An Empirical Study on Change in Buying Pattern with Reference to Food Service Industry

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We develop and describe a framework for research in digital marketing that highlights the touch points in the marketing process as well as in the marketing strategy process where digital technologies are having and will have a significant impact. Using the framework we organize the developments and extant research around the elements and touch points comprising the framework and review the research literature in the broadly defined digital marketing space. We outline the evolving issues in and around the touch points and associated questions for future research. Finally, we integrate these identified questions and set a research agenda for future research in digital marketing to examine the issues from the perspective of the firm. With a population of over 1.2 billion, India is undeniably one of the biggest consumer markets in the world today. The changing of Business strategies along with transaction processing, increase of internet access, use of smart phones in emerging markets has been the main driver for e-transaction growth in the field of Food Order Delivery (Shinde, 2014).

Keywords: E-payment, Buying Pattern, Start-up Business, Customer Preferences

1. Introduction

For online food delivery platforms, more than 80% of orders are now coming from the top seven cities (Kolkata, Delhi, Mumbai, Pune and Bangalore, Hyderabad, Chennai) out of more than 20 cities, in India where online food delivery is more prominent. Due to this concentration of orders, food delivery players in India have limited their expansion to newer towns and are now focusing on achieving operational efficiencies and profitability in Tier 1 cities only. There are multiple factors like changing demographics, rising income, consumption levels, Favourable lifestyle changes, the convenience of ordering, and aggressive marketing strategies are currently driving growth in the online food delivery industry.

In this research paper we will consider the growth trends and its associated impacting factors with respect to one of major dominant players swiggy, licious, Zomato,grofers, foodpanda india, fresh menu in Indian food delivery market.
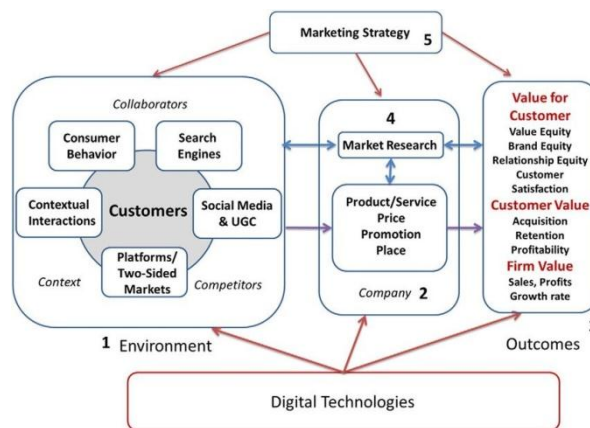
Source: Alice Li, Digital Marketing Era, 2017

2. Literature Review

Despite the advantage of physical sales and purchases, digital marketing or e-marketing provides more knowledge about land market beyond time and geographical limitations (Järvinen and Karjaluoto 2015;Kannan and Li 2017). Online geo-marketing as a kind of e- marketing can play an important role in real-estate services, applications and tools (Suárez- Vega, Santos-Peñate, and Dorta-González 2012; Roig-Tierno et al. 2013; Giovanardi and Lucarelli 2018).According to Chavan *et al.*, (2015), digital restaurant uses smart phones to take customer orders. PDA interface was replaced with smart phones to provide customer user interface to view menu or track their orders. With secured login system, customers have the facility to view menu, place orders, track their orders, receive real time updates and make online payment and collect receipts from smart phone itself increasing customer comfort. Bhandge *et al.*, (2015) proposed an automated food ordering system which will not only enable used to give order without any personal interfacing but also will keep track of orders smartly. Digital

ordering system was developed by means of android application. For Tablet and PCs this system was implemented. The front end was developed using JAVA (Khairunnisa *et al.*, 2009).

Objectives
1. To study the impact of those factors influencing the customers' behavior towards Food Delivery System.
2. To study the affinity towards online payment to their demographic variables.

