





Technology at the dinner table: Perceptions about food delivery apps_

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Abstract

The growth in the mobile food delivery ordering apps considers an innovative channel for the restaurants. The growth in mobile communication has remarkable reason attribute to the online to offline (O2O) business. Mobile phone applications adopt this opportunity to restaurants and food delivery services. It's an alternative way to increase the sale revenue and conveniently receiving the products and services for the consumer. This study was design to explore the five quality attributes that's are associate with the online food delivery apps convenience, design, price, trustworthiness and various food choices, check their impact on user perceived value and attitude towards food delivery apps. A result shows the most important quality attributes for the online food delivery app business is trustworthiness. Additionally, the results found that gender placed important quality attributes price and various food choices. For the female design trustworthiness and convenience are the important quality attributes. The sample size is 309 and the data were collected fro ASAD TAHIR m the students through the online Google survey. Managerial implementation limitations, recommendations and future research are provided.

Keywords: Food Delivery Apps; Convenience; Trustworthiness; Application design; Price.

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1. INTRODUCTION:

The rapid increment in the electronic commerce has developed different changes with traditional practices with new working environment that consist of new working model “O2O” business (off line to online (Liu, Batra, & Wang, 2017). After recognized the off line to online business model this model allowing the costumer to purchase online wide variety of products and a service(J. Li & Mo, 2015). This is a cost-effective business opportunity that connect the offline business opportunities with the internet and it becomes a fully integrated, comprehensive and advance E-trading platforms with internet(X. Chen, Wang, & Jiang, 2016). For their offline business store, they attract more online browsers managers and the marketers has utilized the online to off line business by providing user friendly design and batter shopping environment with a vast variety of products and services choices(Hubert, Blut, Brock, Backhaus, & Eberhardt, 2017).

A unique trend picked up with smart phones is the mobile apps. In the other words the mobile phone application is the software that is used to operate the small computing devices like a wireless and the smart phones, tablets, desktop and the laptops. The rapid increment in the use of smart phones the mobile phone application becoming the way of changing the customer interaction with the brand.3.2 billion smart phone user and 1.4 billion tablets user are available in the Pakistan they download more than 6 billion apps per years for the purpose of entertainment and the purpose of treading and gaming apps but now the rapidly growing was seen in the use of food delivery apps(Lipsman, 2014; Wellard-Cole, Davies, & Allman-Farinelli, 2021). More 50 percent population of Pakistan spent their most of time on social media. Today’s everything be possible to practically purchase online products and services by booking tickets, hotel rooms, products and the foods. The mobiles apps provide the efficient plat forms to connectivity with the costumers(Ostdick, 2016). Basically, mobile apps are the plate forms that takes the relationship maintain with the costumers by creating the unique and novel experiences(Ostdick, 2016).

Within the trend of E-commerce in Pakistan break the barriers for the online food delivery app business. It became very helpful for the new startup of the business. Before the food delivery apps consumer takes traditionally order they call in restaurants and waiting for their order, but now the trend is change consumer order the food by just clicking the few easy steps with a lot of variety of foods under the one table. With the rise in technology consumers used the mobile apps and search the restaurants that nearby and order the food through mobile app. Food companies and restaurants welcome the mobile apps and use this as an additional communication tool for getting the customer loyalty with the brand (R. J.-H. Wang, Malthouse, & Krishnamurthi, 2015).

According to the economy report of mobile that released by the global association of mobile operators (H.-S. Kim & Kim, 2019)(Cho, Bonn, & Li, 2019) (GSMA), the number of smart phone user increased by 3.8 billion in 2021 due to the appearance of smart phones and the high-speed internet connectivity. According to the report results more than 86 percent of the population use the smart phones and subscribe the mobile phone app services it’s a highest mobile penetration. In the

North America accounted 292 million subscribers from total population. But the Asia was top of the list where the total number of the mobile subscribers is more than 2765 million. With the increase in the smart phones and tablets, China is the one of the largest countries of the world where more than 1 billion mobile subscribers (GSMA, 2017). And the Pakistan have 183 plus million mobile subscriber March (2021). The ability of growth and ease in the mobile communication are one significant reason to adopt the online to off line business model in Pakistan in the recent year. Now a day it's a hot topic between Pakistani managers on online to off line business. They examine their customer activity and examine their research activity about online research. They monitor the sales challenges activities and transaction services and the customer preferences on the mobile phone applications (Du & Tang, 2014). The perfect example is that China internet plus emerging business. Online to off line food delivery services has rapidly grown these days (Cho et al., 2019). For increase the sales revenue the food delivery services by the mobile apps has become a rapidly growing trend in Pakistan to take-out restaurants as conveniently (Cho et al., 2019). Due to the growth in the mobile phone user are tapping their smart phones tablets and order food through food delivery apps like food panda, appna kitchen and Eat Oye that make possible to make order food from their favorite restaurants by clicking just few easy steps (C. Wang et al., 2021). In Pakistan food delivery app business have been booming and become a remarkable platform for the business and for increasing their revenue (T. Li, 2017).

