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editor@ijprems.comVol. 04, Issue 05, May 2024, pp: 2468-24755.725A COMPARATIVE STUDY ON CUSTOMER PREFERENCE TOWARDS

COMPARATIVE STUDY ON CUSTOMER PREFERENCE TOWARDS AGGREGATOR FOOD DELIVERY SERVICES WITH SPECIAL REFERENCE TO ZOMATO AND SWIGGY

Milaram Chandrashekar¹, Lalisetti Genesh²

¹Department of Management Studies KG Reddy College of Engineering and Technology, Chilkur, Moinabad, Ranga Reddy District, Telangana, India.

²Assistant Professor KG Reddy College of Engineering and Technology, Chilkur, Moinabad, Ranga Reddy District, Telangana, India.

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ABSTRACT

The main aim of the report is to study the customer preference towards aggregator food delivery services with special reference to Zomato and swiggy. Swiggy's mission is to change the way India eats. Apart from servicing the customer better than last year and widening the assortment to enable users to order on a higher frequency. Swiggy wants to be like a utility app for every Indian. Zomato's mission is that nobody has a 'bad meal'. Help people discover great places around them. Building amazing experiences around dining. Enabling restaurants to create amazing experiences. The objective of the study was to study the factors influence on aggregate food delivery services and customer preferences on aggregate food delivery services.

The objectives of research were studied with the help of general people i.e., students and employees who use these food apps, as to know the customer preference towards aggregator food delivery services with special reference to Zomato and swiggy.

The statistical tool used in this study was Structural Equation Modelling (SEM) as it is useful for the analysis of data collected through the primary source and research objective focuses on prediction and explaining the variance of key targets constructs by different explanatory exogenous, endogenous and moderator variables. The exogenous variables were Technology, Service Quality, Mode of Payment, Delivery Charges, and Offers. Endogenous variables were Aggregate Food Delivery Services and Customer Preference. Chargers and security concerns are the moderate variables. The study result shows that many respondents liked the services of Swiggy. So, alternative hypothesis was accepted based on SEM model.

Keywords: delivery services, SEM model, Structural Equation Modelling

1. INTRODUCTION

Introduction to Food Apps:

On the lines of the war for the e-commerce crown between homegrown Flipkart and Jeff Bezos-led Amazon, the battlefield for the food delivery war has been set, and the contenders are, well, obvious – Zomato and Swiggy.While Swiggy started delivering food in early 2014, Zomato was a late entrant in delivery in February 2015.

Despite the late entry, Zomato has caught up fast with Swiggy. Over the past two years, the Gurugram-based company has been ramping up its food order business aggressively. Recently, it reached the 3-million-orders mark and claimed to have narrowed the gap with competitor Swiggy.At present, Swiggy does about 4 million orders a month while Zomato processes about 3 million orders on a monthly basis. Importantly, Zomato has also turned profitable in all geographies and to celebrate this feat, it announced a zero commission campaign for restaurant partners

"The zero commission models are certainly going to hurt Swiggy," says the founder of one of the foodtech companies. Swiggy charges about 18-20% commission from restaurant partners. On an average, a restaurant makes anywhere between 40-60% margin on an order. By signing up for the zero commission campaign, restaurants can cut the margin they shell out to Swiggy

Yes, Zomato can play with zero commission as its advertising business is pretty much sorted. "See, over the years Zomato has streamlined its advertising business and it's in a position to feed its food-ordering business with that," says the above-quoted person who didn't wish to be identified. According to Zomato, its revenue from advertising stands at \$38 million in FY23. While Zomato plans not to charge anything for delivery from restaurant partners, it will certainly pass on benefits to the customer. Since Zomato won't charge for ordering, it will negotiate with restaurant partners to pass on discount (in the range of 10 to 15%) to customers.

"By passing discounts to customers, Zomato will be able to bring a major chunk of Swiggy's customer base on its own ordering platform



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Food ordering in India is largely divided into two buckets. The first bucket is where customers usually order biryani, Chinese and Indian cuisine while the other is specialized cuisine comprising of outlandish gourmets – pizza, burgers, pasta.

