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A Comparative Study of Online Food Delivery App among Rural and Uraban people

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Abstract : *The rapid growth of digital technology and smartphone usage has significantly transformed consumer purchasing behaviour, particularly in the food service industry. Online food delivery applications provide consumers with convenient access to restaurant menus, multiple food choices, promotional offers, digital payment facilities, and doorstep delivery. However, the adoption and usage of these applications may differ between rural and urban consumers due to variations in digital accessibility, service availability, purchasing power, lifestyle, and consumer preferences. This study, titled "A Comparative Study of Online Food Delivery Apps Among Rural and Urban People," aims to examine the usage patterns and preferences of online food delivery applications and compare the factors influencing their adoption among rural and urban consumers. The study focuses on frequency of ordering, preferred applications, food choices, expenditure per order, convenience, affordability, delivery services, digital accessibility, and customer satisfaction. A descriptive and comparative research design is proposed, using primary data collected through a structured questionnaire. An illustrative sample design of 200 respondents, comprising 100 rural and 100 urban consumers, is considered for planning the analysis. Secondary data may be obtained from academic journals, published research articles, industry reports, and other relevant sources. The proposed statistical techniques include frequency and percentage analysis, chi-square tests, independent-samples t-tests, reliability analysis, multiple regression, and binary logistic regression. Exploratory factor analysis may also be used to identify the underlying dimensions influencing adoption. The study is expected to provide insights into differences in consumer behaviour, the role of convenience and affordability, and the challenges associated with online food delivery services in rural and urban areas. The findings may help food delivery companies improve service accessibility, develop region-specific marketing strategies, and enhance customer satisfaction. The study may also contribute to a better understanding of digital consumer behaviour and the changing food purchasing practices of Indian consumers..*

Keywords: Online Food Delivery Apps, Rural Consumers, Urban Consumers, Consumer Behaviour, Customer Satisfaction

I. INTRODUCTION

The rapid development of information and communication technology has significantly transformed consumer behaviour and purchasing patterns across the world. The widespread use of smartphones, internet connectivity, digital payment systems, and mobile applications has changed the way people access products and services. One of the most notable developments in this digital transformation is the emergence of online food delivery applications. These applications have revolutionised the food service industry by providing consumers with a convenient platform to order food from restaurants and have it delivered to their homes, workplaces, or other preferred locations. Online food

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delivery apps have become an important part of modern consumer lifestyles, particularly among people who seek convenience, variety, and time-saving solutions.

Online food delivery applications such as Swiggy, Zomato, and other regional platforms enable customers to browse restaurant menus, compare prices, read customer reviews, access discounts, make digital payments, and track their orders in real time. These features have made food ordering easier and more accessible than traditional methods of purchasing food. In addition, online food delivery platforms provide restaurants with opportunities to expand their customer base, improve market visibility, and generate additional revenue. The increasing competition among food delivery companies has also encouraged the introduction of promotional offers, subscription plans, faster delivery services, and personalised recommendations to attract and retain customers.

The adoption of online food delivery applications is influenced by several factors, including convenience, affordability, food quality, variety of choices, delivery speed, ease of use, digital literacy, trust, and payment security. Consumers may also be influenced by advertisements, social media promotions, customer ratings, peer recommendations, and special discounts. While some consumers use these applications regularly because of their busy schedules and changing lifestyles, others may use them occasionally for special occasions, family gatherings, or when preparing food at home is difficult. Therefore, understanding the factors that influence the adoption and usage of online food delivery applications is essential for examining contemporary consumer behaviour.

A comparative study of rural and urban people is particularly important because the availability, accessibility, and acceptance of digital services may differ between these two regions. Urban consumers generally have greater access to restaurants, wider internet connectivity, a larger selection of food delivery services, and more delivery options. The presence of numerous restaurants and food outlets in urban areas may encourage consumers to use online food delivery applications more frequently. Furthermore, busy work schedules, educational commitments, professional lifestyles, and limited time for cooking may increase the demand for online food ordering among urban residents.

In contrast, rural consumers may experience different opportunities and challenges in accessing online food delivery services. Although smartphone usage and digital payment adoption are expanding in rural areas, the availability of food delivery applications may be restricted by limited restaurant partnerships, longer delivery distances, inadequate delivery infrastructure, and service coverage limitations. Factors such as internet accessibility, awareness of food delivery platforms, digital literacy, affordability, and trust in online transactions may also influence rural consumers' adoption of these applications. However, rural consumers should not be considered a uniform group, as their preferences and usage patterns may vary according to age, education, occupation, income, location, and familiarity with digital technology.

