IJCSE International Journal of Computer Sciences and Engineering Open Access
Survey Paper Vol.-7, Issue-5, May 2019 E-ISSN: 2347-2693

Analytical Survey on Online Food Delivery Applications of Android Platform from a Service Perspective

S. Durairaj[1*], G. Gopinath[2]

[1,2]School of Computer Science and Engineering, Bharathidasan University, Tiruchirappalli

DOI: https://doi.org/10.26438/ijcse/v7i5.10211025 | Available online at: www.ijcseonline.org

Accepted: 18/May/2019, Published: 31/May/2019

***Abstract*—** The purpose of this study was to survey and review the utilization of food delivery app in android phones. 50 questionnaires were distributed to the randomly selected respondents, who were requested to complete the survey. The questionnaire had been taken from the randomly chosen public of all age groups. Based upon that we made a conclusion regarding that survey. Food is of main importance for well being; quality of food is a big million dollar query in this techie world. Technology has almost started in every field of our life, but still in some important areas such as food industry or food serving industries such as hotel, motels and restaurant. Even in the age of technology, the pen paper method is followed by many restaurants for receiving the orders, which in turn wastes a huge amount of time for the customer. Various earlier efforts were done to bring the technology in the field of food serving industries. Based upon the food apps, one can order food for delivery with just a few taps of a phone screen. Seamless is probably the most aptly named piece of mobile software on this list. Not only does the app provide menus from thousands of restaurants and offer exclusive in-app discounts, but it foregoes a delivery fee and allows you to order with just a few clicks. .Each food app had its own advantages and a set of disadvantages. This survey paper tries to analyze the survey of food apps systems and determine the drawbacks of each to overcome them in the future system. This survey improves accuracy for restaurants by saving time, eliminating human errors, getting customers feedback and customer expectation in the food app.

Keywords *– Online Food Ordering,Android Application.*

I. INTRODUCTION

Online food ordering is the process of food delivery or takeout from a local restaurant or food cooperative through a web page or app. Much like ordering consumer goods online, many of these services allow customers to keep accounts with them in order to make frequent ordering convenient. A customer will search for a favorite restaurant, usually filtered via type of cuisine and choose from available items, and choose delivery or pick-up. Payment can be amongst others either by credit card, Paypal or cash, with the restaurant returning a percentage to the online food company. The first online food ordering service, World Wide Waiter (now known as Waiter.com), was founded in 1995. The site originally serviced only northern California, later expanding to several additional cities in the United States. During the dotcom boom, startups like Webvan, HomeGrocer, and Kozmo started online grocery delivery, but ended up closing in 2001 after the dotcom crash. Seamless was also founded during this time. GrubHub was founded in 2004. By the late 2000s, major pizza chains had created their own mobile applications and started doing 20-30% of their business online. With increased Smartphone penetration, and the growth of both Uber and the sharing economy, food delivery startups started to receive more attention. Instacart was founded in 2012. In 2013, Seamless and Grubhub merged. By 2015, online ordering began overtaking phone ordering. As of September 2016, online delivery accounted for about 3 percent of the 61 billion U.S. restaurant transactions.

II EXISTING ONLINE FOOD ORDERING SYSTEM

A.UBER EATS

Uber Eats (previously stylized as UberEATS) is an American online food ordering and delivery platform launched by Uber in 2014 and based in San Francisco, California. Users can order food from participating restaurants on their website or with a smartphone/tablet application (only iOS and Android). Uber was founded in 2009 by Garrett Camp (also the founder of StumbleUpon), and Travis Kalanick. The company made its foray into food delivery in August, 2014 with the launch of the UberFRESH service in Santa Monica,

Figure 1: Uber Eats Food Ordering App

California. In 2015, the platform was renamed to UberEATS, and the ordering software was released as its own application, separate from their app for Uber rides. At the same time, they expanded the platform to include Barcelona, Chicago, and New York City. UberEATS continued to expand throughout the second half of 2015. As of 2018, the service is at "...a $6 billion bookings run rate, growing over 200 percent." UberEATS is now located in 250 cities with over 300 more locations needed to be equal to Uber. Users can read the menu, order, and pay for food from participating restaurants using their device using an application on the iOS or Android platforms or through a web browser. Users additionally have the option of giving a tip for delivery. The app detects the user's location and displays restaurants open at the time separately from those that are closed. Payment is charged to a credit/debit card on file with Uber. Meals are delivered by couriers using cars, bikes, or on foot. Upon ordering, the customer is notified of the total price combining delivery fee and meal price.

