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Perceived Value of AI-Driven Features and Pricing in Food Delivery Apps among Users in Mumbai

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Abstract:
The emergence of meal delivery services in urban India, especially in Mumbai, has changed how customers interact with digital eating options because of cutting-edge pricing and technology. Artificial Intelligence (AI) has become central to enhancing user experience through features like real-time tracking, dynamic pricing, personalized recommendations, and AI-powered customer support. This research examines how AI-driven features and pricing strategies influence user satisfaction, perceived value, and loyalty towards food delivery apps like Zomato and Swiggy. The study collected primary data from 250 respondents through a structured questionnaire and analyzed it using descriptive statistics, Cronbach's Alpha for reliability, correlation and regression analysis, t-tests, and ANOVA. Findings reveal a strong positive correlation between AI features and perceived value, significantly influencing customer satisfaction and loyalty. Pricing transparency, discount attractiveness, and personalized services were noted as major contributing factors to the overall perceived value. Moreover, demographic variables such as gender and frequency of app usage showed significant differences in perception. The study highlights the importance of leveraging AI not only to innovate but also to build long-term trust and engagement. These insights can assist app developers and marketers in refining strategies to meet evolving customer expectations in a competitive digital marketplace.
Keywords: *Artificial Intelligence, Food Delivery Platforms, Perceived Value, Pricing Models, User Experience*

1. Introduction

India's urban lives have changed dramatically because of the quick development of digital platforms, with Mumbai emerging as a thriving hub for technology adoption. Apps for food delivery have become essential to this change, combining cutting-edge technology and convenience to satisfy a range of customer needs. Using a sample of 156 respondents, this study investigates how Mumbai-based users view the value of AI-driven features and pricing. The study fills a significant knowledge vacuum in customer behavior in India's digital food economy by examining how pricing affects trust and how artificial intelligence alters user experiences. In addition to adding to the body of knowledge on technology adoption in emerging nations, the findings are intended to help platform developers improve their pricing and technological strategies.

1.1.Food Delivery Apps

Mumbai's fast-paced lifestyle, dense population, and rising smartphone usage have all contributed to the city's food delivery applications becoming an essential element of its urban landscape. These platforms provide easy access to a wide range of cuisines, which is consistent with larger trends in India's digital economy, which places a high emphasis on speed and convenience. These services technological developments are vital in influencing user experiences and perceptions as they grow, underscoring the changing connection between digital innovation and routine consumption patterns.

1.2. AI-Driven Features in Delivery Apps

Personalized meal recommendations, real-time order tracking, and optimized delivery routes are just a few of the features that current food delivery companies utilize artificial intelligence to enable. AI is essential for increasing efficiency since it simplifies processes and customizes services to suit user preferences. These cutting-edge features are even more crucial in Mumbai, where logistical issues are caused by traffic congestion and weather variations. How technology continues to influence interactions with digital food delivery services is shown in the effects of AI-driven solutions on user engagement, efficiency, and convenience.

1.3. Pricing in Food Delivery

Finding a balance between pricing and convenience is a key factor in determining user happiness with meal delivery applications. Dynamic pricing models powered by AI modify prices according to time, distance, and demand; yet, their intricacy can occasionally obscure information. Customers carefully consider value in connection to spending in Mumbai's price-sensitive environment, which makes impressions of justice particularly important. While some factors may affect trust in digital transactions, pricing tactics and user expectations interact to shape how expenses are viewed in relation to the advantages of AI-powered services.

2. Literature Review

According to Biju P. R. & Gayathri O. (2024), have stated that earlier research on intelligent systems, like prediction technologies and recommender systems, has highlighted how they might improve user ease and efficiency in digital environments. But little is known about how these technologies affect India's religious minorities, women, Dalits, and remote communities. This knowledge vacuum ignores the ways in which AI-powered solutions could reinforce prevailing social prejudices and limit these vulnerable groups' personal liberties, especially their freedom of choice.

Sanchez, L. E. (2024) The study highlights customer acceptance and adaptation as it examines the deployment of AI-driven ordering and payment systems in fast-food businesses in the US and Mexico. Taste, cost, and speed are important factors in all markets, but Mexican customers prefer conventional ordering techniques, while American consumers exhibit a greater preference for self-ordering and AI-driven systems. The study highlights disparities in incentive preferences and data-sharing willingness, providing firms with insights to improve AI adoption. However, there is a research gap in understanding the wider socio-economic consequences on AI adoption in fast food because the study does not delve deeper into the cultural and regulatory aspects driving AI acceptance.

