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A study on consumers satisfaction in online food purchasing during COVID-19

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Abstract

The COVID-19 situation changed the consumer lifestyle dramatically. The study's goal was to determine the level of consumer satisfaction with online food purchasing during COVID-19. Data collection was done using a pre-tested interview schedule. Random sampling technique was used to collect the data from 125 sample respondents. This study is limited to Coimbatore city. Tools used for analysis were percentage analysis, Friedman test ranking method. The study revealed that consumers are highly satisfied with the quick delivery process, different payment options, order booking procedure is easy, and the availability of a greater number of restaurants.

Keywords: Consumer satisfaction level, COVID-19, online food purchasing and friedman test

Introduction

Online shopping is a type of electronic commerce that allows customers to buy goods or services directly from sellers over the Internet via a web browser or a mobile app. Consumers identify a product of interest by going straight to the retailers website or searching among alternative vendors using a shopping search engine which shows the same products availability and cost across multiple e-retailers (Michael Aldrich 1980). The Online Ordering System is defined as a simple and convenient way for customers to order food from a restaurant without having to go there. The internet enables online food ordering, it is the web that connects the restaurant or company on the one hand and the customer on the other. As a result of this strategy, the customer goes to the app or website, browses the various food items, combos and cuisines available then selects and purchases the items he or she requires. The user is informed of the estimated time for food preparation and delivery via the website/application. A delivery person will then bring these items to the customer's door at the time they specify. Debit cards, credit cards, cash on delivery and possibly digital wallets or UPI are used to pay for such online orders. It is completely safe and secure to order food from the comfort of your own home. These characteristics, such as convenience, speed and precision of delivery are driving up demand for these services in India. Now a days, online shopping has become more popular and customers have accepting it, because of its numerous benefits. From the perspective of the consumer, online shopping give more offers and discounts, transparent prices, a wide range of goods and services and a much more convenient shopping alternative that has eliminated the inconveniences of squeezing through crowds, standing in long lines at cashier counters and battling for parking spaces in a crowded mall. Consumer buying behaviour in online and traditional shopping is significantly different. Although both incorporate social, cultural, personal, and psychological variables but traditional shopping is far more influenced by these factors than online shopping. Online shopping is primarily based on an individual's point of view and perceptions.

The global pandemic of COVID-19 has resulted in significant changes in the structure of people's daily lives around the world, and has also changed consumer foods buying behavior dramatically. The changes in the lifestyle of consumers have shifted offline shopping to online shopping. During the COVID-19 time the consumer fears to go out of their house to buy the food items. The reasons for the fear were the spread of COVID-19, unnecessary crowd, unable to maintain social distance, lockdown, government rules and regulation, less number of vaccinated people.

At this COVID-19 time the consumers prefer online shopping more than offline shopping. The consumer place their food order in food delivery services app, without leaving home. During COVID-19 time, the government formulated the guidelines to the online service providers and they ensure that their food delivery persons also follow it.

