

# “Restaurants in Pocket”: Digitalization and Food Ordering in Bangalore



Roopa K V, Sanjeev Kumar K. M

**Abstract** E- Commerce and Digitalization has paved its way by pooling investments and increasing their market share in Online Food delivery services in India with a revenue of US\$7,730m and an Annual growth rate of 12.8% in 2019. [1] Growth and flourishing in working women population, Dual income, Penetration of internet, Smart phones, Double income no kids (DINK) mobile wallets, customization, discounts and offers has made it easy and convenient to order food online through Swiggy, Zomato, Domino's pizza, uber eats, food panda and others. Bangalore being the highest taker of food orders with 20% market share, Mumbai in its second position with 18% share, Pune at third place with 17% share, Delhi being fourth at 15% and Hyderabad at its fifth position with share of 12% Respectively and other cities accounting to 18% of market share in India 2019. The online food aggregators app has its presence over 200 cities in march 2019. The study emphasizes on understanding the factors influencing to order food online. Convenient and purposive sampling technique has been adopted. A sample of 318 online food ordering customers in Bangalore were surveyed to analyze the Impact of digitalization on ordering Food online using Factor Analysis to associate the influencing factors and Multiple regression was used to identify the most influential factor. It was found that ratings and reviews, ranking on search engine, carousal advertisements, live order tracking, delivery time, coupon code, discounts, notifications on mobile applications had more impact on the consumer's choice to order food online than preferring for dine out at restaurants.

**Key words:** Digital marketing, SEO- Search engine optimization, Gig Economy, O2O mode - Online to offline, Website quality. Loyalty, Customer Trust.

## I. INTRODUCTION

Marketers identify the need of consumers to satisfy them with the suitable products and services for fulfilling their expectations. In today's scenario the rapid enhancement of technology, internet, smart phone and mobile wallets has paved its way for consumers to receive the products and services at their doorstep with one tap on their smart phone. Growing number of working population and their busy schedules has transformed from cooking food at home to takeaways and home delivery.

Manuscript received on February 10, 2020.  
Revised Manuscript received on February 20, 2020.  
Manuscript published on March 30, 2020.

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Pizza hut had the first mover advantage of delivering pizza through online orders at consumers convenient place in 1994 [2] The Dabbawalla founded in 1890 at Mumbai, Maharashtra is a magnificent example for lunch box delivery from homes and restaurant to the people at work in Mumbai.

Around 5000 dabbawalla's carry 1,75,000 to 2,00,000 lunch box each day and deliver to the point through bicycle and railway trains through their inbuilt network chain and return the lunch box post lunch Quality Check [3]

Data Intelligence and management platform KalaGato has reported that Bengaluru based startup Swiggy Scooped up almost half of the market by transactional volume with average market share of 36.40% in 2018(Jan to Nov). Swiggy witnessed inflation of 50% increase in the sales of Pizza, potato fries and luscious ice creams during IPL 2018. Lunch being the most ordered food online in India. Chicken biryani rules customers tummy in Indian online food ordering followed by Masala dose and Pizza In 2018. Manipal, the most popular education institute has the highest frequencies of deliveries in India. [4]

Convenience seeking millennials are at bright spot in restaurant industry for increased global online food ordering. They feel that the time and cost of production of home cooked food would have minimal difference with the cost of professionally cooked meals at the dark kitchens who prepare the food in masses for delivering and meeting the bulk orders through the cheap labor pool in the Gig economy. Restaurant these days have robots flipping burgers, salad making machines, drones delivering the food to chase up the orders for quick delivery. [5]

With the advent of cloud kitchen, Home get-together culture from cooking at home has transformed to restaurants at home as customers now order Lunch, snacks, dinner for their parties leading to higher margins for restaurants and customers as they prefer to enjoy the meal at their own private space. [6]

Restaurants are bolstering their tie ups with the food aggregators like Zomato, Swiggy, fresh menu, Food Panda, Licious, Grofers and others to expand their reach. Availability of restaurant data on mobile applications, feeding real time menu, secured mobile payments, logistics management, delivery time, packaging methods, rewards, references has influenced the consumers to order food online

## II. REVIEW OF LITERATURE

According to Ms. Anita Vinaik, Ms.Richa Goel, Ms.Seema Sahai, Vikas Garg (2019) [7] majority of the respondents were aware about the food aggregators mobile application and are placing the online food orders from last 1-2 years.