While Swiggy undoubtedly has the lead in the first category, Zomato rules the specialized cuisine segment by striking exclusive partnerships with restaurants. On the consumer side, Zomato has a clear edge as it brings a major chunk of search traffic organically. Swiggy has a pole position on the merchant side. Zomato had neglected the ordering part for a long time as it didn't see much value in it.

There is not always a path to rise for any company. All companies earn most when there is chaos in the market, in recent days Zomato is giving heavy discounts they started boosting ads on all popular platforms, covering a wide range of restaurant giving a huge discount. The thing which attracts customers most is the discounts for example if two food aggregator are covering the same restaurant and one giving more discount than other people will prefer the company who is giving more discount. That is very difficult because in this market customer acquisition is not stable, varies with different factors like promotion, packaging, discounts etc.

Foodstuff is generally cheap in comparison to electronic stuff and other items what e-commerce sells in that case people prefer more of quality and security so there is a trade-off between discounts and security and comparison of different e-commerce seems reasonable. But in case of this, it is hard to retain customers like in case of movie tickets booking or mobile recharge platforms these markets are highly unstable. You still can compare but at last, you can't predict anything until both have huge differences in their services and in the case of Zomato and Swiggy it is not.

2. REVIEW OF LITERATURE

1 – The authors 'Mustafa Abbas Bhotvawala, Harsh Balihallimath, Nishant Bidichandani, M. P. Khond' in the article 'Growth of Food Tech: A Comparative Study of Aggregator Food Delivery Services in India' (2016) have studies that it generates a platform for consumers to navigate through a variety of restaurants hosted on it, discovering restaurants and placing orders manually. This study compares growth and operating strategies of food companies. The future seems brighter for the online food industry, as India catches up with developed markets.

2 - The author 'Aniruddha Deshpande' in the article 'Zomato – Market and Consumer Analysis' (2016) have studied that small start- -ups in the Indian Food and Beverages industry have revolutionized the way we look around for dine. The purpose of this study is how the zomato has scaled up its operations, expanded its business into varies countries.

3 – The authors 'Abhishek kumar, Pankaj Kapoor' in the article 'Zomato: Out to Deliver' (2017) have studied that global food tech has crossed the peak of inflated expectations in the hype cycle of its evolution. Zomato and swiggy have emerged as dear leaders in the food ordering space in India. We believe consolidation in the industry is welcome, as it will weed out and irrational players without a sustainable business model.

4 – The author 'Sheryl E. Kimes' in the article 'Customer Perceptions of Electronic Food Ordering' (2011) have studied that industry use of electronic ordering and consumers views about use of those distribution channels. Main intention is to help restaurants operates better design their electronic ordering channels. We pointed out that many restaurants experienced increased sales as a result of accepting electronic orders.

5 – The authors 'Goh See Kwong, NG Soo-Ryue, Wong Shiun-Yi, Chong Lily' in the article 'Outsourcing to Online Food Delivery Services: Perspective of F&B Business Owners' (2017) have studied the technology has played a big role in the revolutionizing the food delivery services from phone based to online ordering to satisfying consumers ever changing demands, making its way to top. Citizens across the nation are shifting towards online ordering and more ways to purchase with less effort and cost. Main aim is to draw feedbacks from restaurant owners who are currently engaged with online delivery services.

OBJECTIVES:

- 1. To know the factors influence on aggregate food delivery services
- 2. To study the customer preferences on aggregate food delivery services
- 3. To analyze the demographical influence (Gender, Age, Profession, Income) on aggregate food delivery services
- 4. To suggest suitable model for aggregate food delivery services.

HYPOTHESIS OF THE STUDY:

H₁: Demographical factors like gender, age, profession and income has significant effect on aggregate food delivery services

H_{2a}: Technology has significant effect on aggregator food delivery services provided by Swiggy.

H_{2b}: Technology has significant effect on aggregator food delivery services provided by Zomato

H_{3a}: Service quality has significant effect on aggregator food delivery services provided by Swiggy.



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H_{3b}: Service quality has significant effect on aggregator food delivery services provided by Zomato. **H**_{4a}: Mode of Payment has significant effect on aggregator food delivery services provided by Swiggy.

 H_{4b} : Mode of Payment has significant effect on aggregator food delivery services provided by Zomato.