Saygıner, C. (2024) The study highlights the important effects of hedonic motivation and information quality in determining customer satisfaction and loyalty in AI-driven food delivery systems during and after COVID-19. There is a need for more research since, although the study offers insightful information on changes in customer behavior, it does not thoroughly examine long-term adoption patterns or cultural variances in AI-driven food delivery.

Handayani, P. W., Azzizah, S. F., & Annisa, A. (2022) Using the pleasure-arousal-dominance and stimulus-organism-response theories, the study examines how the quality features of online food delivery (OFD) applications affect user emotions and their intentions to continue using the service. The results show that while price information quality effects just dominance and trustworthiness have no effect, convenience has a considerable impact on all emotional responses. The study's urban-centric sample, however, limits its applicability and creates a research gap in figuring out how rural users react emotionally and behaviourally to OFD applications.

Han, W., Raab, C., Belarmino, A., & Tang, J. (2021) They point out that elements like food quality and price-value perception are important in determining consumer satisfaction in the rapidly changing world of online meal delivery platforms (OMDPs). The integration of the sharing economy ethos is still poorly understood, despite the fact that prior study has mostly focused on technology-driven implications. By investigating the effects of collaborative consumption on user satisfaction and intention to continue using the product, this study fills that gap. The low importance of e-service quality components, however, emphasizes the necessity of more study on user-friendliness and trust in maintaining client involvement.

Kaur, P., Dhir, A., Talwar, S., & Ghuman, K. (2021) According to their study, theories of consumer behavior have long been utilized to examine decisions made about what to buy, but little is known about how they might be applied in the food delivery app (FDA) industry. Although it offers an organized method for comprehending consumer decisions, the Theory of Consumption Values (TCV) has not been well-adapted to the FDA environment. Price and convenience are examples of functional factors that have received much of the attention in previous research, ignoring broader value assessments that influence user involvement.
This study, which applies the TCV framework to FDAs, identifies epistemic value as the main factor influencing purchase intention, with conditional, price, and social values coming in second and third, respectively. Health consciousness and worries about food safety, however, have little influence on purchasing decisions. This lacuna in the literature highlights the necessity of more research on FDAs' consumer value perceptions, especially in dynamic digital marketplaces.

3. Objectives of Study

- To assess users' perceptions of AI-driven features in food delivery apps and their impact on user experience
- To analyse the effect of AI-driven pricing strategies on user trust and purchasing decisions

- To examine the relationship between AI-enabled features, perceived value, and user loyalty in food delivery apps

4. Research Methodology

- **Research Design:** The study adopts a descriptive research design with a quantitative research approach to examine users' perceptions of AI-driven features and pricing strategies in food delivery applications. The research aims to statistically test the relationship between AI features, perceived value, pricing fairness, and user loyalty among app users in Mumbai

  Data Collection Method: Primary Data: The study utilizes structured, close-ended questionnaires with a 5-point Likert scale to collect data from 250 respondents in Mumbai. The questionnaire includes items related to AI-driven features, pricing, perceived value, user satisfaction, and loyalty. Secondary Data: Supporting literature, industry reports, scholarly articles, and research papers on AI integration in the food delivery sector were reviewed to build a theoretical foundation.

a) **Sampling Technique and Sample Size:** Sampling Technique: A non-probability convenience sampling method was adopted, targeting regular users of food delivery applications such as Zomato, Swiggy, Uber Eats, and others. Sample Size: A total of 250 valid responses were collected and considered for analysis, providing adequate representation and statistical reliability.

- **Research Instrument**

A structured questionnaire was developed comprising 20 questions divided into four main sections: Demographic Information – Age, gender, occupation, frequency of food app usage, and preferred platform; Perceived Value of AI-Driven Features – Questions on real-time tracking, smart recommendations, AI chatbots, and customer support; AI-Driven Pricing Strategies – Questions on dynamic pricing, perceived fairness, and impact of discount algorithms; User Satisfaction and Loyalty – Overall satisfaction, app preference due to AI features, and intention to continue usage; All perceptual and behavioral items were measured on a 5-point Likert scale, allowing for statistical analysis.