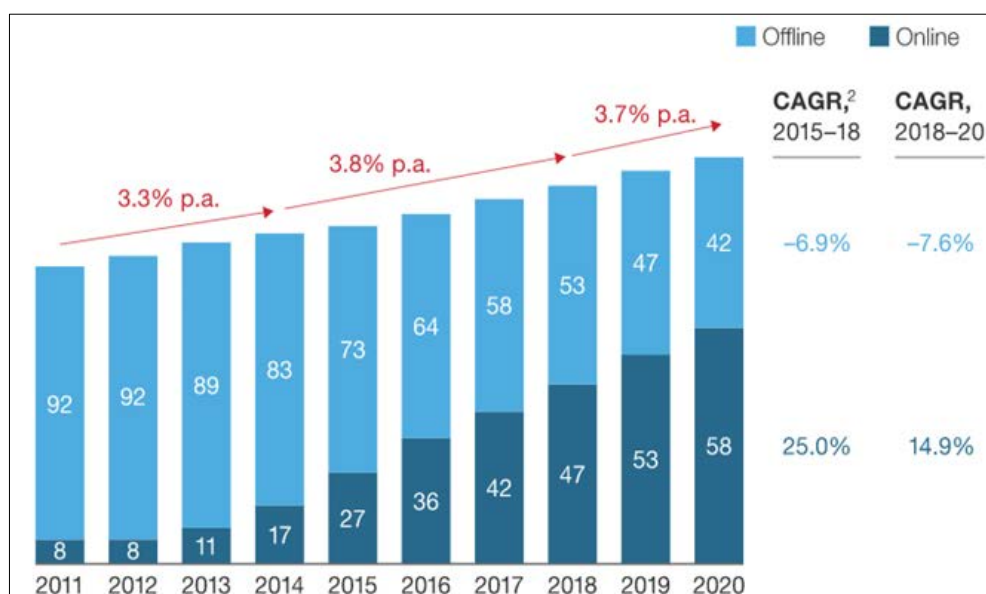


Fig 1: Compound Annual Growth Rate (CAGR)

The global online food delivery services industry is predicted to increase at a compound annual growth rate (CAGR) of 10.3 percent from \$115.07 billion in 2020 to \$126.91 billion in 2021. The increase is primarily due to companies resuming operations and adapting to the new normal while recovering from the COVID-19 impact, which had previously resulted in restrictive containment measures such as social distancing, remote working and the closure of commercial activities, resulting in operational challenges. The market is estimated to reach \$192.16 billion by 2025, with an 11 percent CAGR.

Review of literature

Jaydip Singh Jadeja *et al.* (2021) focused on various factors that influence the consumer to choose food ordering services. The study reveals that during the covid period, most of the consumers feels safer to order food online rather than visiting restaurants. Also find other major influencing factors are offers and discounts, quick delivery, time-saving and convenience.

Ludvik Egeretal (2021) analysed the difference between consumer behaviour between different generations. This study supports and expands generation cohort theory in relation to changes in consumer behavior during the Covid-19 pandemic through empirical investigation.

Brenna Ellison *et al.* (2020) analyse the changes in food expenditures, shopping behaviours, and food values during the pandemic. The findings showed a decrease in out-of-home food spending and an increase in online food purchasing. Also, this study shows, over the period of the pandemic, the food values looked at seem to stable.

Hung-hao chang *et al.* (2020) [9] examine the impact of the coronavirus pandemic on the demand for online food shopping services. This study finds, that the variety of products offered on the e-commerce platform expanded during the pandemic. Finally concluded that the shift to online food shopping indicates that sales were highly increase during pandemic. Meike Janssen *et al* (2020) focused on changes in food consumption that occurred during the COVID-19 pandemic and also determine the impact of various COVID-19 pandemic-related aspects on individual food consumption changes. According to his findings, 15–42 per cent of study participants changed their consumption frequency during the

pandemic compared to before the pandemic, depending on the type of food.

Xuwen Gao *et al.* (2020) analysed the consumer food purchasing behaviour in the short term. According to this study, the confirmed COVID-19 cases increase the chances of consumers purchasing food online. It was more likely to be the case for young people having a lower perceived risk of online purchases

Abdul Kadir. N. Arsiwala (2020) focused on analyse the buying behavior of consumers using food delivery apps to order food. This study, indicate that students and young adults under the age of 25 are the most frequent users of food delivery applications in Jalgaon. Study showed that food variety, payment options, and food tracking are all important influencing variables for ordering food from online food delivery applications. Customers are discouraged from ordering food from online food delivery applications for a variety of reasons, including a preference for home-prepared food and concerns about quality.

Methodology

Percentage analysis

Percentage Analysis was mainly used for study the socio demographic characteristics of the sample respondents that included gender, age, marital status, Number of family members, educational qualification, occupational status, family income, and how often they purchase foods in online during covid-19.

