Attributes Influencing Consumer Perception Towards Online Food Ordering in Rajasthan, India

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Abstract. The number of customers who choose to buy food through a digital platform has increased significantly in recent years. The present study aims to find attributes of Online Food Ordering (OFO) company offerings that are important for customers to decide which company to select. The primary survey for data collection and Conjoint analysis to find the right combination of attributes of OFO to serve customers in a better way. Six attributes of OFO are found after the literature review. Promotions, Delivery Time, Accessibility or Convenience, Flexibility, Ease of Payment, and Packaging. This study helps the industry to understand customers’ choices while selecting delivery time. Many studies have found variables that are instrumental in online food ordering. But no study has been done to compare variables with each other.

Keywords: Food Ordering · Food delivery features · Food Industry · Conjoint Analysis

1 Introduction

According to the findings of a study that was conducted by J.P. Morgan [1] in the year 2021; “Online Food Delivery” refers to any type of food or meal that is prepared outside of the diner’s home and then needs to be delivered on-site for immediate consumption. In a business, like Online Food Ordering, Delivery is done through vehicle routing and scheduling to provide eatables to diners in small amounts [2]. Online food ordering software enables restaurants to deliver food directly to customers’ homes [3]. This type of service is also known as “Online to Offline” or “O2O,” and it involves customers paying for their orders online before having their orders delivered offline to their homes [4]. The food industry comprises several industries that make an intricate association of activities concerned with the supply, consumption, and catering of food products and services and is an essential part of us or any nation [5]. It is expected to grow globally at a CAGR of 4.79% from 2022 to 2027 [6], and the same could be observed in India also, where the Food industry is growing with Compounded Annual Growth Rate (CAGR) of eleven per cent [7]. Because of the Food Industry’s expansion, Food Processing is also...
rising. Food processing means changing agricultural and animal husbandry products into eatables [8].

According to an investigation by Anand & Bhosale [9], the Food Processing Industry is growing at an eighty-six per cent pace. The increase in the Food Industry and enhancement of the Food Processing Industry provided a platform for the Food Service industry to grow. But many online companies do fail in this growing industry. For example, Uber Eats failed in Bangladesh due to inferior customer experience and inferior offerings compared to competitors [10]. Another reason is the failure to deliver from the distribution centre to customers’ homes properly by online food delivery companies [11]. Due to the intense level of competition and the company’s inability to provide real value to customers, the company “Delivery hero” has discontinued its online food delivery business [12]. Other challenges associated with handling OFO companies include maintaining service quality [13], cost [13, 14], delivery [14], and the challenge of going online to place an order for food [15]. These are just a few challenges associated with handling OFO companies. Customers are discrete in analysing benefits from features and may consider more benefit from a few features and less benefit from others [16]. Hence, it is imperative to ask customers what they prefer more in general among offered features [17]. Online food ordering is experiencing rapid expansion in India and expanding at an exponential rate [18]. As a result of the predicted expansion and continued development of the market, the online retailing company Amazon is considering moving into the Indian online fashion and apparel market shortly [19]. Indian household consumption is anticipated to triple by 2030, placing India in fifth place globally in terms of food consumption [18].

The food delivery industry not only increasing but also changing because of new online platforms due to the rise of digital technology [20]. The main drivers of the increase in online food ordering are income and internet facilities [21]. Internet facilities have further evolved into the Internet of Things (IoT), which includes data, data processing, and connectivity that provide facilities to entities or things and make them intelligent [21], and smartphones are one of them. The implication of IoT in online Food Ordering supports the traceability and tracking of items. Internet facilities have also helped diners or customers. Smartphones with the internet have become widespread and universal reducing time and geographical impedance [23]. Another reason for the rise of online food ordering is socio-demographic and situational factors [24, 25]. As per an investigation done by Restolabs [26], there are nine benefits of online food ordering for the restaurant industry. They are making food ordering easier, enhancing efficiency for management & customers, real-time monitoring, economical marketing, robust customer data, convenience during rush hours & heavy traffic, giving an extra edge over offline ordering, increasing quantity ordered, and catering to large customer base. But there are hurdles also like unawareness [27], Online food delivery apps [28], family especially parents [29], bad experiences in general [20], maintaining food quality [30], dealing with volumes, logistics, and delivery time [31].
1.1 Research Gap

