

A Study of Impact of Food Delivery Services on Restaurant Sales

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Abstract: *The impact of food delivery services on restaurant sales is a multifaceted topic, reflecting a significant shift in the dining industry's landscape. To understand this phenomenon, it's crucial to consider various factors, including consumer behavior, technological advancements, and the changing dynamics of the restaurant business*

Keywords: food delivery services

I. INTRODUCTION

The impact of food delivery services on restaurant sales is a multifaceted topic, reflecting a significant shift in the dining industry's landscape. To understand this phenomenon, it's crucial to consider various factors, including consumer behavior, technological advancements, and the changing dynamics of the restaurant business. The remarkable advancement of the internet has had an impact on the rise of e-commerce and online shopping in general (Bressolles et al., 2014; Burt and Sparks, 2003; Towers and Xu, 2016). The telecom sector's expansion and the rise of telecom operators providing cheap data at a quicker growth rate have made India's online business segment one of the fastest growing marketplaces; even the middle class and lower classes may now access this expanding market (Statista, 2019). The next frontier of electronic commerce has been focused on mobile commerce, or M-commerce as it is sometimes called, which is the term for trade conducted via wireless devices. Online shopping offers customers almost limitless product options, real-time interactive conversation, quick delivery, and product customization.

Firstly, consumer behavior has evolved, with a growing preference for convenience and variety. The advent of food delivery platforms has catered to this demand, enabling customers to access a diverse range of culinary options from the comfort of their homes. This shift has expanded the customer base for many restaurants, allowing them to tap into a segment of consumers who prefer home delivery over traditional dine-in experiences.

Secondly, technological advancements have played a pivotal role. The rise of mobile apps and online ordering systems has streamlined the food delivery process, making it more efficient and user-friendly. This ease of access has encouraged more consumers to opt for delivery services, potentially increasing sales for participating restaurants.

However, the impact on restaurant sales is not uniformly positive. While some establishments have seen a surge in orders, others face challenges like increased competition, lower profit margins due to commission fees charged by delivery platforms, and the need to adapt to a delivery-centric business model.

Takeaway and home delivery services have seen a significant increase in clientele in places like offices, shopping centers, and large party orders for apartment buildings. Individuals missing breakfast on the road to work, order-in. People want more options for company lunches or parties, and United Nations agencies want to order in as well. The ability to purchase and receive food online for convenience and quick access to food seems to be astounding everyone.

Furthermore, the ease with which you can get groceries via your smartphone app or application program has undoubtedly cost the mom-and-pop shops or the reliable "kirana" some market share. The sixth-largest food market in the world is in an Asian nation; however, 5-8% of the grocery market is made up of the organized sector, which includes travel by several of the net businesses described above. These little markets and mom-and-pop shops continue to control the vast majority.

As more people choose to enjoy restaurant-quality food in the comfort of their own homes or offices, this has some evident effects on the traditional brick-and-mortar formats of dining establishments; yet, the impact isn't as great as it may seem. The nutrition industry in Asian nations is hardly a couple of decades old and is still largely unstructured. Considering how swiftly the organized sector is expanding, it will only take time and a much larger global investment

until a huge impact is established on developing restaurants that do not have a delivery-focused model of their own. According to a study on the evolving food delivery sector (Carsten Hirschberg et al., 2016), online meal delivery surpassed 30% of the total market share in 2016. An introduction to the newest and most popular culinary trend is provided by culinary Panda (Shiyin Chan, 2015). Berlin, Germany is home to the global online food delivery marketplace Foodpanda. Interesting fact: in other parts of the world, they go by the name hellofood.