Comparing rural and urban consumers can help identify similarities and differences in their awareness, preferences, purchasing frequency, spending patterns, satisfaction levels, and challenges associated with online food delivery applications. The comparison can also reveal whether factors such as convenience, discounts, food variety, delivery charges, and digital payment facilities influence both groups equally or have different levels of importance. In addition, examining consumer satisfaction and service-related difficulties can provide valuable insights into the factors that encourage repeat purchases and long-term usage.

The growth of online food delivery applications also raises concerns regarding additional service charges, food quality, hygiene, delayed deliveries, order accuracy, data privacy, and the reliability of digital payments. These concerns may influence consumers' willingness to adopt and continue using such services. Understanding these issues from both rural and urban perspectives can help food delivery companies improve their services, develop appropriate marketing strategies, and expand their customer base.

In this context, the present study, titled “A Comparative Study of Online Food Delivery Apps Among Rural and Urban People,” aims to examine the usage patterns, preferences, and factors influencing the adoption of online food delivery applications among rural and urban consumers. The study seeks to understand the differences in consumer behaviour, identify the major factors affecting purchasing decisions, and assess the challenges faced by consumers in both regions. The findings may help online food delivery companies, restaurant operators, and marketers develop strategies to

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improve accessibility, customer satisfaction, and service efficiency while addressing the specific needs of rural and urban consumers.

II. REVIEW OF LITERATURE

1. Shroff, Shah, and Gajjar (2022) conducted a systematic literature review on online food delivery services to examine the development and major research themes in the industry. The study reviewed 43 articles published between 2015 and March 2021. The findings identified four major research areas: digital mediation, operational management, consumer adoption, and trust and risk issues. The study highlighted the importance of understanding consumer behaviour and the challenges associated with online food delivery platforms.

2. Shankar et al. (2022) examined online food delivery through a systematic synthesis of existing literature and developed a conceptual framework for understanding consumer behaviour. The study explored different theoretical approaches, including the Technology Acceptance Model (TAM), Theory of Planned Behaviour (TPB), and Unified Theory of Acceptance and Use of Technology (UTAUT). The findings indicated that technological convenience, consumer perceptions, trust, and service quality are important areas for understanding the adoption and continued use of online food delivery services.

3. Chiu, Badu-Baiden, and Cho (2024) investigated consumers' intention to use online food delivery services through a meta-analytic structural equation modelling approach. The researchers analysed 60 studies comprising 61 independent samples and 25,390 participants. The findings revealed that perceived ease of use, perceived usefulness, trust, and price-saving orientation play important roles in shaping consumers' intentions to use online food delivery services. The study provides a useful foundation for comparing the factors influencing app usage among rural and urban consumers.

4. Shankar et al. (2024) examined why consumers choose online food delivery services through a meta-analytic review. The study identified performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived risk as important factors influencing perceived value. The findings further established that perceived value influences usage behaviour, which subsequently affects customer satisfaction, trust, and loyalty. The study highlights the importance of examining technological accessibility and consumer perceptions when comparing rural and urban users.

5. Ahmad (2023) investigated consumer adoption of online food delivery services through the development and validation of a measurement scale. The study focused on identifying and measuring the factors associated with consumers' adoption of online food delivery platforms. This research is relevant to understanding the different dimensions of consumer adoption and provides a foundation for assessing app usage, preferences, and behavioural intentions among different consumer groups.

6. Ahmad (2024) examined online food delivery adoption in the context of consumer behaviour and technology acceptance. Research in this area emphasises that consumers' willingness to use digital food ordering platforms depends on their perceptions of convenience, ease of use, usefulness, and service reliability. These factors are relevant to the present study because differences in digital familiarity, accessibility, and service availability may influence the adoption of food delivery applications among rural and urban populations.

7. Kaur et al. (2021) examined factors associated with consumer adoption of online food delivery services. Research on this subject highlights the role of convenience, digital accessibility, service quality, and the availability of multiple restaurant choices in encouraging customers to use online food ordering platforms. These factors help explain why consumers may prefer app-based ordering over traditional food purchasing methods and provide a basis for examining differences in consumer preferences across geographical regions.

8. Ray et al. (2019) investigated consumer behaviour in the context of mobile food-ordering applications. Their research explored how technological features and consumer perceptions influence the use of digital food ordering services. The study contributes to understanding the importance of application functionality, convenience, and the overall ordering experience in shaping consumer decisions. These dimensions are useful for examining whether rural and urban consumers differ in their expectations and usage patterns.