In most of the studies, an effort is put either to find antecedents of using online food ordering Applications for Online Food Ordering [32], etc. Some study is done to understand perceptions of online food ordering [33]. Some studies are done to find what are the factors that could increase the use of online food ordering like food safety (Dang et al., 2018), demographic factors of customers [24] like Most of the customers who go for online food ordering are youngsters. Many are studied to understand important features of OFO like price promotions [34], delivery time [35], Convenience [36], flexibility [31], Ease of Payment [37], packaging [38], etc. what variables must and without which it is difficult for online food ordering to sustain in the market. There are some studies done to find out what factors influence the attractiveness of ordering online for Indians [39] but researchers are unable to find the study to find critical features without which it is not possible to establish an online food order business.

Due to immense small-scale industries (blue pottery, block-printing, etc.) the tourism industry, growing Information Technology, enabled Services, etc. make Jaipur the future smart city. The working hours of Jaipur people are also on the rise. No cooking on weekends is becoming a general trend. Busy and tide schedules and long operating hours give ground for online food ordering to groom. Because of the reasons mentioned above, Jaipur is a suitable destination to conduct the study and represent Rajasthan. The present study would be relevant for all players in the industry, necessarily those operational in Rajasthan Market. Also, it could be a guiding platform for freshers, newcomers, or potential players who are at present strategizing about how to capture the market in the future. Many companies, which are new to the market or new to the online food ordering business, must invest hefty money to be part of ‘Online Food Ordering’. Organizations that are involved in enhancing business should ponder third-party logistics for online food delivery [40]. It is very imperative to present players who are planning to spread business by entering To understand the Rajasthan market, either Rajasthan or new players coming in from other industries need to do their research. Companies need to be aware of the types of features that customers in Rajasthan value the most and the types of features that customers are willing to forego in exchange for other benefits. The results of this study provide a high-level overview of the importance of features from the point of view of customers’ attitudes.

2 Literature Review

A few studies tried to explore features influencing customers toward online food ordering [11, 41]. One significant feature of grounded theory is promotions that affect offerings prices or net costs to customers [42]. Promotional codes and discounts motivate people to order online and stimulate aspects that customers contemplate [43]. Another aspect that is present in past research is Accessibility and Convenience [11, 41, 42, 44, 45]. Having more accessibility to online food ordering, customers are more prone to ordering online compared to other options [46]. The major antecedent of accessibility is the availability and speed of the internet [42]. Convenience encourages customers to prefer online food ordering [30]. Alagoz & Hekimoglu [44] in their work showed that for new technology, ease of use is significant in influencing attitudes toward online food ordering. Few pieces
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of research mention flexibility as an important component of online food ordering [41, 42, 47]. Providing more flexibility to customers lets customers perceive more control [41]. Flexibility is one of the reasons because of why the online food industry is growing at a fast pace [48]. Rani & Garg indoctrinates various options available to pay for food purchased online as a part of flexibility [49]. Flexibility includes designing a website that can adjust as per customers’ needs and providing more optional features i.e. customizing food orders [42] Few pieces of research highlight the ease of doing payment and the options provided for payment against purchasing online food [41, 42]. As per the empirical study done by Ghosh & Saha [37] on ‘Swiggy’ which provides an online food ordering facility; payment options reduce the difficulty of arranging cash, provide the option to pay through Debit/Credit Cards, Digital Wallets, etc. Consequently provide customers to pay through their preferential payment mode. Packaging is one of the primary deliberations in online food ordering [50]. The growth of the online food distribution industry pushes the growth of supplement industries like the food packaging industry [3]. Due to Covid 19 pandemic, the use of single-usage packaging has increased [3]. Also, customers are going more for sustainability, hence, giving the example of recyclable packaging in online food ordering [50]. Packaging in online food ordering means boxes, bags, bottles, wraps, cups, and plastic trays that provide food safety, and convenience in delivery and helps in branding and advertisement [51].