Zomato being ranked one followed by swiggy and others with monthly online food order expenditure of Rs1000 – Rs1,500. The ease of use, payment method, delivery time and food options available with respect to their age and preferences were considered as the influential factors for ordering food online.<sup>[4]</sup>

Intruding innovative technologies in restaurant chain and the strategic game plans adopted by the E-Food Retail startups are bringing new dimensions to the working people’s kitchen and food culture. In the study Anupriya Saxena (2019) <sup>[8]</sup> Ordering food online is more comfortable and less expensive than dine out due to technology driven portal, choice of restaurant, ease of food at their door step. Promotional deals, rewards, loyalty benefits, cash backs drive them to order food online. While, negative past experience, reviews, word of mouth block them to try online food ordering through mobile application.

Time factor is an important element which drives consumers to opt for online food ordering at their convenient place. The study **Aparna Anib, Gayathri.A., Shabu K.R. (2019)** <sup>[9]</sup> depicts that the female respondents constituted a major portion in ordering food online. Students being the main Hub followed by private employees. Majority of the consumers are single and order food through mobile applications in smart phone. Word of mouth from friends, advertisements, social media were the important source of information for being aware about the deals and offers of online food ordering. Live order tracking, on time delivery, offers, discounts, freebees has influenced them to order food online.

The online food ordering trend has transformed the mindset of consumers and their life style. In the study **Arji Mariam Jacob, N.V. Sreedharan, Sreena.K (2019)** <sup>[10]</sup> students and working population are more inclined towards ordering food online due to their busy working lifestyle, availability of online food aggregators, restaurant options, data base of the last order for easy comparison , consumer reviews and ratings has influenced them to order food online than dining out. The study highlights that the consumers in kochi often place orders on holidays and weekends. Dinner is preferred more followed by snacks majorly through swiggy. Few respondents did not prefer to order food online due to quality and health concern.

Restaurant business has transformed from offline to online by strategizing homedelivery and take away at office, complex, malls and residential areas. The study **Dr. Mitali Gupta (2019)** <sup>[11]</sup> was carried using secondary data to analyze the strategies of Zomato, Swiggy, food panda, beer café, dominos, pizza hut Box 8 and others. Zomato had the first mover advantage and strong content platforms on social media to boost awareness. Introduction of Zomato gold, Feeding India Campaign, Hyper pure strategy and Zomaland – food carnival increased the awareness level and sales.

### III. OBJECTIVES OF THE STUDY

- 1.To understand the Role of Digitization on food ordering
- 2.To identify driving factors for ordering food online.
- 3.To analyze the satisfaction level of consumers and their preferences on online food Aggregators.

### IV. RESEARCH METHODOLOGY

The study was carried out in Bangalore as it is the hub for online food aggregators in India compared to other metropolitan cities. The data was collected from 318 individual customer who order food online in Bangalore with the help of structured questionnaire using convenience sampling and purposive sampling technique through google form. Descriptive study is carried out to understand the online food ordering buying behavior of customers. Five demographic variables and 54 variables were considered for the study. All the 54 variables were scaled using Five-point Likert scale ranging from extremely-influential to not at all influential. Descriptive statistics, Ranking, Exploratory factor analysis and multiple regressions is carried out to analyze the data.

### V. DATA ANALYSIS AND RESULTS

**5.1. Reliability:** During the study the internal coefficient i.e Cronbach’s alpha was estimated to be 0.86 which indicates excellent reliability for 54 variables in the study.

Cronbach's	Cronbach's Alpha Based on Standardized Items	N of Items
0.861328	0.865270305	54

**5.2. Demographic profile of respondents:** Out of 318 respondents’ majority of the customers who order food online are male with 82% (263) and the rest is female with 17.3 % (55). Majority of the consumers who order food online fall in the age group of 18- 21 years with 65.7 % of the respondents.