Now consumers are starting order food online this is major transformation but in some other country's consumer has already used this method for ordering food. In the era of 2017 in the USA, when the population of USA about 320 million persons, it was reported in delivery market 95% of the restaurants still using paper menus for placing order. At the same over all 80% restaurants of the USA did not offering the option of delivery menu. However, in some states like a Los Angeles and California restaurants are starting work with the food delivery apps it become very profitable for these restaurants, saw their revenue rise averagely 3% to 35% that's between 200 to 250 new order per weeks. Now the managers of the America give the example of the "ghost kitchen" and refer the food delivery app because the ghost kitchen be able to generate more new costumers each for their restaurants without any extra investment and without any additional expenses its help in adding more dining space. Now it's become a trend in USA with the food delivery apps business and expands into much more restaurants. Now in America food delivery apps deliver alcohol in 90 cities of the America such as "post mate". Source predict that in the America last 3 to 3 years food delivery become the back bone of the American restaurants like as fast-food restaurants business (Cho et al., 2019) (Tandon, Kaur, Bhatt, Mäntymäki, & Dhir, 2021). If the American restaurants take these opportunities for the food delivery apps positively one can only imagen what it would like in Pakistan with the population of 24 core citizen. Online shopping growth reached of 12 percent in 2017 with the worth of 1.3 billion. There have been a survival studies which confirm that 18 percent all online sales in Pakistan took place in 2018. These figures are expected to reach 4.5 trillion by 2021 (Dr. Imran Batada, 2020) (International Time News).

The purpose of this study to explore the quality attributes of the food delivery apps (convenience, Application design, Price, Trust worthiness, various food choices) and their impact on customer attitude towards the food delivery apps. Current study identifies that what are the most important quality attributes including convenience, Application design, Price, Trust worthiness and various food choices using O2O modeling to explore the impact of the variables on customer attitude towards the food delivery apps.

2. LITERATURE REVIEW

To reach a protentional audience through a newer way is mobile apps. The number of average Chinese person, U.S, India and France are close 40 apps pee month(Di-eter et al., 2019). On the app store three most popular categories of mobile apps are available for users like as Gaming Entertainment and e-commerce(Low, 2006). In E-commerce apps the food delivery apps now days becoming a most value able app. In recent era due to competition markets becomes a battleground for a business specially food market and a lot of opportunity are available for new start up food deliver app business(Mukhopadhyay & Chatwin, 2020). The most important for the operators of food delivery app they want to focus on their product attributes ease of service for their customers. The most popular food delivery app work in Pakistan. Food panda work in 30 plus city of Pakistan. It handles the 65 percent of food delivery work in Pakistan with four easy steps and secures online payment method. Food panda delivers every type of past food traditional food and the local food. Its work with more than 750 restaurants of the Pakistan. In feature mobile apps are the main source of the E-business. Now a day's every type of industry focus on digitalization and move towards mobile apps.

2.1 Application Design

The design of the mobile app is very value able thing. It plays an important role for the attraction of the costumer. Mobile application is design for the specific purpose and for the specific devices like an android smart phone and tablets it's a rapidly booming sector (Stoyanov et al., 2015). The design of the mobile apps is consisting of four different factors navigational design, informational design, collaboration design and the visual design. These are the important factor of the mobile app design. The design of the mobile apps improves the experience of user-friendly costumer. Mobile phone apps attribute improves the quality of the app and user usability and understandability(Yang, Jun, & Peterson, 2004).

Mobile apps are design specially for the e-commerce market(D. J. Kim & Hwang, 2012). The visual design of the mobile apps plays very important role in consumer interaction. Visual design is consisting of images, colors, fonts, shapes and the lay-out these factors interact the consumer preference(Cyr, Head, & Ivanov, 2006; Y.-M. Li & Yeh, 2010). Layout and design are the key factor of the mobile phone apps (Vance, Elie-Dit-Cosaque, & Straub, 2008). For the positiveness of the product for the consumer visual design is very important attribute. Information design attribute play a key role for the mobile app's information structure of the mobile apps interact the costumer and increase the brand loyalty(Ji, Park, Lee, & Yun, 2006). The

relevant information increases the interest of the consumer and increases the trust on the app.

