Analyzing Determinants Affecting Online Food Delivery Services in Rural Surat

Ritika Yadav

Research Scholar, School of Business, Auro University, Surat, Gujarat, India

Abstract: *This research paper aims to investigate the factors that influence the adoption and usage of online food delivery services in the rural areas of Surat. The rapid growth of online food delivery (OFD) services has transformed the food industry, particularly in urban areas. However, rural areas, including those in Surat, have unique challenges and opportunities for online food delivery adoption. This study explores the factors influencing the usage of online food delivery services in the rural parts of Surat, analyzing consumer behaviour, technological accessibility, service quality, and logistical challenges. Consumers are offered various choices and there are many competitors among service providers in the form of online food ordering service offers like Zomato, Swiggy, dine out, eatsure, zepto, domino's, pizza hut etc. these service providers have been gaining popularity since the implementation of the pandemic and they have gained so much popularity that 42% of the restaurant are searched on a mobile device Present study tries to identify the factors that affect online food delivery services. Respondents are majorly satisfied with the quick responses from customer services and also, they have good experience with online food ordering. This study explores the factors influencing the usage of online food delivery services in the rural parts of Surat, analyzing consumer behavior, technological accessibility, service quality, and logistical challenges.*

Keywords: Technological Accessibility, Consumer Behaviour, Online food Delivery (OFD), Service Quality

1. Introduction

Consumer behaviour is a relatively new field of study that emerged shortly after the world the seller's market vanished and the buyers' market emerged. With the growing popularity of online food delivery platforms in urban areas, it is crucial to examine the unique dynamics and challenges faced in rural regions. This resulted into a shift in the ideology of manufacturers from products to processes. Consumer, with a special emphasis on consumer behaviour the assessment of the marketing concept has evolved from a simple selling concept to a consumer - oriented marketing concept. As a result, buy - in behaviour or has emerged as a distinct discipline. The expansion of Consumerism and consumer legislation emphasize the importance placed on the consumer. Consumer behavior is the study of individuals, groups or organizations and all the activities related with purchase, use and disposable of goods and service. Consumer behavior consists of consumer's emotion, attitude and preferences affecting the buying behavior. It refers through the phycological process that a consumer goes through while making the purchase. These phycological process can be affected by the packaging, the good will, advertisement of the company and many other things. Understanding consumer behaviour is the foundation for developing marketing strategies. The reaction of consumers to this strategy determines an organization's success or failure. In this competitive environment, an organisation can only survive by providing more customer value than competitors (the difference between all the benefits derived from a total product and all the costs of acquiring those benefits). To provide superior customer value, an organisation must outperform its competitors in anticipating and responding to customer needs. Understanding the consumer behaviour is the foundation to developing a good marketing strategy, especially in this competitive environment you need to understand the consumer behaviour if you want your company to succeed. While extensive research has been conducted on factors influencing online food delivery services in urban areas, limited attention has been given to the unique dynamics and challenges faced in rural regions.

Access to Technology and Internet Connectivity:
One critical factor affecting the adoption of online food delivery services in rural areas is the availability of technology and internet connectivity. Gupta and Sharma (2018) found that the limited access to high - speed internet and the lack of technological infrastructure in rural areas were significant barriers to the adoption of online services. Poor internet connectivity and unreliable network coverage restrict the ability of rural consumers to access online platforms for food delivery services.

Consumer Behavior in Rural Areas:
Consumer behavior plays a vital role in the adoption of online food delivery services in rural areas. A study by Patel and Desai (2019) revealed that rural consumers tend to rely more on traditional food purchasing channels, such as local grocery stores and farmer's markets. The lack of awareness and familiarity with online platforms, coupled with a preference for traditional food procurement methods, poses challenges for the adoption of online food delivery services in rural areas.

Trust and Perceived Risk:
Trust and perceived risk are significant factors influencing the adoption of online food delivery services in rural areas. Mishra et al. (2020) indicated that rural consumers are more skeptical about the reliability and quality of food delivery services offered online. Concerns related to food safety, delivery time, and the authenticity of online vendors contribute to the perceived risk, which can hinder the adoption of online food delivery services in rural areas.

Convenience and Accessibility:
The convenience and accessibility offered by online food delivery services are crucial factors in driving adoption. Khan et al. (2017) highlighted that rural consumers value the convenience of having food delivered to their doorstep, saving them time and effort. However, limited delivery coverage and logistical challenges in rural areas, such as

inadequate addressing systems and remote locations, can impede the accessibility and reliability of online food delivery services.