3. Data Collection and Sample Plan

Research Type: Empirical in nature.
Population: Customers who pay the money through e payment to order food from DIFFERENT Food Delivery Service in INDIA

Research Design: The study has been partly descriptive and partly analytical. The study is based on both primary and secondary data.
- **Primary Data Collection:** Primary data was collected through a well-structured closed ended questionnaire based on 5 Point Likert Scale consisting of 15 questions from customers who were ordering food through FOOD SERVICES and uses e-payment.
- **Secondary Data Collection:** The data from secondary sources was collected through books, journals, research studies, internet sources.

Sampling Area: Hyderabad, Bangalore, Chennai, Kochi (SOUTH INDIA)
Sampling Frame: Selected Customer list from DIFFERENT FOOD SERVICES Database
Sample Units: E-payment Users of Food Services
Sample Size: 800
Sampling Method: Multistage sampling technique

Objective: 1
X1: Ordering Food

Year Grofers	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
2012	4.77	4.22	4.6	4.13	4.1	4.82
2013	4.29	4.61	4.88	4.52	4.88	4.79
2014	5.04	5.72	6.27	5.78	6.43	6.11
2015	5.11	6.28	6.26	6.38	7.19	5.94
2016	5.39	5.62	5.67	5.4	6.45	5.4
2017	4.63	5.29	5.22	5.14	5.59	5.37
2018	5.33	6.23	6.91	6.42	6.66	6.11
2019	5.61	6.44	7.17	6.64	7.21	6.93
MEAN	5.14	5.75	6.12	5.77	6.33	6.04
SD	0.46	0.823	0.98	0.94	1.13	0.99
CV	8.98	14.32	16.1	16.29	17.86	16.32

x2: Customer Convenience

Year/Banks	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
2012	3.71	1.91	2.8	1072	3.12	0.11
2013	2.6	2.31	1.89	32	1.19	0.09
2014	4.02	1.85	1.39	0.06	1.13	0.23
2015	3.04	3.9	1.61	0.24	2.13	0.76
2016	1.19	1.05	0.68	4.47	0.28	0.3
2017	2.14	1.06	0.7	2.89	0.7	1.08
2018	3.06	2.71	0.83	3.3	0.47	0.88
2019	2.44	1.61	0.52	5.57	1.37	0.74
MEAN	2.69	2.61	1.41	2.33	1.22	0.93
SD	0.835	1.473	0.79	1.988	0.84	0.986
CV	30.99	56.47	55.69	85.14	6862	106.36

x3: Hygenity

Year/Banks	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
2012	6.76	7.54	7.12	7.43	6.79	7.06
2013	7.36	8.34	7.87	7.71	7.72	7.67
2014	8.45	9.22	8.77	9.06	9.13	9.23
2015	8.55	10.01	9.62	9.87	10.32	9.73
2016	8.01	8.86	8.89	9.34	9.95	8.74
2017	7.93	9.15	9.09	9.41	9.81	8.75
2018	9.35	10.31	10.61	10.2	10.22	9.75
2019	8.66	10.41	10.63	10.66	10.35	10
MEAN	8.22	9.43	9.39	9.4	9.55	9.22
SD	0.73	0.97	1.27	1.09	1.3	1.19
CV	8.94	10.34	13.53	11.57	13.63	12.9

x4: Secured Payment Architecture

Year/Banks	Swiggy	Zomato	Licious	Grofers	Foodpand A	Freshmenu
2012	**8.60**	**9.08**	**8.3**	**7.7.**	**7.06**	**8.46**
2013	7.01	6.96	7.12	6.71	5.96	7.69
2014	6.30	6.73	7.03	6.91	6.45	6.75
2015	5.64	7.13	6.55	6.20	6.87	6.48
2016	6.00	6.25	6.34	6.73	6.37	6.05
2017	6.71	7.33	6.47	7.11	7.54	6.41
2018S	7.67	6.99	7.74	7.17	6.78	6.45
2019	7.75	7.23	7.62	6.90	7.25	667
MEAN	7.10	7.46	7.26	7.21	7.06	9.02
SD	0.94	0.91	0.70	0.40	0.50	1.01
CV	13.29	12.21	9.58	5.74	7.24	14.08