Navigational design is the basic structure and layout of the mobile apps. That interact the consumer consciously. The design of the mobile app has significant impact on the use effort during the usage of mobile app (Vance et al., 2008). If the design of the mobile app is efficient people easily use the mobile apps and reach easily and quickly on their desire page. So, the mobile apps design play significant role in the online shopping and e-commerce.

2.2 Convenience:

The consumer has a less time for shopping they spend their lot of time in other works. So, they turn off line to online shopping for the purpose of saving the time(-Kumar & Kashyap, 2018). Because the shortage of the time consumer saves their time and prefer the online shopping (Berry & Cooper, 1990). Due to the shortage of the time consumer save their efforts and their interest move offline to online shopping. Copeland uses this concept of convenience (1923) first time to measure the time and effort of the consumer during the purchasing of products. The non-monitory cost like time and effort impact on the consumer behavior in the literature(Bender, 1964). Some retailer focusing on the convenience the works on both retail and online shops at the same time so they become able to maximize the consumer buying behavior (Shaheed, 2004).

Seller increase their market value through the convenience by saving the consumer time and his effort and energy (Seiders, Berry, & Gresham, 2000). Retailer more effort increase their costumer body, that make resources are committed and need more protentional level for frustration. The option for consumer for saving his time effort and energy is internet. Due to the buzzy life people have no time they search online shops for shopping purpose and save their time and effort. Online shopping has broken the boundaries and provides a lot a variety for consumer. By minimum effort they get their products and efficiently complete their shopping (Kaltcheva & Weitz, 2006).

There has no agreement on the general of the online convenience. There has no imminent and characteristic in online convenience but it's a proxy that consumer use for their resources (Farquhar & Rowley, 2009).(Beauchamp & Ponder, 2010)make a set of convenience dimension for the purpose of both online and offline shopping.

2.3 Trustworthiness:

Trustworthiness is key factor in e-commerce. In this study we find the trust of the online buyers on the online shopping. The newly users judge the trustworthy it's an initial stage when the risk is very high and they feel uncomfortable in the case of online shopping(Flanagin, 2007; Catalina Laura Toma, 2014). This is a key judgment that have a highly impact on relationship either its developed or not)(Balliet & Van Lange, 2013; Ferrin, Bligh, & Kohles, 2008; Rotenberg et al., 2004).

In the online shopping sites and social media advertisement and food delivery apps judge the other user's trustworthiness and check the attitude toward the food delivery apps (Silva, Chrobot, Newman, Schwarz, & Topolinski, 2017; Silva & Topolinski, 2018; Catalina L Toma, 2010). In previous research find how online shopping and food delivery apps effect the perceived trustworthy of the online buyers. The profile of the online food delivery apps effects the trustworthy of the online buyers. Trustworthy is a key factor that's play important role in buying behavior of consumer.

2.4 Price:

Pricing is the key role in the online shopping. Pricing has a great impact on buying decision in online shopping. Online pricing has not change frequently(Law, Chan, & Goh, 2007). Different pricing strategies are used for the online shopping like as discounts, bundle pricing and the flash deals pricing(Mattila & Gao, 2016). These strategies are commonly used in online shopping. Flah deals pricing are more attract the consumer in flash pricing they purchase a lot of products because the products rate is very cheap in flash pricing and the retailer earn more profit.

Price discrimination strategies are not used in the online shopping (Haws & Bearden, 2006; Mattila & Gao, 2016; Melis & Piga, 2017; Sánchez-Pérez, Illescas-Manzano, & Martínez-Puertas, 2019). Optimal demand base pricing strategies are used when customer want product in less lead time because the time is more important factor in the online shopping. The price of the products can be changed only the time of events because due to this factor change costumer mind and change their purchasing decision(Mattila & O'Neill, 2003).

Products attributes having a great impact on the product price. In this researches we trying to find the how timely price change effect the consumer purchasing decisions (C. C. Chen & Schwartz, 2013). Because time play a key role in the online shopping.