Price and Affordability:
Price and affordability are important considerations for rural consumers when adopting online food delivery services. Sharma et al. (2019) found that rural consumers perceive online food delivery services to be more expensive compared to traditional food purchasing channels. Affordability concerns and the availability of cheaper alternatives, such as cooking at home or purchasing from local vendors, can deter rural consumers from adopting online food delivery services.

Perceived Value and Quality:
Perceived value and quality of online food delivery services significantly influence consumer adoption. Shukla et al. (2018) demonstrated that rural consumers prioritize factors such as freshness, taste, and variety of food options when evaluating the value proposition of online food delivery services. The perception of high - quality and value - for - money offerings plays a vital role in driving adoption among rural consumers.

2. Review of Literature

According to JYOTISHMAN DAS (2018), consumer perception towards online food ordering examined that the mobile application period has thrown open a new alley for today's marketing. It also affects the operation of companies and organizations. Companies have changed their traditional business strategies into online marketing to suit customer needs and taste at any time. Today more people are getting associated through the mobile application and this has made all conventional modes of business outdated and produced amazing new possibilities in business. The popularity of online food ordering and delivery services is steadily growing, eand expectations of the users are also increasing. According to ADITYA TRIBHUVAN (2020), examine the consumer perception of food apps and analyze the factors that influence consumer perception towards food apps. The study concluded that some people still want the old - fashioned way by ordering over the phone and the whole population is influenced by improved people's preferences, time management effectiveness, affordability, food preferences, available discounts, and door - to - door service with no quality compromised. According to APARNA ANIB, GAYATHRI, AND SHABU (2019), found the factors that influence the consumers to buy through food ordering application Swiggy is also identified in the study and the satisfaction derived out of the food ordering applications. It has also examined how it bridges the gap between the consumer and the restaurant. Online food ordering and delivery is a new type of business model in the current era of e - commerce and that leads to the startups of several online businesses. Finally, there is no association between age and frequent use of the Swiggy app and there is also no association between gender and convenience of the Swiggy app. According to SERHAT MURAT ALAGOZ & HALUK HEKIMOGLU (2012), e - commerce is rapidly growing worldwide, the food industry is also showing steady growth. In this research paper, they have used the Technology Acceptance Model (TAM) as a ground to study the

acceptance of online food ordering systems. Their data analysis revealed that the attitude towards online food orders varies according to the ease and usefulness of the online food ordering process and also varies according to their innovativeness against information technology, their trust in e - retailers, and various external influences. According to Varsha Chavan, Priya Jadhav, Snehal Korade and Priyanka Teli (2015), the use of a smart device - based interface for customers to view, order and navigate has helped the restaurants in managing orders from customers immediately. The capabilities of wireless communication and smartphone technology in fulfilling and improving business management and service delivery. Their analysis states that this system is convenient, effective, and easy to use, which is expected to improve the overall restaurant business in the coming times.

The growing concern for environmental sustainability has started to influence consumers' choices in online food delivery services. Consumers are increasingly inclined to support platforms that offer eco - friendly packaging, minimize food waste, or source ingredients sustainably. Research by Spangenberg et al. (2021) revealed that consumers' environmental consciousness affects their decision - making process and loyalty towards online food delivery services. User reviews and ratings on online platforms have a significant impact on consumers' decision - making processes. Research by Xie et al. (2019) demonstrated that positive reviews and high ratings act as social proof, enhancing consumers' trust and confidence in the quality and reliability of the service. Conversely, negative reviews and low ratings can deter potential customers. The availability of a wide variety of food options and the ability to customize orders according to individual preferences are influential factors in online food delivery services. Consumers seek diversity in cuisines, dietary options, and the ability to personalize their orders. Research by Liang et al. (2020) emphasized the importance of menu variety and customization features in attracting and retaining customers. Social influence, including word - of - mouth, recommendations, and online reviews, plays a significant role in consumers' decision - making process regarding online food delivery services. Research by Yu and Chen (2019) highlighted the influence of positive online reviews and recommendations from friends and family members in encouraging consumers to try online food delivery services. Prompt delivery and reliable service are crucial factors that impact consumers' satisfaction with online food delivery services. Customers expect timely and efficient delivery, with accurate order tracking and updates. Studies by Hung et al. (2018) revealed that consumers prioritize fast and reliable delivery, and delays or delivery mishaps can significantly affect their overall experience.