The percentage of these characteristics are calculated by using the below derived formula to collect the meaningful conclusion.

$$\text{Percentage analysis} = \frac{\text{Number of respondents}}{\text{Total sample size}} * 100$$

Likert Scale Technique

Likert scaling technique was used to analyse the satisfaction level of customer in online food purchasing during covid-19. The respondents were questioned to indicate whether their satisfaction level of online food ordering were highly satisfied, satisfied, neutral, dissatisfied, highly dissatisfied in the form of five point scale. The score of this scale was indicated as below

Table1: Five point scale used for factors influencing the consumer purchasing behavior

Particulars	Scales
Highly satisfied	5
Satisfied	4
Neutral	3
Dissatisfied	2
Highly dissatisfied	1

normality assumption is required. The ranks of the scores for each sample consumers were calculated based on that consumers satisfaction level could be calculated.

$$Q = \frac{12}{nk(k+1)} \sum_{j=1}^k \{ R_j - n(k+1)/2 \}^2$$

Q = Number of sample consumers k=Number of columns

n = number of row

R_j = sum of the ranks

3.4.3 Friedman Test Ranking

Friedman test is a non-parametric test analysis and no

Table 2: Analysis of consumer Satisfaction level using Friedman Ranking Test

1	Taste of food
2	Hygiene and freshness
3	Price of food
4	Good Quality foods
5	Brand name of restaurant
6	Available a Variety of foods
7	Quick Delivery Process
8	Offer and discount
9	Customer Care service
10	Safe and secure packaging of food
11	Reliable delivery charges
12	Cancellation of order at any time
13	Order Tracking Facility
14	Order booking Procedure is easy
15	Easy Replacement Procedure
16	Different Payment Options
17	Attractive Food Pictures
18	Privacy system
19	Payment system

Result and Discussion

General characteristics of the respondents such as age, gender, marital status, family size, educational qualification,

occupation and average monthly income were analyzed using the percentage analysis tool and were presented below table

Table 3: General profile of the respondents

Component	No. of respondent	Percentage to total
Gender	Male	68
	Female	57
	Total	125
Age	18-25	59
	26-35	44
	36-45	12
	>46	10
	Total	125
Marital status	Married	47
	Unmarried	78
	Total	125
Family size	<3	62
	4-5	43
	>6	20
	Total	125
Educational qualification	Degree	76
	Diploma	22
	School	14
	Illiterate	13
	Total	125
Occupational status	Business	18
	Private employees	49
	Government employees	20
	Home maker	23
	Other	15
	Total	125
Average monthly income	15,000-25,000	56

	25,001-35,000	34	27.2
	35,001-45,000	25	20
	45,001&above	10	8
	Total	125	100.00

The total number of respondents were 125, out of which 68 respondents were male and 57 respondents were female. About 43.2 percentage of respondents belongs to the age group of 18-25years, whereas 36 percent of respondents belongs to 26-35 years age group followed by 12 percentage respondents in 36-45 years age group and 8.8percentage belongs to above 46 years of age group. Out of 125 sample respondents 60.8 percentage of respondents completed degree, 17.6 percentage respondents completed diploma while 11.12 percentage of respondents competed their school. The remaining respondent (10.2 percent) were illiterate.

About 39.2 percent of the respondents works in various private organization, 18.4 percent of the respondents were home maker, 16 percent of the respondents were working in government organizations. Whereas 14.4 percent of the respondents have their own business. Only 12 percent of the respondent give the other option. 62.4 percent of the respondents were un married and only 34.4 percent of the respondents were married. A maximum of 44.8 percent of the respondents have a family income of Rs. 15,000-25000 whereas 27.2 percent of the respondents have a family income of 25,001-35000. About 20 percent of the respondents belonged to the category above Rs. 35,001-45,000 and percent of the respondents have a family income 45,001&

above.

Fried man test ranking

Friedman test is a nonparametric test that compares the mean scores of the variables. It is an equivalent of variance analysis with repeated extents.

H₀: There is no significant relationship between consumer satisfaction and online food purchasing

H₁: There is a significant relationship between consumer satisfaction and online food purchasing

Table 4: Test statistics

N	125
Chi-Square	383.655
Df	20
Asymp. Sig.	.000
a. Friedman Test	

From table 4 shows the Friedman test statistic for number of observation was 125, chi-square value was 383.655, degrees of freedom 20 and highly significant (0.000) it indicate that there was significant relation between the ranks given for satisfaction level of consumers towards online food purchasing during COVID-19.