x5: Strategy for Referral Coupon

Year/Banks	Swiggy	Zomato	Licious	Grofers	Foodpand A	Freshmenu
2012	**7.6**	**7.8**	**8.4**	**8.6**	**8.6**	**8.1**
2013	7.8	8.5	8.6	8.2	8.5	8.4
2014	7.4	8.6	8.1	8.4	8.2	8.1
2015	7.69	8.4	8.3	8.5	8.1	8.1
2016	7.30	8.9	8.5	8.9	8.8	8.5
2017	7.26	8.5	8.06	8.0	8.6	8.5
2018	7.02	8.4	8.4	8.3	8.5	8.9
2019	7.70	8.4	8.2	8.7	7.8	8.2
MEAN	7.6	8.3	8.4	8.3	8.1	8.3
SD	0.97	2.02	1.20	1.3	2.3	2.07
CV	1.26	1.45	1.45	1.5	2.9	2.4

x6: Discount by Portals

Year/Bank	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
2012	7.9	7.8	8.4	8.6	8.6	8.1
2013	7.6	8.2	8.6	8.5	8.4	8.4
2014	7.4	8.6	8.1	8.2	8.3	8.1
2015	7.9	8.4	8.3	8.1	8.1	8.5
2016	7.3	8.9	8.5	8.8	8.6	8.1
2017	7.3	8.5	8.3	8.4	8.2	8.9
2018	7.6	8.1	8.4	8.3	8.3	8.3
2019	7.8	8.2	8.4	8.5	8.2	8.2
MEAN	7.9	8.3	8.1	8.2	8.3	8.3
SD	0.97	2.02	1.20	2.39	1.30	2.07
CV	1.26	2.43	1.45	2.91	1.56	2.48

x7: Payment Preference of the Customers

Year/Bank	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
2012	8,4	7.9	8.1	8.1	8.6	8.1
2013	8.6	7.6	8.4	8.6	8.5	8.5
2014	8.4	8.2	8.5	8.4	8.3	8.4
2015	8.1	8.4	8.1	8.8	8.5	8.1
2016	8.8	8.1	7.6	8.4	8.0	8.3
2017	8.4	8.6	7.9	8.2	8.3	8.2
2018	7.9	7.9	7.6	8.1	8.1	8.2
2019	8.0	8.0	7.2	8.4	8.0	8.1
MEAN	7.9	7.9	7.5	8.4	8.2	8.3
SD	1.23	1.25	0.84	2.04	2.05	2.05
CV	1.25	1.38	1.16	1.24	2.20	2.31

Results of Correlation Analysis of Selected Ratio

Variables	Swiggy	Zomato	Licious	Grofers	Foodpanda	Freshmenu
X1 and X2	8,4	7.9	8.1	8.1	8.6	8.1
X1 and X3	8.6	7.6	8.4	8.6	8.5	8.5
X1 and X4	8.4	8.2	8.5	8.4	8.3	8.4
X1 and X5	8.1	8.4	8.1	8.8	8.5	8.1
X1 and X6	8.8	8.1	7.6	8.4	8.0	8.3
X2 and X3	8.4	8.6	7.9	8.2	8.3	8.2
X2 and X4	7.9	7.9	7.6	8.1	8.1	8.2
X2 and X5	8.0	8.0	7.2	8.4	8.0	8.1
X2 and X6	7.9	7.9	7.5	8.4	8.2	8.3
X2 and X7	1.23	1.25	0.84	2.04	2.05	2.05
X3 and X4	-.391	.599	-.486	.369	.405	-.138
X3 and X5	-.188	-.104	.119	-.244	-.114	-.015
X3 and X4	.175	.425	.142	-.032	-.884**	.604
X4 and X5	-.711	-.802**	-.874**	-.628	.753*	-.689*
X3 and X6	.657	.761	.947**	.890**	-.328	.277
X3 and X7	.502	-.805**	.514	.434	-.301	.115
X4 and X5	-.154	.105	.123	-.136	.410	.138
X4 and X6	.201	.391	.075	-.230	-.054	-.477
X4 and X7	-.299	-.537	-.193	-.218	-.647*	-.492
X5 and X6	.254	-.010	.269	-.272	-.653	-.323
X5 and X7	.458	-.743*	-.946**	-.641*	.524	-.494
X6 and X7	.582	.248	.624	.456	.248	.681s

Source: Computed data from CMIE Prowess

Note:*-correlation is significant at the 0.05% (2-tailed)
** .correlation is significant at the 0.01 level (2-tailed)

The above table depicts that correlation results among selected ratios indicates high degree of positive correlation between X1 and x3 of all the selected food services and is statistically significant at one percent level. The variable X6 of all selected services X6 is negatively correlated with X3 and X7 and results are statistically significant. There is low degree of negative relationship between total deposits to X5 and X6 of all selected food services.