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9. Zhao and Bacao (2020) examined consumers' behavioural intentions towards using online food delivery services during the COVID-19 pandemic. The study highlighted the relevance of consumer attitudes, perceived usefulness, and risk-related perceptions in explaining the intention to use digital food delivery platforms. The research is relevant to understanding how external circumstances and perceptions of safety can influence consumers' food-ordering decisions and continued use of online delivery applications.
10. Cai and Leung (2020) examined consumer responses to online food delivery services and the factors affecting their acceptance. Research in this area highlights the importance of service convenience, perceived value, consumer expectations, and the overall digital ordering experience. These factors provide a useful basis for analysing consumer satisfaction and repeat usage of food delivery applications. The present study extends this area of research by considering whether the importance of these factors differs between rural and urban consumers.

Objectives:
1. To examine the usage patterns and preferences of online food delivery applications among rural and urban people, with particular reference to frequency of ordering, preferred applications, types of food ordered, and spending patterns.
2. To compare the factors influencing the adoption and usage of online food delivery applications among rural and urban people, with particular reference to convenience, affordability, food variety, delivery services, digital accessibility, and customer satisfaction.

III. RESEARCH METHODOLOGY

The study entitled "A Comparative Study of Online Food Delivery Apps Among Rural and Urban People" adopts a descriptive and comparative research design to examine the usage patterns, preferences, and factors influencing the adoption of online food delivery applications among rural and urban consumers. The study is based on primary data collected from respondents through a structured questionnaire. For illustrative purposes, a sample of 200 respondents, comprising 100 rural and 100 urban consumers, is considered. A suitable sampling technique, such as stratified sampling, may be adopted to ensure representation from both geographical groups. The questionnaire covers demographic characteristics, frequency of app usage, preferred applications, food preferences, spending patterns, convenience, affordability, digital accessibility, service quality, and customer satisfaction. Secondary data may be collected from research articles, journals, books, industry reports, and relevant publications on online food delivery services. The collected data can be analysed using frequency and percentage analysis, chi-square tests, independent-samples t-tests, Cronbach's alpha, multiple regression, and binary logistic regression, depending on the nature of the variables and the suitability of the data. Exploratory factor analysis and structural equation modelling may also be considered if the sample size and measurement quality are adequate. Statistical analysis can be performed using SPSS, Jamovi, or comparable software. The study should obtain informed consent, protect respondents' confidentiality, and report only results supported by the actual collected data.

IV. DATA ANALYSIS AND INTERPRETATION:

Table 1: Distribution of Respondents by Area

Area	Respondents	Percentage
Rural	100	50%
Urban	100	50%
Total	200	100%

Statistical tool: Frequency and percentage analysis.
Interpretation: The illustrative sample consists of 200 respondents, with 100 respondents each from rural and urban areas. This balanced distribution provides a basis for comparing consumer behaviour across the two geographical

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groups. The final sample size should be determined based on the study design, statistical power, and requirements of the selected analytical techniques.

Table 2: Frequency of Using Online Food Delivery Applications

Usage frequency	Rural (n=100)	Urban (n=100)
Daily	5 (5%)	15 (15%)
Weekly	25 (25%)	45 (45%)
Monthly	30 (30%)	25 (25%)
Occasionally	40 (40%)	15 (15%)
Total	100 (100%)	100 (100%)

Statistical tool: Chi-square test of independence.

The chi-square test examines whether usage frequency is associated with residential area.

\[H_0:\text{Usage frequency is independent of area} \]

\[H_1:\text{Usage frequency is associated with area} \]

Interpretation: The illustrative results indicate that 60% of urban respondents use food delivery applications daily or weekly, compared with 30% of rural respondents. Conversely, occasional usage is higher among rural respondents (40%) than urban respondents (15%). This pattern suggests that urban consumers may use online food delivery applications more regularly. A chi-square test should be performed on the actual survey data to establish whether the observed association is statistically significant.

Table 3: Preferred Online Food Delivery Application

Application	Rural (n=100)	Urban (n=100)
Swiggy	30 (30%)	45 (45%)
Zomato	35 (35%)	40 (40%)
Other applications	10 (10%)	5 (5%)
No specific preference	25 (25%)	10 (10%)
Total	100 (100%)	100 (100%)

Statistical tool: Chi-square test of independence.

Interpretation: Zomato is the most preferred application among rural respondents, whereas Swiggy leads among urban respondents in this illustrative dataset. A chi-square test can determine whether application preference is significantly associated with residential area. The test should be performed using the observed survey frequencies, with categories combined where necessary to address small expected cell counts.

Table 4: Factors Influencing Food Delivery App Usage

Multiple responses permitted.

Factor	Rural (%)	Urban (%)
Convenience	65%	85%
Discounts and offers	75%	65%
Food variety	50%	75%
Time-saving	45%	80%
Easy payment options	40%	70%
Home delivery	60%	85%

Statistical tool: Multiple-response analysis and comparison of proportions.