3 Research Design

The study is exploratory and empirical. Efforts are made to find different variables (attributes) influencing customers toward online food ordering. After that, the schedule is prepared to collect primary data to conduct multivariate analysis. Enumerators through schedules, administer the collection of data. From ground theory, efforts are made to find significant variables responsible for online food ordering. The next step is to find the necessary variables from the influencing variables by conducting a conjoint analysis. The study is unsupervised as the conjoint analysis is done. Unsupervised learning means there is no dependent variable. All variables are free to relate themselves, unlike regression analysis, an example of supervised analysis where we have pre-defined dependent and independent variables. Conjoint analysis is a statistical marketing tool used to find important features of an offering that customers value the most. In full profile conjoint analysis, a full product description is provided to the respondent to evaluate them. The judgmental sampling method is used and a total of 278 schedules are filled. In judgmental Sampling, it is up to the discretion of the researcher to decide whether the element from the population could provide the required information in the right way to fulfil the study objects and could become a part of the sample [52, 53]. Out of 278 responses, twenty-eight have either incomplete data or data filled in a haphazard way like selecting the same option for each card. Therefore, twenty-eight responses are discarded, and the final sample size becomes two hundred and fifty.
Card number one to card number sixteen are used for model generation. Card number seventeen to card number twenty-one would be verifying the reliability and validity of the model generated from the first sixteen combinations through Test-Retest Reliability. These cards are called ‘Holdouts’. Each card depicts the entire offering of a company. Respondents are asked to provide the total utility perceived by them on a scale of nine.

Though there could be many combinations to generate a hypothetical card (a total company offering), that could create fatigue for respondents. For the present study, the total number of cards could be 216, which could be reduced to less with Orthogonal Design. Orthogonal design is a way to find fewer combinations of features that could represent the entire combination of features. It promises the results with efficiency in resulting parameter estimates since attributes are barren of statistical correlation [54, 55].

After validity through Holdouts, utilities, Beta Coefficients, and the Importance of all six factors are analyzed through values and graphs. Utility value is to be calculated for each level of different attributes like promotion, packaging, etc. with beta Coefficients ‘β’ for each factor or attribute.

4 Analysis and Findings

In the present study, the most important factor that comes out is packaging with a value of ‘27.347’. The second most important is Promotion with a value of 20.942’. The third place is occupied by Delivery Time with a value of ‘18.482’. It could be said that the surveyed sample has a perception of having the least utilities for Ease of payment and Accessibility / Convenience in presence of other factors or features of online ordering. As the level of promotion increases, the Utility of the Promotions also increases. The increase in utility is in a positive direction. level ‘Normal’ to ‘Fast’ increases Utility. As food ordering gets complicated, the utility of ‘Accessibility & Convenience’ also decreases. With the presence of Promotion and Packaging, people are ready to sacrifice accessibility & Convenience. Customers are willing to sacrifice ‘flexibility in ordering food’ in form of other features like promotions and the time taken to deliver online food. Customers prefer high flexibility in ordering food compared to rigidness if other features (Price Promotions, Packaging, Delivery Time) are kept constant.

As the Ease of Payment becomes difficult, the utility from the Options of Payment decreases. Hence, in presence of other features like promotion discounts and packaging, people are ready to sacrifice utility ‘Ease of Payment.’ the Packaging of Ordered Food utility does increase with each subsequent level of Packaging. There are very few lines below neutral which means that the customers are not willing to sacrifice packaging in return for other features.
From the above graph (Fig. 1), Packaging is most important as far as utility is concerned. The second most important is Promotion like discounts. Next, is Time taken for Delivery. It has the third-highest important variable after Packaging and Promotions. Rest three which are Accessibility & Convenience, Flexibility in ordering food and ease & options of payment are of less importance.

5 Conclusion

The above study can be of assistance to present and potential companies of Online Food ordering. For present companies, it can provide a premise of knowing where they cannot afford to be comfortable if they are operational in the Rajasthan Market. They have to be careful, not to compromise elements like Promotions, Packaging of food and time of delivery. If the present company ignores any of the three factors, customers could switch to another company.

It is advisory for new startups to at least invest in the three factors which are having high utility in the present study. Those three factors are Packaging, Promotions and Time of delivery. The offering of potential companies and new startups should at least have the basic product to offer to the customers. A basic offer or basic product is constituted of Packaging, Promotions and Delivery Time. The present study also constituted the basic product or offering for Online Food Ordering Industry. The advice is if organizations have more to offer, it is good, but companies should at least have a basic offering composed of Packaging, Promotions and Timely Delivery.

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