Variable Name	Categories	Frequency	Percentage (%)
Gender	Male	263	82.7
	Female	55	17.3
Age	Below 18	12	3.8
	18 to 21	209	65.7
	22 to 25	21	6.6
	26 to 29	41	12.9
	30 to 33	28	8.8
	34 to 37	2	0.6
	38 and above	5	1.6
Occupation	Student	215	67.6
	Salaried	67	21.1
	Self Employed	24	7.5
	Home Maker	12	3.8
Marital status	Married	73	23.0
	Unmarried	245	77.0
Income	Dependent Income	117	36.7
	Below 25,000	73	22.9
	25,000- 50,000	98	30.8
	50,000- 75,000	14	4.4
	75,000 and above	16	5

Students have the superiority with 67.6%. when compared to other occupation who order the food online most because of their busy schedule and smart generation. Majority of consumers are unmarried respondents with 77% who are likely to order more than married population. Out of 318 respondents 131 respondents (41.2%) order dinner online and 77 (24.2%) respondents prefer to order snacks and others order as per their preferences.

282 (88.7%) of the respondent's order food online through mobile applications installed in their smart phones, 24 (7.5%) of the respondent's order through website and 12 (3.8%) order through the contact number displayed on the website. Swiggy is the most desired and loyal online food aggregator opted by majority of the respondents followed by Zomato

**5.3. Factor analysis:** The sampling Adequacy for the statistical factor analysis in the study was proved with Kaiser-Meyer-Olkin Measure which depicted the value of 0.66 which illustrate that, the data is desirable to run factor analysis. The table 3 gives KMO value which is more than the recommended value (0.6). The Bartlett's test of sphericity provides the value of Chi-square = 4341.201 and df =276

which is significant with p-value <0.05 and illustrates that the variables are significantly corelated to each other for factor analysis

Kaiser-Meyer-Olkin Measure of Sampling		0.662
Bartlett's Test of Sphericity	Approx. Chi-Square	4341.201
	df	276.000
	Sig.	0

Factors which influence the respondents to order food online through mobile applications using smart phone and other media was analyzed through factor analysis. The principle component analysis using extraction method is depicted in Table 4.

Component	Initial Eigenvalues			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.519	22.997	22.997	5.519	22.997	22.997	4.129	17.203	17.203
2	3.444	14.349	37.346	3.444	14.349	37.346	3.764	15.684	32.887
3	2.755	11.479	48.825	2.755	11.479	48.825	3.233	13.472	46.359
4	1.933	8.054	56.879	1.933	8.054	56.879	2.525	10.520	56.879
5	1.321	5.503	62.381						
6	1.241	5.173	67.554						
7	1.195	4.980	72.534						
8	0.869	3.619	76.153						
9	0.731	3.046	79.198						
10	0.672	2.799	81.997						
11	0.592	2.468	84.465						
12	0.516	2.149	86.614						
13	0.468	1.950	88.564						
14	0.432	1.801	90.364						
15	0.393	1.637	92.001						
16	0.357	1.488	93.490						
17	0.318	1.325	94.815						
18	0.275	1.148	95.963						
19	0.235	0.981	96.944						
20	0.227	0.945	97.889						
21	0.165	0.689	98.578						
22	0.155	0.645	99.222						
23	0.098	0.409	99.631						
24	0.089	0.369	100.000						

Extraction Method: Principal Component Analysis.

**Naming of Extracted Factors:** Rotated component matrix resulted into extraction of Four factors with 56.8 % of total variance. Items with less than (<0.05) was not considered for

the study. The extracted factors were Reliable sources, Impulsive factors, Credibility, benefits and perks.

## “Restaurants in Pocket”: Digitalization and Food Ordering in Bangalore

**Factor 1 (Reliable sources):** The first factor explains 22.9 % of variance and contains total of seven variables: Search engine ranking on the page (loading= 0.852), Enquires and discussions on Quora( loading = 0.795), Website features and navigation ( loading = 0.677),Food bloggers reviews and stories( loading = 0.676),Notifications on mobile applications( loading = 0.663), Hash tags on social media (loading =0.615), and Number of followers (loading = 0.571). The above-mentioned factors were considered as the most dependable and honest information source which the consumers prefer while ordering food online

**Factor 2 (Impulsive Factors):** The second factor explains 14.3 % of variance and has 7 variables: Number of likes (loading = 0.800), Appealing posts by service provider (loading = 0.727),carousel Adds i.e use of two or more images to convey Information (loading = 0.687)

Ratings by just dial, trip advisor, dine out and group table (loading = 0.686), Posts shared by friends on social media

(loading = 0.553), Reviews by consumers (loading = 0.527) and Campaigns (loading = 0.517). The online food ordering decision is influenced by the impulsive expressions of individuals.