Multiple Regression Analysis
Y=a+bx1+bx2+bx3+bx4+bx5+bx6+e

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.959	.921	.912	.3437

The multiple regression analysis is used to explain the variance of the dependent variable return on advances by independent variables namely X1, X2, X3,, X4, X5, X6 .The regression model is defined as

From the results of multiple regression analysis the R-value .959 indicates high degree of multiple correlations between the dependent and the selected independent variables. The adjusted R square value depicts that 91.2% variance X3 is explained by the selected independent variables and remaining 9.8% is about the influence of unregistered or not considered factors**Significance Test of ANOVA**

Significance Test of ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	72.562	6	12.094	102.356	.000 b
Residual	6.262	53	.118		
Total	78.824	59			

The ANOVA results reveal that the six independent variables in the standard model are significantly predicting the dependent variable X3.The calculated F-value is greater than the critical value .hence the null hypothesis is rejected indicates goodness of fit of the regression model.

Multiple Linear Regression Coefficients

Model	Unstandardised Coefficients		Standardise d Coefficient	T	Sig	Collinear it y	
	B	Std Error	Beta			Tolerance	
VIF	.766	3.443		.223	.825		
X1	.871	.063	.717	13.9	.000	.563	1.78
X2	.080	.035	.095	2.301	.025	.885	1.13
X3	-.140	.062	-.093	-2.257	.028	.874	1.14
X4	.055	.024	.139	2.276	.027	.400	2.50
X5	-.063	.022	-.210	-2.912	.005	.289	3.46
X6	.021	.017	.092	1.257	.214	.278	3.59

The absolute value of beta is above the table indicates the order of importance of predictors. The variable with highest beta value is relatively most important predictors variable on examining the contributions to the dependent made a biggest contribution to the dependent variable. The variance increased factors values for all the variables shows less than 10 and the tolerance level is higher than.10 implying that there is no multi colinearity among the independent variables.

Objective: 2

Si. No	Factor	Variable name	p-val
1	Gender	1. Customer convenience	**0.048**
2	Age	1. Customer convenience	**0.007**
		2.strategy for referral coupon	**0.003**
3	Education	1.customer convenience	0.005
		2.secured payment architecture	0.002
		3.strategy for referral coupon	0.002
		Payment preference of customers	0.021
4	Marital status	1.customer convenience	0.000
		2.secured payment architecture	0.004
		3.strategy for referral coupon	0.000
		Payment preference of customers	0.017
5	Profession	1.customer convenience	0.000
		2.secured payment architecture	0.007
		3.strategy for referral coupon	0.003
		Payment preference of customers	
6	Income	1.customer convenience	0.001
		2.secured payment architecture	0.001
		3.strategy for referral coupon	0.039
		Payment preference of customers	

4. Conclusion

Ordering Food Online or through an App is a new concept in India. We tried to find out in this research paper what are the factors that have a positive impact on this new concept and how are the demographic variables associated with it. The result shows that 5 factors have been extracted from 15 variables which influences customers' mode of payment preferences, they are

- Customer Convenience
- Secured payment architecture
- Strategy for referral coupon
- Payment preference of the customers
- Discount by Portals

The survey conducted revealed a positive attitude and behavior towards E-payment while ordering Food Online through App. The study also shows that there is significant association between online payment behaviors with respect to Demographic variables. This study will help the industry as well as the new entrepreneur to formulate marketing strategies in such a way that they can increase the volume of sale.

5. Managerial Implications

This study will help the industry as well as the new entrepreneur to formulate marketing strategies in such a way that they can increase the volume of sale by making some updates regarding time management, hygienist etc.,

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