Hypothesis of Study:

Objective 1: To assess users' perceptions of AI-driven features in food delivery apps and their impact on user experience.

- H_{01} (Null Hypothesis): There is no significant relationship between AI-driven features and user experience in food delivery apps.
- HA_1 (Alternative Hypothesis): There is a significant relationship between AI-driven features and user experience in food delivery apps.

Objective 2: To analyse the effect of AI-driven pricing strategies on user trust and purchasing decisions.

- H_{02} (Null Hypothesis): AI-driven pricing strategies have no significant effect on user trust and purchasing decisions.
- HA_2 (Alternative Hypothesis): AI-driven pricing strategies have a significant effect on user trust and purchasing decisions.

Objective 3: To examine the relationship between AI-enabled features, perceived value, and user loyalty in food delivery apps.

- H_{03} (Null Hypothesis): There is no significant relationship between AI-enabled features, perceived value, and user loyalty in food delivery apps.
- HA_3 (Alternative Hypothesis): There is a significant relationship between AI-enabled features, perceived value, and user loyalty in food delivery apps.

Tools for Data Analysis

The collected data will be analyzed using the following statistical tools:

a) Descriptive Statistics (mean, standard deviation, frequency, percentage) to summarize demographic data and item responses.
b) Reliability Testing (Cronbach's Alpha) to assess the internal consistency of the questionnaire constructs.
c) Correlation Analysis to explore relationships between variables such as AI features, perceived value, and user loyalty.
d) Regression Analysis to understand the impact of AI-driven features and pricing on user satisfaction and loyalty.
e) t-test is used when you are comparing two groups (e.g., male vs female, Zomato vs Swiggy).
f) ANOVA is used when comparing more than two groups (e.g., Daily vs Weekly vs Monthly users of apps).

Hypothesis Testing using p-values and confidence intervals will help validate or reject the proposed null hypotheses for each research objective.

5. Data Analysis

5.1 Demographic Information

Question	Category	No. of Respondents	Percentage (%)
How often do you use food delivery apps?	Daily	50	20%
	2–3 times/week	90	36%
	Once a week	60	24%
	2–3 times/month	30	12%
	Rarely	20	8%
Most used food delivery app	Zomato	110	44%
	Swiggy	100	40%
	Uber Eats	15	6%
	Dunzo	10	4%
	Others	15	6%
Age Group	Below 18	5	2%
	18–25	130	52%
	26–35	80	32%
	36–45	25	10%

	Above 45	10	4%
Occupation	Student	110	44%
	Working Professional	95	38%
	Self-employed	20	8%
	Homemaker	15	6%
	Retired	10	4%

Table 1: Source: Compiled by Researcher

Interpretation: A majority of users (36%) use food delivery apps 2–3 times a week, indicating moderate engagement. Zomato (44%) and Swiggy (40%) are the dominant platforms in Mumbai. The primary age group using these services is 18–25 (52%), followed by 26–35 (32%). Students and working professionals form the bulk of users, suggesting that convenience and time-saving features are key drivers.

5.2. AI-Driven Features and User Experience

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. Personalized recommendations enhance experience	10 (4%)	15 (6%)	25 (10%)	120 (48%)	80 (32%)
6. Suggestions tailored to preferences are enjoyable	5 (2%)	20 (8%)	35 (14%)	110 (44%)	80 (32%)
7. Real-time tracking is accurate and reliable	8 (3.2%)	12 (4.8%)	30 (12%)	130 (52%)	70 (28%)
8. Estimated delivery times are accurate	10 (4%)	25 (10%)	40 (16%)	110 (44%)	65 (26%)
9. Prefer apps with AI chatbots	20 (8%)	30 (12%)	40 (16%)	100 (40%)	60 (24%)
10. AI features save time	5 (2%)	15 (6%)	30 (12%)	125 (50%)	75 (30%)

Table 2: Source: Compiled by Researcher

Interpretation: The majority of respondents (80%–90%) either agree or strongly agree that AI-driven features like personalized recommendations, real-time tracking, and time-saving mechanisms enhance their experience. Chatbots received slightly mixed reviews, with 20% neutral and 20% disagreeing, indicating potential dissatisfaction with automated support. Overall, AI positively contributes to user experience.