**Factor 3 (Credibility):** The third factor explains 11.4% of variance with five variables: Reference from friends and peers ( loading = 0.518), Content marketing through images, newsletter, videos, GIF'S, info graphics, Listicles(loading=0.797), Email 's received by the supplier loading=0.773), Contests (loading = 0.740) and Google adds (loading = 0.518).

**Factor 4 (Benefits and Perks)** The fourth factor explains 8.05% of variance with five variables: Coupon Code (loading = 0.710), Initial order offer (loading = 0.684), Discounts (loading = 0.594), Hashtags on social media (loading = 0.589) and Offers (loading = 0.562).All the five variables are related to the price and the benefits gained for ordering food online.

**Table - 5 : Rotated Component Matrix**

Variable Name	Component			
	1	2	3	4
Search engine ranking on the page	0.852			
Enquiries and discussions on quora	0.795			
Website features and navigation	0.677			
Food bloggers reviews and stories	0.676			
Notifications on mobile applications	0.663			
Hash tags on social media	0.615			
Number of followers	0.571			
Number of likes		0.800		
Appealing posts by service provider		0.727		
carousel Adds ( use of two or more images to convey Information		0.687		
Ratings by just dial,trip advisor,dine out and group table		0.686		
Posts shared by friends on social media		0.553		
Reviews by consumers		0.527		
Campaigns		0.517		
Reference from friends and peers			0.518	
Content marketing through images, news letter,videos,GIF'S, info graphics, Listicles			0.797	
Email 's received by the supplier			0.773	
Contests			0.740	
Google adds			0.518	
Coupan Code				0.710
Initial order offer				0.684
Discounts				0.594
Hashtags on social tags				0.589
Offers				0.562

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.a

**3. Multiple Regression:** Table 6 shows the R value which is 0.996 and illustrates the data extracted has better linear relationship between the response variable and the predictor. Difference between R square and adjusted R square is nil which portrays that there is approximately no variance in the outcome. The data was further analyzed through F ratio using Anova to test if the regression model is universal for a good fit.

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the
1	.996a	0.991	0.991	1.05934

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

Table 7 shows that, the independent variables notably predict the dependent variables,  $F(8830.92) = 39640.20$   $P < 0.05$ . Hence the regression equation can be interpreted as

$$Y = \text{Constant} + (V1) + (V2) + (V3) + (v4)$$

Factors influencing online food ordering =  $75.48 + 7.09(V1) + 6.83(V2) + 3.76(V3) + 3.71(V4)$

**Table 7: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39640.20	4	9910.05	8830.929	.000b
	Residual	351.248	313	1.1222		
	Total	39991.45	317			
a. Dependent Variable: STR						
b. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1						

The actual relationship among the variables in known and the first variable i.e. Reliable sources has high weightage on influencing the customers for ordering food online. The ranking of food aggregator on the search engine page, website features, navigation, reviews of the food bloggers, notifications of the meals and offers on mobile application influence the consumers.

**Table-8: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	75.487	0.059		1270.7	0.000
	Reliable sources	7.097	0.059	0.632	119.3	0.000
	Impulsive Factors	6.834	0.059	0.608	114.9	0.000
	Credibility	3.769	0.059	0.336	63.3	0.000
	Benefits and Perks	3.711	0.059	0.330	62.4	0.000
a. Dependent Variable: STR						

Second, impulsive factors like Appealing posts by service provider, carousel Adds (use of two or more images to convey Information, Ratings by just dial, trip advisor, dine out and group table, Posts shared by friends on social media, Reviews by consumers and Campaigns also trigger for ordering food online. Credibility of source of information as Reference from friends and peers, Content marketing through images, newsletter, videos, GIF'S, info graphics, Listicles, Email 's received by the supplier, Contests and Google pop up adds also drives to prefer for ordering food online. As consumer is price sensitive perks and benefits like Coupon Code, Initial order offer, Discounts, Hashtags on social media and offers galvanize the smart generation plump for ordering food online than opting for dining out or preparing dish at home.