Customers can track the delivery status after the order is placed. As of August 2018, Uber Eats changed its flat $4.99 delivery fee rate to varying fee according to the distances. The fee ranges from $2 to $8 as the minimum and maximum rate varying according to the distance covered by delivery services. The platform occasionally features food from local celebrity chefs wishing to increase their public visibility, including some who do not have physical restaurants. Depending on the city, people can sign up to deliver food orders for Uber Eats using their car, bike, scooter, or on foot. Delivery partners earn money for each delivery trip based on number of trips and the distance between the restaurant and the dropoff location. In most cities, partners must be 19 years of age or older in order to participate. Uber drivers who currently provide rides for Uber are also able to sign up to do delivery.

B.SWIGGY

Swiggy is an online food ordering and delivering service based in Bengaluru, Karnataka, India. It was founded in 2014 by Nandan Reddy, Rahul Jaimini, and Sriharsha Majety. Swiggy is operated by Bundl Technologies Private Limited in over 25 cities in India. Its total valuation in the market is $1.3 billion and its total funding amount is $465.5 million Swiggy was founded in August, 2014 by Nandan Reddy, Rahul Jaimini, and Sriharsha Majety. In 2013, Nandan Reddy and Sriharsha Majety, both alumni of Birla Institute of Technology and Science (BITS) Pilani, started a logistics company called Bundl, which connected small and medium companies to courier service providers. After a year, they wanted to build an online hyperlocal logistics company in the restaurant industry.

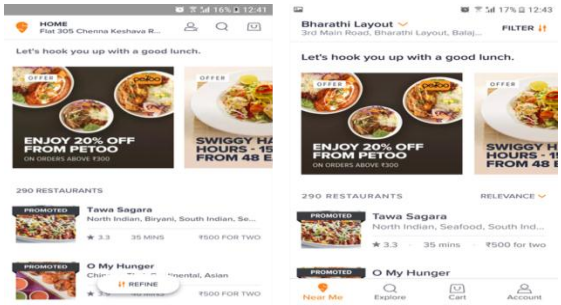

Figure 2: Swiggy Food Ordering App

They approached Rahul Jaimini, an IIT Kharagpur alumnus, who was working as a software engineer for online fashion retailer Myntra at that time and together, they rolled out Swiggy. Swiggy operates in 25 cities in India.[4] These include: Ahmedabad, Bangalore, Chandigarh, Chennai, Coimbatore, Dehradun, Delhi, Gurgaon, Guwahati, Hyderabad, Indore, Jaipur, Kochi, Kolkata, Lucknow, Ludhiana, Mumbai, Mysore, Nagpur, Noida, Pondicherry, Pune, Surat, Vadodara, and Vizag. The total funding amount for Swiggy is $465.5 million. Collectively, Naspers and DST Global have invested $210 million. Other investors include Accel, Bessemer Venture Partners, Norwest Venture Partners, SAIF Partners, Harmony Partners, Coatue Management, RB Investments, and Dianping. Swiggy operates through its website and mobile application. Users can read the menu and place the order on its website or its Android or iOS application. Once the order is placed, a delivery person is assigned for that order that collects the food from the restaurant and delivers it to the location decided by the customer. Payment can be made through cash on delivery, net banking, credit and debit cards and digital wallets. Swiggy has collaborated with over 40,000 restaurants in India.

C.ZOMATO

Zomato is an Indian restaurant search and discovery service founded in 2008 by Deepinder Goyal and Pankaj Chaddah. It currently operates in 24 countries.It provides information and reviews on restaurants, including images of menus where the restaurant does not have its own website. The restaurant search and discovery platform began its operations under the name, *Foodiebay*. In November 2010, the brand was renamed as *Zomato*. By 2011, Zomato launched in Bengaluru, Pune, Chennai, Hyderabad and Ahmedabad. With the introduction of .xxx domains in 2011, Zomato also launched zomato.xxx, a site dedicated to food porn. The company launched a print version of the website content named, "Citibank Zomato Restaurant Guide", in collaboration with Citibank in May 2012, but it has since been discontinued. In September 2012, Zomato expanded overseas to the United Arab Emirates, Sri Lanka, Qatar, the United Kingdom, the Philippines, and South Africa. In 2013, the company launched in New Zealand, Turkey, Brazil and

Indonesia with its website and apps available in Turkish, Brazilian Portuguese, Indonesian and English.