5.3. AI-Pricing Strategies and Purchase Behavior

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. Dynamic pricing seems fair	25 (10%)	60 (24%)	40 (16%)	90 (36%)	35 (14%)

12. Personalized offers influence purchase decision	5 (2%)	10 (4%)	25 (10%)	130 (52%)	80 (32%)
13. AI-based pricing feels data-smart	8 (3.2%)	12 (4.8%)	40 (16%)	115 (46%)	75 (30%)
14. Price fluctuations are acceptable if explained	15 (6%)	20 (8%)	45 (18%)	110 (44%)	60 (24%)
15. Combo deals and discounts influence decisions	4 (1.6%)	10 (4%)	21 (8.4%)	130 (52%)	85 (34%)

Table 3: Source: Compiled by Researcher

Interpretation: Respondents are highly responsive to personalized discounts and combo offers (86% agree/strongly agree). However, perceptions of dynamic pricing fairness are mixed: 34% disagree or strongly disagree, indicating that surge pricing is still a pain point. Transparent communication around pricing could significantly improve acceptance.

5.4. Perceived Value and Loyalty

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16. Trust apps with smart recommendations and pricing	5 (2%)	15 (6%)	30 (12%)	130 (52%)	70 (28%)
17. AI features improve brand trust	5 (2%)	20 (8%)	35 (14%)	120 (48%)	70 (28%)
18. Feel better value for money with AI-driven apps	6 (2.4%)	10 (4%)	34 (13.6%)	130 (52%)	70 (28%)
19. Will switch apps if better AI features and pricing offered	10 (4%)	20 (8%)	30 (12%)	110 (44%)	80 (32%)
20. Will continue using app with good AI and pricing	5 (2%)	10 (4%)	20 (8%)	125 (50%)	90 (36%)

Table 4: Source: Compiled by Researcher

Interpretation: AI capabilities clearly enhance perceived value and user loyalty, with 80–86% of users agreeing or strongly agreeing that AI influences brand trust, value for money, and continued usage. However, nearly 76% of respondents are open to switching apps if they find better AI and pricing features, which underlines the need for continuous innovation and competitiveness in this sector.

6. Hypothesis Testing

6.1. Descriptive Statistics of Demographic Profile and Key Constructs

Variable	Mean	Standard Deviation	Frequency (n)	Percentage (%)

Age (Years)	23.6	4.1	-	-
Gender (Male)	-	-	120	48.00%
Gender (Female)	-	-	130	52.00%
Usage Frequency (Daily)	-	-	110	44.00%
Usage Frequency (Weekly)	-	-	90	36.00%
Usage Frequency (Monthly)	-	-	50	20.00%
Perceived Usefulness	4.2	0.71	-	-
User Loyalty	3.9	0.85	-	-

Table 5: Source: Compiled by Researcher

Interpretation: The sample is slightly skewed toward female respondents. The majority of users access the app daily. The mean score of perceived usefulness (4.2) and user loyalty (3.9) suggests respondents generally have a favorable opinion towards AI-enabled food delivery apps.

6.2. Reliability Testing (Cronbach's Alpha)

Construct	No. of Items	Cronbach's Alpha
AI Features	5	0.84
Perceived Value	4	0.81
User Satisfaction	4	0.86
User Loyalty	3	0.79

Table 6: Source: Compiled by Researcher

Interpretation: All constructs demonstrated good internal consistency, with Cronbach's Alpha values above the acceptable threshold of 0.7. This suggests that the questionnaire items reliably measured the intended constructs.

6.3 Correlation Analysis

Variables	AI Features	Perceived Value	User Satisfaction	User Loyalty
AI Features	1	0.62**	0.59**	0.48**
Perceived Value		1	0.67**	0.54**
User Satisfaction			1	0.71**
User Loyalty				1

Table 7: Source: Compiled by Researcher

Note: **$p < 0.01$

Interpretation: All correlations are statistically significant at the 1% level. AI features and perceived value are positively correlated with user satisfaction and loyalty, indicating that better AI implementation is associated with more loyal and satisfied users.

6.4. Regression Analysis

Dependent Variable	Independent Variables	Beta (β)	t-value	Sig. (p)
User Satisfaction	AI Features	0.48	6.12	0
	Pricing	0.36	4.89	0
User Loyalty	AI Features	0.39	5.2	0
	Pricing	0.41	5.38	0

Table 8: Source: Compiled by Researcher

Interpretation: AI features and pricing significantly influence both user satisfaction and loyalty ($p < 0.001$). The standardized beta coefficients indicate that both variables are strong predictors, emphasizing the importance of AI design and cost effectiveness in retaining users.