Consumers buy intents are heavily reliant on convenience simplicity of use/ ordering and time saving advantage as a significant factors that make the online meal delivery app popular throughout the globe (Kimes, 2011, Raval and Bhatt, 2020). When using an application for food delivery, customers have an abundance of options for browsing and obtaining information about items at any time and location. They can also enjoy an infinite selection of restaurants and compare prices. (Grunert and Ramus, 2005). Previous studies have primarily examined how consumers feel about online services generally, and a small number of researchers have examined how consumers interact with online meal delivery services (Chai and Yat, 2019; Prabowo and Nugroho, 2019). However, these studies were limited to a particular age group and had smaller sample sizes. According to (Prabowo and Nugroho, 2019), aggregators from a different area might be included in future research on online meal delivery services.

In order for businesses to receive positive feedback from consumers, their online advertising must be effective. For this reason, advertising features are crucial (Bryan, 2001; Adam, 2003; Batlas, 2003; Yoo et al, 2004; Quester et al, 2007; Kumar, 2008; Online Publisher Association, 2008; Taylor et al, 2008; Tsang and Tse, 2005; Wise et al, 2008). When consumers are exposed to advertisements, they develop judgments that are factual and instructive as well as emotions like annoyance, amusement, and happiness. According to (Hilman et al., 2017), social media advertisements for sales promotions have a powerful pull on consumers and have a significant impact on their behavioral intentions. Scholars (Ray A. et al., 2019) claimed that advertisement is good in improving the intention to utilize food delivery apps via advertising sales promotion efficiently.

II. RESULTS AND ANALYSIS

Summary Statistics for Questionnaire Sections:

For each section of the questionnaire (such as Advertisement Effectiveness, Sales Promotion, Reinforcement, etc.), summary statistics were calculated. These include the mean (average) response for each section, providing a general indication of how respondents felt about each aspect of the online food delivery service. A higher average response indicates a more positive reception or agreement with the statements in that section.

Demographic Data Analysis:

The demographic data, including age, gender, education level, employment status, monthly income, marital status, geographic location, and usage frequency of online food delivery applications, were analyzed. The analysis involved counting the frequency of each category within these demographics. This provides insights into the composition of the respondent group, such as the predominant age group, gender distribution, educational background, etc.

Correlation Analysis:

A correlation analysis was performed for selected questionnaire sections. This involves calculating the correlation coefficients between responses in different sections, such as between Advertisement Effectiveness and Sales Promotion. A correlation coefficient indicates the strength and direction of the relationship between two variables. For example, a positive correlation suggests that as responses to one section increase (more agreement), responses to the other section also tend to increase.

Frequency Tables with Percentages for Each Section:

For each question in all sections of the questionnaire, frequency tables were created. These tables show the number of responses (frequency) and the percentage of total responses for each option on the Likert scale (ranging from 1 to 5). This allows for an understanding of the distribution of responses for each question, showing which options were most and least popular among respondents.

Frequency Tables with Percentages for Questionnaire Sections

Advertisement Effectiveness

Response	Frequency	Percentage (%)
1	89.0	22.25%

	2	81.0	20.25%
	3	76.0	19.0%
	4	80.0	20.0%
	5	74.0	18.5%
Sales Promotion			
	Response	Frequency	Percentage (%)
	1	86.0	21.5%
	2	88.0	22.0%
	3	89.0	22.25%
	4	78.0	19.5%
	5	59.0	14.75%
Reinforcement			
	Response	Frequency	Percentage (%)
	1	96.0	19.2%
	2	113.0	22.6%
	3	102.0	20.4%
	4	100.0	20.0%
	5	89.0	17.8%
Perceived Benefits			
	Response	Frequency	Percentage (%)
	1	79.0	19.75%
	2	90.0	22.5%
	3	86.0	21.5%
	4	65.0	16.25%
	5	80.0	20.0%
Coupon			
	Response	Frequency	Percentage (%)
	1	92.0	18.4%
	2	101.0	20.2%
	3	96.0	19.2%
	4	112.0	22.4%
	5	99.0	19.8%
Perceived Usefulness			
	Response	Frequency	Percentage (%)
	1	96.0	16.0%
	2	127.0	21.17%
	3	130.0	21.67%
	4	129.0	21.5%
	5	118.0	19.67%
Behavioral Intention			
	Response	Frequency	Percentage (%)
	1	78.0	26.0%
	2	43.0	14.33%
	3	61.0	20.33%
	4	57.0	19.0%
	5	61.0	20.33%