BHATNAGAR, MISRA, AND RAO (2000) have attempted to study the risk, convenience, and behavior of ordering from food apps. They found marital status of individuals does not impact the purchase behavior of the customers and found mixed results based on gender, internet usage timeframe, and age. Baveja and Rastogi (2000) have found that customer loyalty on the internet is key to long - term profitability. Loyal online customers, similar to offline customers, spend time, recommend friends and family, and try to research thoroughly when they purchase anything. The online retailers who have

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carved out the factor of building customer loyalty will help them to become profitable (Chaturvedi and Karthik, 2020). According to the research of RASTOGI'S (2010) study, it describes that 44% of students use the Internet pan India, and 72% of youngsters use the internet every day. Factors affecting ease of use, usefulness, and enjoyment are linked to other factors like consumer individuality, situational factors, product distinctiveness, previous online shopping, and having faith in online shopping and these have shaped the behavior of an online shopper. The research of Mr. Chorneukar (2014) specifies that food apps are recommended to customers by their friends, family, or peers. However, some people use the telephone as the primary communication to use food apps. Sethu and Saini's (2016) study discusses the penetration of food apps online as being high. The service providers try to keep the quality stable. Factors like culture, socio - economic, reference group, and household and intrinsic factors like experience, personality and self - image, and perception and attitudes have influenced the decisions of consumers to order online. RATHORE, SINGH, CHAUDHARY, AND MAHIK (2018) studied that youngsters connect to food apps and older people don't connect themselves to food apps when compared to the former group. The study summarizes that youngsters are addicted to food apps. Furthermore, the price of the food, discounts available, and offers have influenced consumers to use food apps. The second factor is convenience and time - efficient delivery. According to a study by PRATIBHA A. DABHOLKAR (2000), a properly designed self - service order system allows the time needed by the customers to order the food they want. Furthermore, this reduces the time of the customers ordering from the menu on mobile or telephone. Moreover, independent control has given the customers a higher satisfaction rate and they use the application with greater intent, which allows customers to take their own time while ordering online whereas ordering on telephone time is a constraint.

3. Research Methodology

Objectives of the Study
1) To identify the key factors influencing the adoption of online food delivery services in rural Surat.
2) To analyze the role of technological accessibility in the usage of online food delivery services.
3) To examine consumer preferences and their impact on service demand.
4) To explore logistical challenges affecting service efficiency in rural areas.
5) To provide recommendations for improving online food delivery services in rural Surat.

Research Design:
The research will adopt a mixed - methods approach, combining qualitative and quantitative data collection methods to gain a comprehensive understanding of the factors influencing online food delivery services in rural areas of Surat. The qualitative component will involve in - depth interviews and focus group discussions with key stakeholders, including rural consumers, online food delivery service providers, and local vendors. The quantitative component will involve a survey questionnaire administered to a representative sample of rural consumers in Surat.

Sampling:
The target population consists of rural consumers residing in different villages or areas within the Surat district. A multi - stage sampling technique will be employed. Initially, specific villages or areas will be randomly selected, followed by the random selection of households within those areas. The sample size was 200 sample to ensure a representative sample and adequate statistical power for the study.

Data Collection:
Qualitative data will be collected through in - depth interviews and focus group discussions. Semi - structured interview guides and discussion protocols will be developed to explore the factors influencing online food delivery services from the perspectives of consumers, service providers, and vendors. Quantitative data will be collected through a structured questionnaire survey. The questionnaire was designed based on the research objectives and literature review, focusing on factors such as technology access, awareness, trust, convenience, price, and quality. The survey was administered face - to - face or through online platforms, depending on the feasibility and preferences of the participants.

Data Analysis
Qualitative data analysis of the interview transcripts and focus group discussions. The data were coded, categorized, and analyzed to identify common themes and patterns related to the factors influencing online food delivery services in rural areas. Quantitative data analysis will involve descriptive statistics, such as frequencies and percentages, to summarize the demographic characteristics and responses to the survey questions. factor analysis was be applied to relationships between variables and identify significant factors. SPSS software is used to analyzed data.
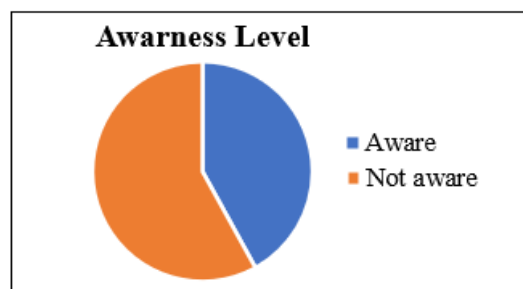
Research suggests that online food delivery services have lower awareness and adoption rates in rural areas compared to urban areas. The lack of exposure and limited marketing efforts in rural regions contribute to this lower adoption rate.

