.

iv. Chatterji (2020)

Research utilized a predictive algorithm to capture user behaviour and explained that through this process, AI develops longer-term customer engagements.

v. Ramanathan & Tan (2020)

As reported by the authors, consumers depend on accurate tracking of their order status and transparency in communication as indicators of trustworthiness towards a business. AI-enabled tracking solutions can help build this trust by providing consumers with accurate, real-time updates on their orders.

vi. Bhatia (2021)

According to a study conducted by Bhatia (2021) in relation to psychological factors that impact On-Demand Food (OFD) consumption, aesthetic design of apps along with how easy they are to navigate, have a substantial impact on consumer buying behaviours.

vii. Sharma & Verma (2021)

Found that AI-powered chatbots are the future for customer service. With the ability to answer questions immediately, users will have better experience as a result.

viii. Gupta (2022)

In looking at the personalization of digital applications, Gupta (2022) concluded that AI-assisted recommendations are a large contributor to higher frequency and larger value of online orders.

ix. Alam & Mukherjee (2022)

Examined the factors that contribute to users' willingness to provide their personal data. While users enjoy personalized experiences, many expressed concerns about how apps will use the data collected.

x. Iqbal (2023)

Demonstrated the adoption of machine-learning technology for the process of optimising a delivery route. The evidence collected in the presentation was found to support the use of AI in minimizing the amount of time a package is held up, thus improving the overall efficiency of a delivery organization's logistics products.

4. Research methodology

4.1 Research Design

A mixed method of research design was adopted. The quantitative component consisted of a structured questionnaire administered online. The qualitative component included semi-structured interviews with frequent OFD users.

643

4.2 Sample Size and Sampling Technique

A total of 210 respondents were selected using convenience sampling from urban regions such as Mumbai, Delhi, Bengaluru, and Hyderabad. Interview participants included 10 frequent OFD users chosen through purposive sampling.

4.3 Data Collection Tools

➢ Primary Data: Structured Questionnaire;
➢ Secondary Data: Journals, articles, reports, existing literature.

4.4 Data Analysis Technique

➢ Descriptive Statistics
➢ Percentage Analysis
➢ Thematic analysis for qualitative responses

4.5 Limitations

➢ This study only includes urban users.
➢ Responses are self-reported and may include bias.
➢ Changing market dynamics may alter consumer trends.

5. Data Analysis and Findings

5.1 Demographic profile of responders

➢ Gender: 52% Female, 47% Male, 1% Non-Binary.
➢ Age
  • 18-25 years: 58%
  • 26–35 years: 32%
  • 36+ years: 10%
➢ Occupation:
  ▪ Students (45%),
  ▪ Working professionals (42%),
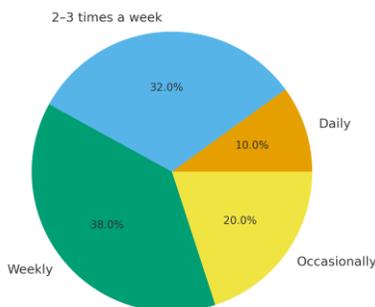 ▪ Others (13%).

5.2 Frequency of Using Food Delivery Apps

Frequency of Using Online Food Delivery Apps

Majority use OFD apps at least once a week, indicating high market penetration.

5.3 Popular Platforms

App	Percentage Usage
Swiggy	48%
Zomato	44%
Others (Dominos, Uber Eats, Dunzo)	8%

Swiggy and Zomato dominate due to wide restaurant networks and trusted delivery systems.

5.4 Factors Influencing Consumer Preferences

Respondents rated the importance of factors on a 5-point scale.

Factor	Mean Score
Convenience	4.8
Discounts & Offers	4.6
Delivery Speed	4.5
App Usability	4.3
Food Quality	4.7
AI-driven personalization	4.2
Customer Support (Chatbots/Help)	4.0

Convenience, food quality, and offers ranked highest

5.5 Impacts of AI Features

➢ Personalized Recommendation: 78% agreed that AI-based recommendations helped them discover new dishes/restaurants.

- Chatbots & Customer Support: 69% expressed satisfaction with chatbot interactions, though many preferred human support for complex issues.
- Other Tracking & Predictive Delivery Time: 85% rated real-time tracking as "very important."
- Dynamic Pricing & Smart Discussions: 71% appreciated AI-generated offers based on ordering patterns

5.6 Customer Perceptions Towards AI

- Positive: Improved user experience, better suggestions, and reduced effort.
- Negative: Data privacy concerns (22%), irrelevant recommendations (15%).

Discussion

According to our analysis, the three main factors impacting consumer preference for ON-DEMAND FOOD DELIVERY (OFD) applications are: 1) Convenience; 2) Speed of delivery; and 3) Discounts/savings offered by restaurants and retailers. In addition, the growing presence of Artificial Intelligence (AI) technology improves the speed and efficiency of OFD application interaction while also offering consumers an even more personalized experience through enhanced functionality.

6.1 AI as a Value Enhancer

AI contributes to smoother user experiences through:

- Tailored suggestions,
- Route optimization,
- Automated issue resolution,
- Push notifications based on past behavior.

These factors create a sense of ease and familiarity, encouraging repeat usage. Younger users appreciate the intuitive design powered by AI.

6.2 Customers Expectations and Loyalty

AI features help OFD platforms anticipate consumer needs. However, brand loyalty remains fragile. Consumers switch apps frequently based on:

- Better offers
- Faster delivery
- Restaurant availability

Thus, while AI strengthens user engagement, it is not the sole retention tool.

6.3 Psychological Influence of AI

Think of those "Popular near you" or "You might like this" suggestions you see online. They're more than just helpful tips; they're like gentle nudges from the AI, subtly guiding your choices. It turns out, lots of people notice these suggestions often lead them to buy things they might not have

646

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otherwise. This shows that AI isn't just reacting to what we're already interested in; it's actively playing a role in shaping what we decide to purchase.

6.4 Limitations in AI Experience

Despite its advantages, users pointed out issues such as:

- Irrelevant suggestions
- Occasional chatbot inaccuracies
- Data privacy concerns

This implies that AI must evolve to remain transparent, secure, and context aware.

6.5 Strategic Implication of OFD Apps

To maximize user satisfaction, platforms should:

- Enhance personalization algorithms
- Improve chatbot natural language processing
- Offer transparent data usage policies
- Integrate feedback-based AI improvements
- Use AI to identify pain points such as pricing concerns and delivery delays

6. Conclusion

The findings of this research confirm that food delivery apps, created and developed for use on the internet, have become an increasingly important part of the way people live in cities as a result of several factors. The factors influencing the growth of this industry are convenience, promotional offers, speed of service, and ease with which customers can request delivery services. AI technology is playing a vital and growing role in how online food delivery platforms influence user preferences. By allowing users to interact with the platforms via a more personalized manner, AI technology improves the efficiency of delivery operations, facilitates contact with customer service representatives, and enhances user engagement.

While the majority of consumers are seeing a positive impact and using food delivery apps more frequently, some users are concerned about potential privacy violations regarding the sharing of personal data with third-party entities. Overall, however, AI has been shown to positively influence the overall experience of the user and has increased the number of times users will order food online.

In order to remain competitive in their business, OFD service providers must continue to enhance and refine the AI technology that provides them with services to ensure that these services are as accurate and effective as possible. Continued advancements in artificial intelligence technology will enhance the user experience and be a driving force in the continued success of online food delivery companies.

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