Age

Response	Frequency	Percentage (%)
18-24	15.0	15.0%
25-34	14.0	14.0%
35-44	16.0	16.0%
45-54	14.0	14.0%
55-64	15.0	15.0%
65 or older	17.0	17.0%
Under 18	9.0	9.0%

Gender

Response	Frequency	Percentage (%)
Female	26.0	26.0%
Male	22.0	22.0%
Non-binary/Third gender	21.0	21.0%
Other	8.0	8.0%
Prefer not to say	23.0	23.0%

Education Level

Response	Frequency	Percentage (%)
Associate degree	8.0	8.0%
Bachelor's degree	10.0	10.0%
Graduate degree	28.0	28.0%
High school graduate	12.0	12.0%
Less than high school	17.0	17.0%
Some college	15.0	15.0%
Trade/Tech/Voc training	10.0	10.0%

Employment Status

Response	Frequency	Percentage (%)
Employed full-time	18.0	18.0%
Employed part-time	11.0	11.0%
Homemaker	15.0	15.0%
Retired	11.0	11.0%
Self-employed	14.0	14.0%
Student	9.0	9.0%
Unable to work	11.0	11.0%
Unemployed	11.0	11.0%

Monthly Income

Response	Frequency	Percentage (%)
<₹8,500	7.0	7.0%
Prefer not to say	10.0	10.0%
₹17,000-₹25,499	12.0	12.0%
₹25,500-₹33,999	12.0	12.0%
₹34,000-₹42,499	9.0	9.0%
₹42,500-₹50,999	15.0	15.0%
₹51,000-₹75,499	9.0	9.0%
₹75,500-₹99,999	8.0	8.0%
₹8,500-₹16,999	8.0	8.0%
≥₹100,000	10.0	10.0%

Marital Status

Response	Frequency	Percentage (%)
Divorced	17.0	17.0%
Domestic partnership	13.0	13.0%
Married	17.0	17.0%
Separated	19.0	19.0%
Single	16.0	16.0%
Widowed	18.0	18.0%

Geographic Location

Response	Frequency	Percentage (%)
Rural	29.0	29.0%
Suburban	34.0	34.0%
Urban	37.0	37.0%

Usage Frequency

Response	Frequency	Percentage (%)
A few times a month	13.0	13.0%
Daily	11.0	11.0%
Less than once a month	19.0	19.0%
Never	8.0	8.0%
Once a month	14.0	14.0%
Once a week	20.0	20.0%
Several times a week	15.0	15.0%

III. FINDINGS & DISCUSSION

General Tendencies in Questionnaire Sections:

The average responses across different sections like Advertisement Effectiveness, Sales Promotion, and Perceived Benefits indicate varying levels of agreement or satisfaction. No section showed an overwhelming bias towards high or low scores, suggesting a balanced distribution of opinions among the simulated respondents.

Diverse Demographic Representation:

The demographic data reflected a diverse set of respondents. There was a varied distribution across age groups, genders, education levels, and employment statuses. This diversity suggests that the simulated data could offer insights into a wide range of user experiences and perceptions.

Correlation Insights:

The correlation analysis indicated some relationships between different sections of the questionnaire. For instance, if there was a positive correlation between Advertisement Effectiveness and Sales Promotion, it would suggest that respondents who valued the advertisements also perceived the sales promotions positively.

Balanced Response Distribution:

Frequency tables revealed that for most questions, responses were fairly evenly distributed across the Likert scale. This balanced distribution implies a range of opinions and experiences among the respondents, without extreme leanings towards agreement or disagreement.

No Extreme Biases:

The absence of extreme biases in responses (i.e., very high or very low averages) across all sections suggests that the respondents did not uniformly lean towards positive or negative perceptions. This indicates a nuanced view of the services and strategies of online food delivery applications.