Factors for Online Food Delivery Services	Mean
Faster Delivery	4.16
Convenient to use the app	3.95
Time - Saving	4.03
Late - night Delivery	3.96
Packaging	3.75
Reviews of Restaurant	3.73
Variety of food	3.87
Variety of restaurants	3.92
Variety of cuisine	3.8
Rewards and Cashbacks	3.69
Discounted Pricing	3.73
Various Offers	3.74

Design of Application	3.74
Design of Menu	3.71
Navigation System	3.58

The respondents were asked to rate online food delivery services based on various quality parameters with 1 representing 'worst' and 5 representing 'Excellent. From figure 4.4, it can be interpreted that the best - rated parameter of online food was faster - delivery and Time - saving with a mean score of 4.16 and 4.03. Late - night delivery (3.96), Convenient use of the app (3.95), variety of restaurants (3.92), Variety of food (3.87), and variety of cuisine (3.8). Packaging (3.75) Design of menu (3.71), Design of application, and various offers both have a mean score of (3.74), Discounted

pricing and reviews of the restaurant both have a mean score of 3.73. The navigation system, with a mean score of (3.58), was the worst - rated parameter, although the mean parameter of these was not too bad either.

Exploratory factors analysis was performed on various statements showing online food quality.

KMO and Bartlett's Test		
Kaiser - Meyer - Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi - Square	1044.279
	Df	105
	Sig.	.000

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.498	36.656	36.656	5.498	36.656	36.656	2.471	16.473	16.473
2	1.267	8.446	45.102	1.267	8.446	45.102	2.388	15.922	32.395
3	1.189	7.928	53.030	1.189	7.928	53.030	2.177	14.512	46.907
4	1.010	6.735	59.765	1.010	6.735	59.765	1.929	12.858	59.765
5	.950	6.335	66.100						
6	.899	5.994	72.095						
7	.732	4.879	76.974						
8	.647	4.310	81.284						
9	.590	3.933	85.217						
10	.496	3.308	88.525						
11	.451	3.009	91.534						
12	.386	2.571	94.104						
13	.315	2.101	96.206						
14	.310	2.067	98.273						
15	.259	1.727	100.000						
Extraction Method: Principal Component Analysis.									

Here, from total variance table, it is interpreted that the three factors extracted together account for 61.940% of the total variance. Here while reducing these factors to three factors, (100 - 59.765) = 40 % of the information content was lost.

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
Various Offers	.778			
Rewards and Cashbacks	.629			
Design of Applications	.565			
Reviews of Restaurant	.528			
Discounted Pricing	.511			
Navigation System				
Variety of Restaurants		.762		
Variety of Foods		.730		
Variety of Cuisines		.624		
Late Night Delivery			.776	
Convenient to use app			.680	
Packaging			.506	.504
Time Saving				
Faster Delivery				.752
Design of Menu				.591

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. [A]
a. Rotation converged in 9 iterations.

Final Factor Combinations

Various Offers	.778	
Rewards and Cashbacks	.629	Factor 1 Promotional Offers
Design of Applications	.565	
Reviews of Restaurant	.528	
Discounted Pricing	.511	

Variety of Restaurants	.762	
Variety of Foods	.730	Factor 2 Variety
Variety of Cuisines	.624	

Late Night Delivery	.776	
Convenient to use app	.680	Factor 3 Supplementary Services
Packaging	.506	

Faster Delivery	.752	
Design of Menu	.591	Factor 4 Tangibles

4. Result and Discussion

To conclude this research on customers' perception of online food ordering, it is thus inferred that most people use food app as it is time - saving and have faster delivery. The study shows that all age groups and both male - female use food apps, and they are happy with the services except for the age group above 46, maybe because they still like the traditional method. According to the research conducted, it can be concluded that Zomato and Swiggy have competition in

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comparison to other services providers. Majority of the respondents are like to order food at the time of snacks and dinner and many respondents order food once a week or once a month and they spend between 500 - 1000. Cash on delivery is the most preferred option of payment by the respondents but other digital techniques are also in the growth stage. Majority of the people get influenced by Friends, family, brand loyalty and they are satisfied by the app because most people respond that they will recommend others to use online food ordering services. Respondents are majorly satisfied with the quick responses from customer services and also, they have good experience with online food ordering. Four factors were extracted viz. promotional offers, variety, supplementary services, and tangibles. This research paper suggest that rural consumers tend to prefer local and traditional food sources, such as local markets, grocery stores, and home - cooked meals. Offering cost - effective options and value for money can help attract rural customers. Rural areas have unique preferences and dietary habits.

5. Limitations and Future Scope

The study's generalizability may be limited to the specific rural areas of Surat, and caution should be exercised when applying the findings to other regions. in Future someone want to carry this research further he/she can apply advance test to validate the result like SEM, Meta analysis and thematic analysis.

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