**Managerial Implications:** Digitalizing the marketing strategies through location based content, friendly URL, Optimizing the content on website with relevant key words, google add words for proper pay per click strategies, using unique pictures of the meals with the story telling , optimizing food menu, engaging customers through posts on social media and contests can increase the rate of visibility to consumers. Food aggregators need to have the listing of restaurants in accordance to the good reviews and repeated number of orders. Keeping up the promise in accordance to the advertisements and promotions increases the order rate and

word of mouth. Consumer prefer to know the delivery time, online tracking, preparation time, delays, updates on offers and newly listed restaurants for better experience and loyalty.

## VI. CONCLUSION

Digital food ordering has flourished and changed the culture of traditional restaurant business to “Restaurants in pocket” with steady growth in restaurant business through the prime online food aggregators like swiggy- the mushroomed company in every corner, Zomato -with the first mover advantage and others. The study illustrates that consumers consider the ranking and reviews, discounts, coupon code, carousel advertisements, navigations, notifications on the updates and updates on social media. Delivery time is the most considered factor followed by live tracking and payment options for ordering food online than dining out. Hence marketers can increase their sales through on time delivery, hot and fresh food with upgraded packaging and add-on's like appropriate ecofriendly condiments, napkins and table ware for better experience. Digital food aggregators should give more preferences for green and ecofriendly packaging. Online food ordering has whooped the sales of restaurants. Delighted services to customers would benefit with Positive reviews and brand loyalty.

## REFERENCES

1. Indian online food ordering market set to grow at 16.2%, to touch \$17.02 billion by 2023. (march 2019). Business today from <https://www.businesstoday.in/current/economy-politics/indian-online-food-ordering-market-set-to-grow-at-162-to-touch-1702-billion-by-2023/story/331156.html>
2. Wikipedia contributors. (2019, December 18). Bricks and clicks. In *Wikipedia, The Free Encyclopedia*. Retrieved 07:06, March 3, 2020, from [https://en.wikipedia.org/w/index.php?title=Bricks\\_and\\_clicks&oldid=931318100](https://en.wikipedia.org/w/index.php?title=Bricks_and_clicks&oldid=931318100)
3. Wikipedia contributors. (2020, March 2). Dabbawala. In *Wikipedia, The Free Encyclopedia*. Retrieved 07:09, March 3, 2020, from <https://en.wikipedia.org/w/index.php?title=Dabbawala&oldid=943545870>
4. Indians prefer to swiggy it more than ordering in Zomato, Kaagato report, 6<sup>th</sup> June 2019 from [https://yourstory.com/2019/06/swiggy-zomato-foodpanda-kalagato-report?utm\\_pageloadtype=scroll](https://yourstory.com/2019/06/swiggy-zomato-foodpanda-kalagato-report?utm_pageloadtype=scroll)
5. Online Food Service in India: An Analysis. (2019) The AIMS Institutes. From <https://theaims.ac.in/resources/online-food-service-in-india-an-analysis.html>
6. FoodTech | What's cooking inside the Indian food delivery market? (August 2019) Money control from <https://www.moneycontrol.com/news/business/companies/foodtech-whats-cooking-inside-the-indian-food-delivery-market-4357231.html>.
7. Vinaik, A., Goel, R., Sahai, S., & Garg, V. (2019). The study of interest of consumers in mobile food ordering apps. *International Journal of Recent Technology and Engineering*, 8(1), 3424-3429.
8. Saxena A, (2019). An Analysis of Online Food Ordering Applications in India: Zomato and Swiggy. National Conference on Recent Trends in Humanities, Technology, Management & Social Development (RTHTMS 2K19); KIET School Of Management, Ghaziabad, UP, India.
9. Aparna Anib, Gayathri.A., Shabu K.R. (2019). Consumer Perception towards Swiggy Digital Food Application Service: An Analytical Study with Special Reference to Ernakulam City. *International Journal of Innovative Technology and Exploring Engineering* ISSN: 2278-3075, Volume-8 Issue-6S

## “Restaurants in Pocket”: Digitalization and Food Ordering in Bangalore

10. Arji Mariam Jacob, N.V. Sreedharan, Sreena.K (2019) Consumer Perception of Online Food Delivery Apps in Kochi. International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-8 Issue-7S2.
11. Dr. Mitali Gupta (2019) A Study on Impact of Online Food delivery app on Restaurant Business special reference to zomato and swiggy. International Journal of Research and Analytical Reviews. Volume 6, Issue 1.

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