Figure 3: Zomato Food Ordering App

In April 2014, Zomato launched its services in Portugal, followed by launches in Canada, Lebanon and Ireland the same year. The acquisition of Seattle-based food portal Urban spoon marked the firm's entry into the United States, Canada and Australia, and brought it into direct competition with Yelp, Zagat and OpenTable. In February 2017, Zomato in a company's blog, explained the concept of cloud kitchen. With its cloud kitchen, the company will help the restaurants to expand their presence without incurring any fixed costs. In September 2017, Zomato claimed that the company had "turned profitable" in the 24 countries it currently operates in. Furthermore, Zomato announced that the "zero commission model" is to be introduced for partner restaurants. Zomato narrowed down its losses by 34% to □ 389 Cr for the financial year 2016-17, from Rs 590.1 Cr in the previous year 2015-16. On 10 December 2018, a video went viral which showed a food deliverer eating directly out of the orders he had to deliver. In the video, the person can be seen repacking the food after eating it. The company said it was a "rare" incident and it will launch measures to prevent that from happening again. Between 2010-13, Zomato raised approximately US$16.7 million from Info Edge India, giving them a 57.9% stake in Zomato. In November 2013, it raised an additional US$37 million from Sequoia Capital and Info Edge India. In November 2014, Zomato completed another round of funding of US$60 million at a post-money valuation of ~US$660 million. This round of funding was being led jointly by Info Edge India and Vy Capital, with participation from Sequoia Capital. In April 2015, Info Edge India, Vy Capital and Sequoia Capital led another round of funding for US$50 million. In October 2018, Zomato raised $210 million from Alibaba's payment affiliate Ant Financial.

Ant Financial received an ownership stake of over 10% of the company as part of the round, which valued Zomato at around $2 billion. Zomato had also raised an additional $150 million also from Ant Financial earlier in 2018. In July 2014, Zomato made its first acquisition by buying Menu-mania for an undisclosed sum. The company pursued other acquisitions such as lunchtime.cz and obedovat.sk for a combined US$3.25 million. In September 2014, Zomato acquired Poland-based restaurant search service Gastronauci for an undisclosed sum. Three months later, it acquired Italian restaurant search service Cibando. Zomato acquired Seattle-based food portal Urbanspoon for an estimated $60 million in 2015. Other acquisitions of 2015 include Mekanist in an all-cash deal, the Delhi based startup MapleGraph that built MaplePOS (renamed as Zomato Base, and NexTable, a US-based table reservation and restaurant management platform. In 2016, the company acquired Sparse Labs, a logistics technology startup and the food delivery startup, Runnr, in 2017. In September 2018, Zomato acquired Bengaluru-based food e-marketplace TongueStun Food for about $18 million in a cash and stock deal. On 4 June 2015, an Indian security researcher hacked the Zomato website and gained access to information about 62.5 million users. Using the vulnerability, he was able to access personal data of users such as telephone numbers, email addresses and Instagram private photos using their Instagram access token. Zomato fixed the issue within 48 hours of it becoming apparent.

On 15 October 2015, Zomato changed business strategies from a Full-Stack market to an Enterprise market. This led Zomato to reduce of its workforce by 10%, or around 300 people. On 18 May 2017, a security blog called Hackread claimed over 17 million accounts had been breached. "The database includes emails and a password hash of Zomato users, while the price was set for the whole package is $1,001.43 (Bitcoins 0.5587). The vendor also shared a trove of sample data to prove it is legit", the Hackread's post said. Hackread claimed details of 17 million users had meanwhile been sold on the Dark Web. Zomato confirmed that names, email addresses and encrypted passwords were taken from its database. The company reassured affected customers that no payment information or credit card details were stolen. Zomato said the security measures it uses ensure the stolen passwords can't be converted back into normal text, but it still urged users who use the same password on other services to change them. It also logged the affected users out of the app and reset their passwords. "So far, it looks like an internal (human) security breach - some employee's development account got compromised", the company said in a blog post but later, when Zomato contacted the hacker, they discovered a loophole in their security. The hacker removed the stolen content from Dark Web asking for a healthy bug bounty programmer.

Section I contains the introduction of Online food ordering, Section II contain the current online food ordering systems in India, Section III contains Literature Survey of Food Ordering System, Section IV contains the Questionare and data collection from different age users, Section V represents the conclusion of the survey from different age users about the online food ordering system their expectations and conclusion about the present food ordering system.