 H_{5a} : Delivery Charges has significant effect on aggregator food delivery services provided by Swiggy.

 H_{5b} : Delivery Charges has significant effect on aggregator food delivery services provided by Zomato.

 H_{6a} : Offers has significant effect on aggregator food delivery services provided by Swiggy.

 H_{6b} : Offers has significant effect on aggregator food delivery services provided by Zomato.

H_{7a}: There is a significant relationship between customer preference and aggregator food delivery services provided by Swiggy.

H_{7b}: There is a significant relationship between customer preference and aggregator food delivery services provided by Zomato.

3. RESEARCH METHODOLOGY

Need For the Study

This food business is undergoing a revolutionary change. They are making lot of changes in their user interface, technology and website. So that consumers can easily access the app and make purchase. Here technology and smartphone plays the key role in this industry. They are providing the total information about every restaurant and their food items. They also included the mode of payment in a secure way and consumers can pay easily.

Scope Of the Study:

This study was carried out by conducting survey for Swiggy and Zomato customers only. The study is limits its research to the customers who have ordered food by using these food apps. The main aim of this study is to know the variables that influence the consumer behavior while making order in these food apps.

Table.1

Data collection method:

METHODOLOGY ELEMENTS	METHODOLOGY DESCRIPTION
Research Name	Descriptive Study
Location	Hyderabad
Total Population	68.1 Lakhs
Sample Size Determination	Glenn Sample Size Table(1992)
Sample Size	162 People
Source Of Data	Primary And Secondary Sources
Sample Selection Technique	Convenient Sample
Data Collection Technique	Structured Questionnaire
Measuring Scale	Likert 5-Point Scale
Data Analysis Technique	Descriptive Statistics, Reliability Tests, Cronbach's Alpha, SPSS V- 23, AMOS V-22

4. DATA ANALYSIS & INTERPRETATION

Table 4.1 Goodness of Fit Statistics in SEM:

INDEX	ABBREVIATION	TYPE OF FIT MEASURE	RECOMMENDED CRITERIA	REFERENCES	
Chi – Square	χ^2	Model fit	χ^{2} , df, p >0.05	Joreskog and	
Normated Chi – Square	χ^2/df	Absolute fit and parsimony of model	1.0<χ²/Df<3.0	Sorbom (1998); Hair et al.	
Goodness – of – fit index	GFI	Absolute fit	>0.90	(2001); Hair et al. (2006)	
Root mean square error of	RMSEA	Absolute fit	<0.05 good fit <0.08 acceptable fit		

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	approximation						
	Normated fit index	NFI	Incremental fit	>0.90			
	Comparative fit index	CFI	Incremental fit	>0.90			
	Adjusted goodness – of – fit index	AGFI	Parsimonious it	>0.90			

MODEL ESTIMATES:

In addition to goodness of fit criteria, other standardized estimates are used to evaluate the measurement model. For example, standardized regression weight (factor loadings), and critical ration (CR) estimates the criteria. This research is used to study the cut-Off point suggested by researchers for these estimates as follows. According to Holmes – Smith (2002), the factor loadings value should be greater than 0.7, however, a value greater than 0.5 is also considered. The critical ratio values should be above 1.96.

Measurement Model Estimates:

ESTIMATES	RECOMMENDED VALUES	REFERENCES
Factor loading	>0.5 acceptable >0.7 good	Churchill, (1979); Holmes –Smith (2002)
Critical ration (t-value)	>1.96	Hair et., al. (2006); Byrne (2001)
Standard residuals	±2.8	Byrne (2001); Hair et., al. (2006)

As described in the previous section, measurement model explains the interrelationships between indicator (observed) variables and latent (unobserved) variables. In other words, it specifies and aims to confirm which measurement variables (indicator variables) relate to each of its corresponding construct (latent variable). Therefore this confirmatory factor analysis (CFA) was performed in order to identify and confirm the pattern, by which these measurement items were loaded onto a particular construct. So this measurement model was evaluated by using the maximum likelihood (ML) and estimation Technique provided in AMOS software. The reasons for choosing this estimation procedure was: Firstly, this Technique is reasonably suitable for medium sized samples and when the model doesn't meet the criteria of at least 5, then the measurement items for each construct. Secondly, the ML estimation Technique is fairly unbiased when compared to other estimation methods under the moderate violations of normality incase of medium size sample, normal data. This study used the five point Likert scale. Finally, ML method is also most widely used estimator in SEM analysis, because this method minimizes the difference between covariance and observed matrices. As a result, it improves the parameter estimates. So, in this study, the measurement model was run using the maximum likelihood estimation method.