2.5 Various food choices:

People rapidly move offline to online food apps. The food choices play an important role for the single person user or multi house. Single person prefers the single deals like burger plus cold drinks, and other side multi house user chooses the various variety of food. The study of various food choices works from multiple factors like as psychology, marketing (Esch, Langner, & Redler, 2004; Grunert, 2006) sociology and economic behavior(Ammerman, Hartman, & DeMarco, 2017; Bucher et al., 2016; DiClemente & Hantula, 2003; Hong, Choi, Choi, & Joung, 2021; Just, Wansink, Mancino, & Guthrie, 2008; Thøgersen, 1995). Number of food choices interact the consumer towards online food delivery apps, and have a positive impact on the consumer perceived value. Because in the local market various food choices are available but not in a single place, need to more travel and wastage of time. But in the online food delivery apps multiple potations are available in a single platform. And they get their favorite food with a single tap.

2.6 Attitude towards the food delivery apps:

Due to advancement in technology people prefer the online shopping. In the last five years according to survey seen the increment in the use of mobile apps specially for shopping purpose rapidly people move on online mobile apps (Associations, 2020). In the food market people rapidly follow this trend and use food delivery apps. Online food delivery apps are a channel that provide the relationship for customer they order their food online and get delivery offline (Ray, Dhir, Bala, & Kaur, 2019). Online food delivery apps have a divide into two categories firstly the restaurants having their own apps that's provide the facilities of their customers like as KFC, MacDonald and pizza hunt. Secondly the local restaurant uses the third-party food delivery mobile apps like as Food Panda and Apana kitchen (Roh & Park, 2019).

Online food delivery apps provide the facility to delivery services of food on daily bases. Therefor the quality of the services of the food delivery apps are directly impact on the consumer perceived value (Keeble, Adams, Bishop, & Burgoine, 2021). In previous research work on to gain the consumer attentions through the food delivery apps. For the adoption of the food delivery apps, it's more important to make the food quality batter and provide the efficient services to their customers (Elvandari, Sukartiko, & Nugrahini, 2018). Customer experience with the use of online food delivery app is good due to the ease-of-use in technology characteristics (Cho et al., 2019).

Thus, the trustworthiness has a remarkable impact on the perceived value through using online food delivery apps. Food delivery apps continuous attentions have a great impact on the consumer perceived value. In this study we find the consumer attitude towards the food delivery app through the factors price, trustworthiness, various food choices, convenience and design of food apps and check their impact on the consumer perceived value.

2.7 Hypothesis development:

H1: Convenience quality of food delivery apps has a positive relationship with attitude towards food delivery apps.

H2: Design quality of food delivery applications has a positive relationship with attitude towards food delivery apps.

H3: Food delivery app's price quality has direct association with attitude towards food delivery apps.

H4: Food delivery app's trustworthiness has direct association with attitude towards food delivery apps.

H5: Food delivery app's various food choice features has direct association with attitude towards food delivery apps.

2.8 Frame work:

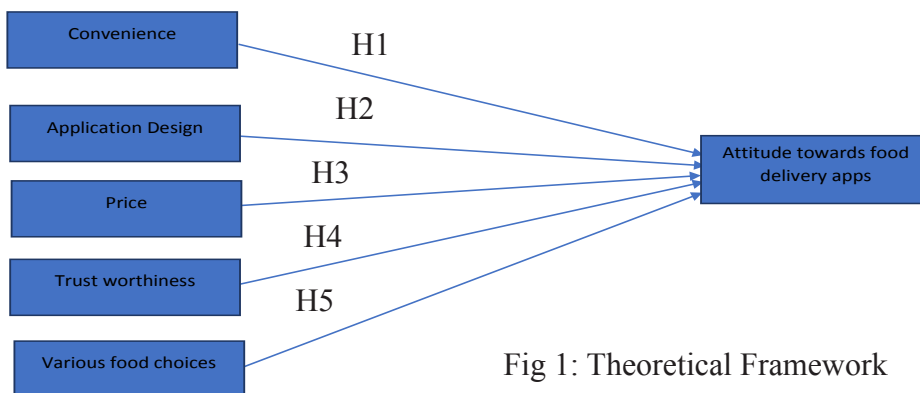


Fig 1: Theoretical Framework

3. METHODOLOGY:

The purpose of this study to explore the quality attributes of the food delivery apps (convenience, Application design, Price, Trust worthiness, various food choices) and their impact on customer attitude towards the food delivery apps.

3.1Data collection:

Research data were collected in June-July 2021 from different locations in Punjab, Pakistan. Data was collected from respondents through the online survey. The measurement items for each construct were drawn from pre validated scales in previous related literature whenever possible. In addition, questions about demography of the respondent were also asked including gender, age, marital status and education. Questionnaire contains two portions including demographic information and variable related items. A screening question was place at the top of questionnaire to screen the relevant respondents who are used any food delivery app at least once. Final questionnaire was developed in English language.