III RELATED WORK

[1] This study examines the determinants of the customer ordering experience, which include website trust, customer satisfaction and loyalty. The determinants are represented by website quality and service quality. A survey data of 353 online food ordering customers were used to test the research model using structural equation modelling (SEM). Results reveal that not only is there a significant positive relationship between website quality and website trust but also a significant positive relationship between service quality and customer satisfaction. Furthermore, significant positive relationships are also found not only between website trust and customer satisfaction but also between customer satisfaction and loyalty. Finally, the study also found an unexpected direct link between service quality and loyalty. Overall, the study provides valuable insights for operating online food ordering services successfully.

[2] In today's world, technology has entered almost all the fields and has grown vastly in each of these fields. But one of the industries where technology is yet to expand is the Food Industry. In India the food industry i.e., the restaurants still follow the traditional pen and paper method. While the new cafes have adapted to a new a computer based ordering, the restaurants in India still use the traditional method of pen and paper. This method often tends to waste the time of both the customers as well as the restaurants, plus there is a possibility of getting the wrong order. This paper presents touch based food ordering system considering android as the base and various other technologies such as Java and Html, CSS, AJAX, etc. for web based applications.

[3] It is a website designed primarily for use in the food delivery industry. This system will allow hotels and restaurants to increase scope of business by reducing the labour cost involved. The system also allows to quickly and easily managing an online menu which customers can browse and use to place orders with just few clicks. Restaurant employees then use these orders through an easy to navigate graphical interface for efficient processing.

[4] The recent development of the Internet has augmented the e-commerce industries in a country like India. E-commerce development has made online food ordering services seamless for people who want to get food delivered at their doorstep. Although consumers continue to go out for the meals, consumers feel very convenient to order food online since it frees the customer from personally visiting the restaurants. In this study, our main focus was to analyze the perception of consumer towards online food ordering services. In order to understand what factors have played a dominant role to attract consumer in the developing country like India towards them, we decided to study on the consumer perception on online food ordering. In this research paper, two objectives were set for study. The first one was to identify the factors which influence the consumer to order food online and the other one was to know the consumer preferences on online food ordering services provider. To achieve these objects survey was held to gather the information. Survey successfully helped to understand the behavior and perception of people for online food ordering. It shows how easily people search for a favorite restaurant, choose from available items and place their orders in just a few minutes.

[5] Studies concerning consumers' decision-making regarding a restaurant choice commonly cite food quality, service quality, and price as important determinants. Less research has focused on how consumers are willing to trade off gains and losses from respective foodservice attributes. Also, extant literature does not account for consumers who use a non-compensatory decision-making strategy. The present study examined consumers' choices of casual restaurants using a simulation where trade-offs were inevitable. By utilizing a choice experiment, the researchers found that food quality is the most important attribute in restaurant choice, consistent with the literature reviewed. Good service quality, however, does not increase choice likelihood while poor service quality significantly reduces it. Most importantly, we deter-mined a considerable percentage (24.57%) of respondents does not trade off food quality for better service or a lower price. Findings of the study are discussed with implications for practitioners.

IV QUESTIONARE AND DATA COLLECTION

50 questionnaires were distributed to the randomly selected respondents, who were requested to complete the survey. The participants were assured that their individual responses were anonymous and confidential. The survey was developed for the purpose of collecting data about the factors influencing the respondent's decision to analyze the survey of food apps systems and determine the drawbacks of each to overcome them in the future system. The data were collected from different age people and gender. These analyze of various food app is examined based on the food app performance, user expectation and future needs.

V CONCLUSION AND FUTURE SCOPE

Based on a questionnaire taken from the randomly chosen public of all age groups. The following inferences were made. Food is of main importance for well being; quality of food is a big million dollar query in this techie world. Main motto of this research work is to find the best foodie app which is suitable for all age groups. Unfortunately, survey results say, that all those foodie apps failed to concentrate on health aspects of the customers regarding diabetic patients. On the whole, they need to give a separate menu for diabetic patients as they have an urge to eat variety of food like

normal people. Food apps are the basic need in this fastest world. So steps needs to be taken in this area. But other than that the food app are giving a very good performance to the users.

REFERENCES

[1] Zulkarnain Kedah and Yusof Ismail, A.K.M. Ahasanul Haque & Selim Ahmed "Key Success Factors of Online Food Ordering Services: An Empirical Study" Malaysian Management Review JULY-DECEMBER 2015 Vol. 50 No. 2

[2] Tarun Varma, Krunal Tanna, Harshal Utekar, Monish Verma and Sejal D″mello "A Survey on Touch Based Food Ordering System in Restaurants" International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169 Volume: 6 Issue: 3.

[3] Mayurkumar Patel "Online Food Order System for Restaurants" School of Computing and Information Systems.