Interpretation: Discounts and offers appear relatively important among rural respondents, while convenience, food variety, time-saving, and home delivery receive higher responses among urban respondents. A two-proportion test or

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logistic regression can be used to examine whether these differences are statistically significant. Since multiple responses are permitted, the percentages need not total 100%.

Objective 2: To compare the factors influencing adoption and usage among rural and urban people.

Table 5: Comparative Satisfaction with Online Food Delivery Applications

Satisfaction level	Rural (%)	Urban (%)
Highly satisfied	16%	30%
Satisfied	40%	50%
Neutral	24%	14%
Dissatisfied	16%	6%
Highly dissatisfied	4%	0%
Total	100%	100%

Statistical tool: Chi-square test of independence.

The hypotheses are:

\(H_0\): Satisfaction level is independent of residential area.

\(H_1\): Satisfaction level is associated with residential area.

Interpretation: In this illustrative dataset, 56% of rural respondents and 80% of urban respondents report being satisfied or highly satisfied. The distribution suggests higher satisfaction among urban consumers. The chi-square test can assess the association between residential area and satisfaction. Because some expected frequencies are small, adjacent satisfaction categories may need to be combined before conducting the test.

Table 6: Independent-Samples t-Test for Mean Satisfaction Scores

Assume satisfaction is measured using a five-point Likert scale, where 1 represents highly dissatisfied and 5 represents highly satisfied.

Statistical measure	Rural	Urban
Sample size	100	100
Mean satisfaction score	To be calculated	To be calculated
Standard deviation	To be calculated	To be calculated

V. FINDINGS

1. Usage Patterns: The study indicates that online food delivery applications are used by both rural and urban consumers. Urban respondents tend to use these applications more frequently, whereas rural respondents are more likely to order food occasionally.

2. Application Preferences: Swiggy and Zomato emerge as the major food delivery applications preferred by respondents. Preferences may differ between rural and urban consumers depending on service availability, promotional offers, and user experience.

3. Food Preferences: Fast food appears to be the most commonly preferred category among both rural and urban respondents. However, rural consumers may demonstrate relatively greater preference for traditional food, depending on local availability and eating habits.

4. Spending Behaviour: Rural respondents tend to spend smaller amounts per order, while urban respondents are more likely to spend higher amounts. This difference may be associated with income levels, purchasing power, ordering frequency, and lifestyle.

5. Factors Influencing Usage: Convenience, discounts, food variety, time-saving, and home delivery are important factors influencing the use of online food delivery applications. Rural consumers may give greater importance to discounts and affordability, while urban consumers may prioritise convenience and time efficiency.

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6. Customer Satisfaction: Urban respondents appear to report higher satisfaction with online food delivery services than rural respondents. Differences in restaurant availability, delivery speed, food quality, and service reliability may contribute to variations in satisfaction.
7. Challenges Faced by Rural Consumers: Limited restaurant availability, high delivery charges, and delayed deliveries emerge as potential challenges for rural consumers. These factors may restrict the accessibility and regular usage of online food delivery applications in rural areas.
8. Digital Accessibility: Access to reliable internet connectivity, familiarity with mobile applications, and the availability of digital payment facilities may influence consumers' adoption of online food delivery services. These factors are particularly relevant when comparing rural and urban populations.
9. Role of Service Quality: Delivery speed, order accuracy, food quality, and payment security are important dimensions that may influence customer satisfaction and repeat usage. Improvements in these areas can help food delivery platforms retain customers in both geographical settings.
10. Comparative Consumer Behaviour: The comparison suggests that rural and urban consumers differ in their usage frequency, spending patterns, preferences, and perceived barriers. Food delivery companies may therefore benefit from developing region-specific strategies that address the needs and expectations of both groups.

VI. CONCLUSION

Online food delivery applications have transformed the food service industry by offering consumers convenience, a wide variety of food choices, digital payment facilities, and doorstep delivery. The comparative study of rural and urban consumers highlights the importance of understanding geographical differences in app adoption, usage frequency, spending patterns, and customer satisfaction. Urban consumers may benefit from wider restaurant availability, faster delivery services, and greater choice, while rural consumers may face challenges related to limited service coverage, delivery charges, and infrastructure constraints. Convenience, affordability, discounts, food variety, digital accessibility, and service quality are important factors that may influence consumer behaviour in both regions. Food delivery companies should therefore develop strategies that address the specific needs of rural and urban consumers, including affordable delivery options, improved service coverage, reliable transactions, and better customer support. Overall, expanding access to online food delivery services while maintaining food quality, affordability, and customer satisfaction can support the sustainable growth of this industry. The final conclusions should be validated using actual survey data and appropriate statistical tests.

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