Table 5: Descriptive statistics

Statements	N	Mean	Std. Deviation	Minimum	Maximum
Taste of food	125	3.00	1.035	1	5
Hygiene and freshness	125	3.09	1.129	1	5
Price of food	125	3.05	1.029	1	5
Good Quality foods	125	3.13	.971	1	5
Brand name of restaurant	125	3.19	.940	1	5
Available a Variety of foods	125	3.34	1.066	1	5
Quick Delivery Process	125	4.21	.795	1	5
Offer and discount	125	3.84	.801	1	5
Customer Care service	125	3.88	.782	1	5
Safe and secure packaging of food	125	3.95	.757	1	5
Reliable delivery charges	125	3.65	.880	1	5
Cancellation of order at any time	125	3.77	.908	1	5
Order Tracking Facility	125	4.01	.810	1	5
Order booking Procedure is easy	125	4.06	.722	1	5
Easy Replacement Procedure	125	3.81	.861	1	5
Different Payment Options	1125	4.07	.832	1	5
Information quality	125	4.18	.770	1	5
Website Design	125	3.93	.714	1	5
Privacy system	125	3.85	.757	1	5
Payment system	125	3.97	.846	1	5
Attractive Food Pictures	125	4.03	.810	1	5

The Friedman test descriptive table contain mean statistics, standard deviation and the minimum and maximum of the data. In the first column on the left, the variables names are listed. The number of respondents was listed in the second column and the average number of responses to each question was listed in the third column. The data's standard deviation was shown in the fourth column. The minimum and maximum quality ranges for each question are shown in the fifth and sixth columns, respectively.

Friedman ranking test used for analyzing consumer satisfaction level of online food purchasing during COVID-19 and it shown that significant association and mean score and

ranking was given in the Table 5. Some of the major factors satisfying the consumer online purchasing were quick delivery process, information quality, different payment options, order booking procedure is easy, attractive food pictures, order tracking facility, payment system, safe & secure packaging of food, website design, customer care service, privacy system, offer & discount, cancellation of order at any time, easy replacement procedure, delivery charges, available a variety of foods, brand name of restaurant, hygiene & freshness, good quality foods, price of food, taste of food.

Table 6: Friedman test ranking for consumer satisfaction level

Factors	Mean rank	Rank
Quick Delivery Process	14.34	I
Online food purchasing give proper information about variety and quality of food	13.86	II
Different Payment Options	13.18	III
Order booking Procedure is easy	13.14	IV
Availability of more number of restaurants	12.77	V
Order Tracking Facility	12.70	VI
Available a Variety of foods	12.51	VII
Safe & secure packaging of food	12.45	VIII
Offer & discount	12.13	IX
Customer Care service	11.95	X
Privacy system	11.65	XI
Price of food	11.52	XII
Cancellation of order at any time	11.51	XII
Easy Replacement Procedure	11.48	XIV
Reliable delivery charges	10.32	XV
Brand name of restaurant	7.63	XVI
Hygiene & freshness	7.51	XVII
Good Quality foods	7.46	XVIII

It could be inferred from the above table 6 that quick delivery process was a highly satisfied factor for online purchasing, consumer ranked first with mean score of 14.34. The reason for quick delivery process was online service provider create a better logistics system. Online food purchasing give proper information about variety and quality of food was ranked II with mean score of 13.86. It was one of the major satisfaction factor of online purchasing in this study area. Different Payment Options was ranked III with mean score of 13.18. Different payment options like cash on delivery, net banking, credit card, debit card were these factors satisfy the consumer. Order booking Procedure is easy was ranked IV with means score of 13.14. It saves consumers time significantly. During COVID-19 situation consumer are fear about to go out from home. Online shopping ensure consumer safety during covid 19 situation. Availability of more number of restaurants was ranked V with means score of 12.77. Consumer visit the more number of restaurant web pages in online, then choose the reliable restaurants. Order Tracking Facility was ranked VI with means score of 12.70. These system satisfy the consumer to know the status of the food whether food was prepared and how much time take to prepare the food and receive the food. Available a Variety of foods was ranked VII with means score of 12.51. Followed by Safe & secure packaging of food was ranked VIII with means score of 12.45. Packaging ensure hygiene and freshness of the food item. Offer and discount ranked IX with means score of 12.13. Customer care service was ranked X with the mean score of 11.95. Privacy system ranked XI with the mean score of 11.65. The level of satisfaction with price of the food and cancellation of order at any time of the consumer with score of 11.52 and 11.51 respectively. In this study consumers were less satisfaction with quality of foods because they doesn't know the food quality condition before the reaching of food.