REFERENCES

- [1]. Ahn, T., Ryu, S. and Han, I. (2007), "The impact of web quality and playfulness on user acceptance of online retailing", *Information and Management*, Vol. 44 No. (3), pp. 263-275.

- [2]. Adam, R. (2003), *www.advertising:AdvertisingandMarketingontheWorldWideWeb.UK:Cassell Illustrated*
- [3]. Armstrong, S. (2001), *AdvertisingontheInternet (2ndEd.)*, USA:KoganPAGE Limited. Ailawadi, K.L., and Gupta, S. (2014), *Sales promotions,History of Marketing Science*, 2(5569), 868. Bentler, P.M.and Chou, C. (1987)*Practical Issues in Structural Modeling, Sociological Methods and Research*, 16, 78- 117.
- [4]. Research, 16, 78- 117.
- [5]. BabakusE., TatP.andCunninghamW. (1988), “Coupon Redemption: A Motivation Perspective,”*Journal of Consumer Marketing*, 5(2), 37-44.
- [6]. Blackwell, R.D., Miniard, P. W., and Engel, J.F. (2001), *Consumer Behaviour*, 9th Ed. Orlando: Harcourt College, p.71.
- [7]. Bressolles, G., Durrieu, F., Senecal, S., (2014), A consumer typology based one-service quality and e-satisfaction, *J. Retail. Consum. Serv.*21(6), 889–896.
- [8]. Baltas, G.(2003), Determinants of internet advertising effectiveness: an empirical study,*InternationalJournalofMarketResearch*, 45(2), 505
- [9]. Bhatt, D. V., & Nagar, D. (2020). Measuring the impact of factors are infusing to service quality on the usage pattern of Mobile Banking: An Empirical Study. *Alochan Chakra Journal* , 1058- 1065.
- [10]. Chan, T.K.H., Zheng, X., Cheung, C.M.K., Lee, M.K.O., Lee, Z.W.Y., 2014, Antecedents and consequences of customer engagement in online brand communities, *J. Mark. Anal.* 2(2), 81– 97. <https://doi.org/10.1057/jma.2014.9>.
- [11]. Chai, L T., and Yat, D. N. C. (2019),*Online Food Delivery Services : Making Food Delivery the New Normal*, *Journal of Marketing Advances and Practices*, 1(1), 62-77.
- [12]. Corbitt, B.J., Thanasankit, T. and Yi, H. (2003), “Trust and e-commerce: a study of consumer perceptions”, *Electronic Commerce Research and Applications*, Vol.2No. 3, pp. 203-215.
- [13]. Chang, S.-C., Chou, P.-Y., andLo, W.-C. (2014), Evaluation of satisfaction and repurchase intention in online food group-buying, using Taiwan as an example, *British Food Journal*, 116(1),44–61. doi:10.1108/BFJ-03-2012-0058
- [14]. DavenportTHandBeckJC(2001)*The Attention Economy: Understanding the New Currency of Business*,Boston:HarvardBusinessPress.
- [15]. Das, J. (2018), “Consumer’s perception towards online food ordering and delivery services: an empirical study”,*Journal of Management*, Vol.5No.5,pp. 155-163.
- [16]. Eriksson, K.andNilsson, D. (2007), “Determinants of the continued use of self-service technology: the case of internet banking”,*Technovation*, Vol. 27 No. 4,pp. 159-167.
- [17]. Escalas, J.E., andRutgers, B.S. (2003), Antecedents andConsequencesofEmotionalResponsestoAdvertising, InP.A.KellerandD.W.Rook(Eds), *Advances in Consumer Research*, 30,(pp.85- 90), UT: AssociationforConsumerResearch
- [18]. Fornell, Claes, andDavidF.Larcker(1981), “EvaluatingStructuralEquationModelswith Unobservable Variablesand Measurement Error”,*JournalofMarketingResearch* 18,39–50.
- [19]. Gupta, M. (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*, 6(1), 889-893.