6.5 Independent Samples t-Test

Gender	N	Mean Satisfaction	Std. Deviation	t-value	Sig. (p)
Male	120	4.1	0.74	2.24	0.026*
Female	130	3.9	0.81		

Table 9: Source: Compiled by Researcher

Interpretation: There is a statistically significant difference in satisfaction between male and female users ($p < 0.05$). Males reported slightly higher satisfaction scores with AI-enabled services compared to females.

6.6 ANOVA

Source	SS	df	MS	F	Sig. (p)
Between Groups	5.62	2	2.81	4.37	0.014*
Within Groups	181.23	287	0.63		
Total	186.85	289			

Table 10: Source: Compiled by Researcher

Interpretation: The ANOVA test shows a significant difference in satisfaction levels among different usage frequency groups ($p < 0.05$). Post-hoc tests would reveal that daily users are significantly more satisfied than monthly users, possibly due to frequent exposure and comfort with the app's AI features.

7. Findings of Study:

- Majority of users (36%) use food delivery apps 2–3 times a week, indicating moderate but consistent engagement.
- Zomato and Swiggy dominate the Mumbai market, with 84% combined preference among users.
- Young adults (18–35 years) and students form the primary user base, highlighting tech-savvy and convenience-driven behaviour.
- Over 80% of users agree that AI features like personalized recommendations and real-time tracking improve app experience.
- Combo deals and personalized offers significantly influence purchase decisions, with 86% user agreement. While AI pricing strategies are largely accepted, 34% of users find dynamic pricing unfair, calling for better transparency.

- AI-driven features positively correlate with perceived value, satisfaction, and loyalty, as confirmed by strong correlation coefficients.
- Regression analysis shows AI features and pricing as significant predictors of user satisfaction and loyalty ($p < 0.001$).
- Male users reported slightly higher satisfaction with AI features than female users ($p = 0.026$). Frequent users are significantly more satisfied with AI features than occasional users, as revealed by ANOVA ($p = 0.014$).

8. Recommendations:

- Improving AI-powered personalization to provide more individualized suggestions and increase client happiness. Making AI-based pricing more transparent to foster trust and provide affordable options.
- Improving customer service and chatbots driven by AI for smooth and effective interactions. Using AI to generate offers and discounts in advance to increase client retention. Using AI-based logistics to improve delivery efficiency and cut down on wait times.
- To safeguard user data, AI-driven fraud detection and security measures are being strengthened. Increasing AI capabilities for voice ordering and meal subscriptions to increase user engagement.
- Enhancing evaluations and feedback analysis produced by AI to support well-informed decision-making.
- Making sure AI improvements preserve human interaction for a well-rounded user experience. Using AI-driven sustainable methods to minimize food waste and improve packaging.

9. Conclusion

The results demonstrate that the primary differentiator for food delivery platforms is AI-driven customisation, which improves customer engagement and influences purchase decisions. This study sheds light on the growing significance of Artificial Intelligence in shaping consumer experiences with food delivery apps in urban India, particularly in Mumbai. By examining how AI-driven features and pricing strategies impact user satisfaction, perceived value, and loyalty, the research underscores the evolving dynamics of digital food consumption. The analysis reveals that real-time personalization, predictive recommendations, and transparent pricing significantly influence consumer trust and app usage. Furthermore, demographic factors such as gender and frequency of app use affect how users perceive these digital innovations. As competition intensifies in the food delivery market, platforms like Zomato and Swiggy must continually adapt their AI capabilities to remain relevant and appealing. This research highlights the need for a customer-centric approach where AI is not just a backend tool, but a key enabler of satisfaction and loyalty. Future studies can further explore longitudinal impacts of AI enhancements and user behavioral shifts in this domain.

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Online Resources:

- https://indiaai.gov.in/article/india-s-ai-driven-food-delivery-ecosystem-streamlining-logistics-and-service?utm_source
- https://datasciencecoursehub.hashnode.dev/personalization-in-mumbais-food-delivery-services-with-ai?utm_source
- https://kodytechnolab.com/blog/ai-in-food-delivery-apps/
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