Conclusion

In this study, the level of satisfaction of consumers in online food purchasing has been investigated. The result suggests that the null hypothesis was rejected and an alternate hypothesis was accepted, which is based on the existence of a significant relationship between consumer satisfaction and online food purchasing, was confirmed. According to this test, the level of satisfaction with the quick delivery process, with a score of 14.34, has the highest score, and the level of

satisfaction with the good quality foods with a score of 7.46 has the lowest score.

References

1. Yogi Tri Prasetyo, Hans Tant, Martinus Mariyanto. Factors Affecting Customer Satisfaction and Loyalty in Online Food Delivery Service during the COVID-19 Pandemic: Its Relation with Open Innovation. Journal of open innovation 2021.
2. Parameshwar Ganapathi, Emad Ahmed Abu-Shanab. Customer Satisfaction with Online Food Ordering Portals in Qatar. International Journal of E-Services and Mobile Applications 2020.
3. Leonardo Salvatore Alaimo, Mariantonietta Fiore, Antonino Galati. Measuring consumers level of satisfaction for online food shopping during COVID-19 in Italy using POSETs. Socio-Economic Planning Sciences 2021.
4. Abdul Kadir Arsiwala N. Consumer Buying Behaviour Towards Online Food Delivery Apps In North Maharashtra Region 2019, 08-11.
5. Mehathab Sheriff, Shaik Mohamed N. Study on Customer Perception towards Online Food Ordering With Special Reference To Tiruchirappalli. A Journal of Composition Theory 2019.
6. Ayush Beliya, Rubi Kujur. Satisfaction of Consumers by Using Online Food Services: International Journal of Humanities and Social Sciences 2019, 35-44.
7. Van Kien Pham, Thu Ha Do Thi, Thu Hoai Ha Le. A study on the COVID-19 awareness affecting the consumer perceived benefits of online shopping in Vietnam 2020;7:1846882
8. Rosa Maria Fanelli. Changes in the Food-Related Behaviour of Italian Consumers during the COVID-19 Pandemic 2021.
9. Hung-Hao Chang, Chad D. Meyerhoefer: COVID-19 and the Demand for Online Food Shopping Services: Empirical Evidence from Taiwan 2020.
10. JiHyo Moon, Yunseon Choe, HakJun Song. Determinants of Consumers' Online/Offline Shopping Behaviours during the COVID-19 Pandemic 2021.
11. Jeneefa H, Rajalakshmy. A Study On Consumer Satisfaction And Preference Towards Online Food Ordering Applications. Journal of Emerging

- Technologies and Innovative Research 2019.
12. Nazifa Insyirah binti Azman, Nurul Aqeelah binti Ahmad *et al.* The Online Food Delivery Service and their Impact on Customer Satisfaction among University Students in Malaysia. International Journal of Academic Research in Business and Social Sciences 2021.
 13. Priyanka Pandita Koul, Ganesh Waghmare, Rajeshwari Patil. Customer's Expectation and Satisfaction with online food ordering portals with special reference to PCMC region in Pune: International Journal of Creative Research Thoughts 2018.
 14. Krishna kumara V. A Impact of Customer Behavior towards Online Food Services: International Journal of Recent Technology and Engineering 2019.
 15. Aparna Anib, Gayathri A, Shabu K. Consumer Perception towards Swiggy Digital Food Application Service: a Analytical Study with Special Reference to Ernakulam City. International Journal of Innovative Technology and Exploring Engineering 2019.
 16. Brindha. A Study on Customers' Perception and Satisfaction towards Online Food Delivery System in Coimbatore City. SSRG International Journal of Economics and Management Studies (SSRG-IJEMS) 2020.