[4] Suryadev Singh Rathore, Mahik Chaudhary "Consumer's Perception on Online Food Ordering" IJMBS Vol. 8, ISSue 4, oct - Dec 2018.

[5] A. Albayrak. Factors that Influence of Costumers' Restaurant Selection: The Case of Istanbul. Anatolia: Journal of Tourism Researches, vol. 25 no 2, 2014, pp. 190-201.

[6] C. Feldmann and U. Hamm. Consumers' perceptions and preferences for local food: A review. Food Quality and Preference Journal, vol. 40, pp. 152-164, 2015.

[7] H. Youn and J. H. Kim. Effects of ingredients, names and stories about food origins on perceived authenticity and purchase intentions. International Journal of Hospitality Management, vol. 63, pp 11-21, 2017.

[8] J. Ha, K. Park, K. and J. Park. Which restaurant should I choose? Herd behavior in the restaurant industry. Journal of Foodservice Business Research, vol. 19 no 4, pp. 396-412, 2016.

[9] J. M. Jung, S. Sydnor, S. K. Lee, B. Almanza. A conflict of choice: How consumers choose where to go for dinner. International Journal of Hospitality Management, vol.45, pp. 88-98, 2015. https://doi.org/10.1016/j.ijhm.2014.11.007

[10] L. Lu and D. Gursoy. Does offering an organic food menu help restaurants excel in competition? An examination of diners' decision-making. International Journal of Hospitality Management,vol. 63, pp. 72-81, 2017. https://doi.org/10.1016/j.ijhm.2017.03.004.

[11] M. Clark and R.C. Wood. Consumer Loyalty in the Restaurant Industry: A Preliminary Exploration of the Issues, International Journal of Contemporary Hospitality Management, vol. 10 no 4, 1998, pp. 139–144.

[12] O. Mhlanga, Dr. T. M. Tichaawa. What are the current factors affecting consumer selection criteria in formal full service restaurants in Port Elizabeth, South Africa. African Journal of Hospitality, Tourism and Leisure, vol. 5 no 2, 2016, pp. 1-11.

[13] R. Lewis. Restaurant advertising: appeals and consumers' intentions, Journal of Advertising Research, vol. 21 no. 5, 1981, pp.69-74.

[14] S. Auty. Consumer choice and segmentation in the restaurant industry. The Service Industries Journal, vol. 12 no. 3, 1992, pp. 324-39.

[15] Y. A. A. Akbar, M. S. S. Alaudeen. Determinant of factors that influence consumer in choosing normal fullservice restaurant: case in Seri Iskandar, Perak. South East Asian Journal of Contemporary Business, Economics and Law, vol. 1, 2012, pp. 137-145.

[16] Resham Shinde, Priyanka Thakare, Neha Dhomne, Sushmita Sarkar, "Design and Implementation of Digital dining in Restaurants using Android", in International Journal of Advance Research in Computer Science and Management Studies, Volume 2, Issue 1, January 2014.

[17] Shweta Shashikant Tanpure, Priyanka R. Shidankar, Madhura M. Joshi, "Automated Food Ordering System with Real-Time Customer Feedback", in International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 2, February 2013.

[18] Kirti Bhandge, Tejas Shinde, Dheeraj Ingale, Neeraj Solanki, Reshma Totare, "A Proposed System for Touchpad Based Food Ordering System Using Android Application", in International Journal of Advanced Research in Computer Science & Technology (IJARCST 2015), Vol. 3, Issue 1 (Jan. - Mar. 2015).

[19] Sushmita Sarkar, Resham Shinde, Priyanka Thakare, Neha Dhomne, Ketki Bhakare, "Integration of Touch Technology in Restaurants using Android", in IJCSMC, Vol. 3, Issue. 2, February 2014, pg.721 – 728.

[20] Varsha Chavan, Priya Jadhav, Snehal Korade and Priyanka Teli, "Implementing Customizable Online Food Ordering System Using Web Based Application", in International Journal of Innovative Science, Engineering & Technology, Vol. 2 Issue 4, April 2015.

[21] Vikas Mullemwar, Vaibhav Virdande, Madhura Bannore, Ashwini Awari, Raviprakash Shriwas, "Electronic Menu card For Restaurants", in International Journal of Research in Engineering and Technology.

[22] Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, Prof. Mr. S. R Lahane, "Digital Ordering System for Restaurant Using Android", in International Journal of Scientific and Research Publications, Volume 3, Issue 4, April 2013.

[23] Nibras Othman Abdul Wahid (2014). "Improve the Performance of the Work of the Restaurant Using PC Touch Screen", in Computer Science Systems.