Total Variance Explained								
Factor		Initial Eigen v	values	Extract	ion Sums of S	Rotation Sums of		
					Loadings		Squared Loadings	
	Total	% of	Cumulative	Total	% of	Cumulati	Total	
		Variance	%		Variance	ve %		
1	12.300	53.478	53.478	11.938	51.904	51.904	10.646	
2	2.042	8.878	62.356	1.697	7.377	59.281	8.756	
3	1.775	7.716	70.072	1.532	6.662	65.943	6.695	
4	1.013	4.403	74.475	.787	3.421	69.364	8.336	
5	.764	3.322	77.797	.625	4.628	70.893	7.218	
6	.705	3.067	80.864	.501	4.189	71.732	7.083	
7	.506	2.199	83.064	.587	4.376	72.864	7.016	
8	.453	1.971	85.035					
9	.424	1.844	86.879					
10	.390	1.695	88.574					



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11	.329	1.433	90.007					
12	.301	1.311	91.317					
13	.296	1.286	92.604					
14	.263	1.142	93.745					
15	.235	1.023	94.768					
16	.229	.995	95.763					
17	.208	.905	96.668					
18	.180	.781	97.448					
19	.170	.741	98.189					
20	.129	.560	98.749					
21	.105	.458	99.207					
22	.096	.415	99.623					
23	.087	.377	100.000					
	Extraction Method: Maximum Likelihood.							
a. V	a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

The rule of thumb is applied to choose the number of factors for which "Eigen Values" with greater than unity is taken by using Principal Component Analysis method. The component matrix so formed is further rotated orthogonally using Varimax rotation algorithm which is the standard rotation method (Kaiser, 1958). All the statement is loaded on the seven factors

Pattern Matrix

Pattern Matrix							
Cronbach's		F	actors				
Alpha	Technology	Service	Mode of	Delivery	Offers	Aggregator Food	Customer
	.916	Quality	Payment	Charges	.925	Delivery Services	Preference
		.919	.873	.918		.826	.847
STE1	.710						
STE2	.816						
STE3	.642						
STE5	.765						
SSQ1					.891		
SSQ2					.974		
SSQ3					.932		
SSQ4					.785		
SSQ5					.804		
SMOP1				.452			
SMOP2				.442			
SMOP3				.856			
SMOP4				.917			
SDC1			.428				
SDC2			.665				
SDC3			.732				
SDC4			.841				



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SDC5		.831			
SOf1	.673				
SOf2	.749				
SOf3	.853				
SOf4	.981				
SOf5	.876			.642	.752
AFS1				.738	
AFS2				.819	.916
AFS3				.913	.849
AFS4				.537	.731
AFS5					
CPS1					
CPS3					
CPS4					
CPS5					
Extraction Method: Maximum Likelihood. Rotation Method: Promax with Kaiser Normalization.					
a. Rotation converged in 6 iterations.					

The above figure shows the Cronback's Alpha values. Cronbach's Alpha value of Technology is 0.916, Service Quality is 0.919, Mode of Payment is 0.873, Delivery Charges is 0.918, Offers is 0.925, Aggregator Food Delivery Services is 0.826, and Customer Preference is 0.847.

The total variance accounted for, by all the seven factors with the Eigen values. Among seven factors, the first factors accounts for around 51.90 percent of variance, second factor accounts for around 59.28 percent of variance, third factor accounts for around 65.94 percent of variance, fourth factor accounts for around 69.36 percent of variance, fifth factor accounts for around 70.89 percent of variance, sixth factor accounts for around 71.73 percent of variance, seventh factor accounts for around 72.86 percent of variance.

The first factor consists of four variables. Variable V1 value is 0.710, V2 is 0.816, V3 is 0.642 and V5 is 0.765. All these variables are grouped to form first factor.

The second factor consists of five variables. Variable V1 value is 0.891, V2 is 0.974, V3 is 0.932, V4 is 0.785 and V5 is 0.765. All these variables are grouped to form second factor.

The third factor consists of four variables. Variable V1 value is 0.452, V2 is 0.442, V3 is 0.856, and V4 is 0.917. All these variables are grouped to form third factor.

The fourth factor consists of five variables. Variable V1 value is 0.426, V2 is 0.665, V3 is 0.732, V4 is 0.841 and V5 is 0.831. All these variables are grouped to form fourth factor.

The fifth factor consists of five variables. Variable V1 value is 0.673, V2 is 0.749, V3 is 0.853, V4 is 0.981 and V5 is 0.876. All these variables are grouped to form fifth factor.

The sixth factor consists of five variables. Variable V1 value is 0.642, V2 is 0.738, V3 is 0.819, V4 is 0.913 and V5 is 0.537. All these variables are grouped to form sixth factor.

The seventh factor consists of four variables. Variable V1 value is 0.752, V3 is 0.916, V4 is 0.849 and V5 is 0.731. All these variables are grouped to form seventh factor.



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		ł	Absolute Fit Me	Incremer Measu	ntal Fit ures	Parsimony Fit Measures			
	(χ ²)	(Df)	(χ²/df)	(NFI)	(CFI)	(AGFI)			
Criteria			1<χ²/Df<3	≥0.90	≤0.05	≥0.90	≥0.90	≥0.90	
Obtained	543.994	220	2.473	0.785	0.096	0.846	0.901	0.730	
Note $\cdot (\gamma^2)$	Note: $(\gamma^2) = Chi_{square}$: (Df) = Degrees of freedom: (GFI) = Goodness of fit index: (RMSEA) = Root mean								

Note : (χ^2) = Chi-square; (Df) = Degrees of freedom; (GFI) = Goodness of fit index; (RMSEA) = Root mean square error of approximation; (NFI) = Normated fit index; (CFI) = Comparative fit index; (AGFI) = Adjusted goodness of fit index

The goodness of fit indices (χ^2 , GFI, RMSEA, AGFI) of the initial run of CFA (Confirmatory Factor Analysis) were not in the suggested level, so further meticulous evaluation was conducted to redefine and re-specify the model, in order to get better discriminant validities and achieve better fit of model.

The model improvement procedure applied and the following criterion. Factor loading value should be greater than 0.7 and Squared multiple correlations (SMC) value should be greater than the cut-Off point of 0.5. The standard residual values should be within the threshold (above 2.58 or below -2.58). Finally, the MI (modification indices) that shows high covariance and demonstrates high regression weights for deletion.

The output of this initial CFA (Confirmatory Factor Analysis) was examined to see whether any item is proving to be challenging. So, evaluation of results indicated that the standard regression weight of all measurement items were above the recommended level (>0.7). However, the assessment of modification indices indicated that the values of SMOP3, SMOP4, SDC4, and SDC5 were having highest values and are not within the acceptable level.

The items which shared a high degree of residual variance were therefore associated. After correlating these problematical items, the measurement model was re-run.



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5. CONCLUSION

Even though they are many other food apps (Food Panda, Uber Eats, and Tiny Owl etc) in the market these Swiggy and Zomato are on top and leading in the market. But each one of them is having their own priorities and due to cut throat competition they are pushing the products into the markets. Because of that these Swiggy and Zomato are losing their customers.

Both Swiggy and Zomato will vary in some areas i.e., Zomato is good at technology, service quality, mode of payment and offers, and Swiggy is good at technology, service quality, delivery charges and offers. If Swiggy and Zomato are good at (technology, service quality, mode of payment, delivery charges, offers) all these above things. Then they will lead the market and no one can touch them. Swiggy and Zomato should prepare some strategies to improve the less concentrated areas like for swiggy – mode of payment and for zomato – delivery charges. Then they will automatically gain then customer attention.

So, as for now, according to the study, most of the respondents are happy with services of Swiggy. Even though they like Swiggy, they want some changes in it. If Swiggy does it, then it will become the "customer's most favorite food app".

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