We send questionnaire through the link on E-Mail and WhatsApp. Total 352 respondents participated in this research. After screening the data, we finalized 309 valid respondents for analysis. Use the sampling technique in which we followed the purposive sampling. Purposive sampling is a type of non-probability sampling in which researches rely on their own judgment when choosing members of the population to participate in their survey.

3.2Socio-demographic characteristics:

Table 1 represents behavioral and demographics features of users of food delivery app. This is the information of the respondents that participate in the research. Mostly people were male that are the 56% of the total sample and the 44% were female that participate in the research. 51% of the participant's age of the sample is between 21 to 25 years and 43 % between 15 to 20. Mostly of our respondents are unmarried it's a 92% of our sample size and the 7% are the married persons. Most

of respondents belongs to bachelor's degree (43%) and some belongs to intermediate(31%) and the other belongs to master and M.Phil.

Table 1

N value is 309		Frequency N. number	Percentage
Gender of respondents	Male	174	56.3%
	Female	135	43.7%
Age of respondents	15 to 20	132	42.7%
	21 to 25	159	51.5%
	26 to 30	8	2.6%
	31 to 35	2	0.6%
	Above 35	2	0.6%
Qualification of respondents	Intermediate	98	31.7%
	Bachelors	133	43.0%
	Master	59	19.1%
	M.Phil.	19	6.1%
Marital Status	Married	21	6.8%
	Unmarried	288	93.2%

1

Table 2
Results of confirmatory factory analysis

	Cronbach Alpha	AVE	CR
Convenience	0.795	0.66	0.85
Design	0.770	0.68	0.86
Trust worthiness	0.762	0.66	0.85
Price	0.760	0.69	0.87
Various food choices	0.7740	0.70	0.88
Attitude towards food delivery apps	0.784	0.65	0.85

The above the table show the value of average variance extracted (AVE) and composite reliability (CR) and the Cronbach alpha value. If the value of the Cronbach alpha is above the 0.7 that is considered a reliable measure. For Cronbach alpha co-efficient the norm of 0.7 set by Nunnally (1979) Nunnally J.C (1978) psychometric theory McGraw-Hill, New York.

The table.1 represent the age of the respondents that participate in the research and represent the age of our respondents. Table 1 show the marital status of our respondents it shows that the un married persons and single persons that living in other cities in hostels for the purpose of work used food delivery apps more than married persons. And represent the qualifications of the respondents. These four tables are showing the basic results of our research.

Check the behavior characteristics of the usage of the food application of the male respondents it was noted that Male persons are also used food apps more frequently than females. They use food apps averagely 5 to 6 time per months. According to the survey in 2016 48 % respondents of the U.S using the food delivery apps and enjoying the services. And 20 % respondents order only time in a week (David, 2017).Females' persons typically used the food delivery apps 5 to 6 time per month. Both males and females use the food application between the 11 am to 2 pm. The interesting thing that was noted both younger male and female studding in colleges and universities most prefer the food panda. The young males more frequently use the food delivery apps than females. Table.5 represent the factor loading effects and the values of the alpha that results shows that how much results of the questionnaire how much our questions are efficient and how efficiently our respondents' response in our research. We take all the questions from previous research that was held in China (2019).

3.5 Measure:

The survey was designed to measure the result through the hypothesis testing. The survey was designed to check the perception of users about food delivery apps through the multiple attributes including convenience, app design, price, various food choice options in app and trustworthiness. Total 18 questions were used to assess the based upon (Zhilin, Minjoon, & Robin, 2004) and (Al Dmour, Alshurideh, & Shishan, 2014). Respondents were asked to choose one food delivery app and implement those five quality attributes and fill the questionnaire. And the next section of the survey assesses to the attitude towards the food delivery apps by applying the items by Sweeney and Souter (2001). All students construct to measure the five-scale model (1= strongly disagree, 2= disagree, 3=neutral, 4= agree, 5= strongly agree).

After adding the final instruments in the survey (age, gender, qualification and marital status) examine the respondents and get the survey result.

4. RESULT

4.1. Validity and reliability of measurements

To measure the validity and reliability of our constructs we conduct a confirmatory factor analysis (CFA). Cronbach alpha was used to measure the interitem consistency reliability and the values lies within acceptable range (0.760 to 0.795) (Nunnally, 1978). All the values of AVE, factor loadings, and CR lies within prescribed criteria (Fornell & Larcker, 1981). Moreover, square root of AVEs is greater than the relevant correlation values. Therefore, reliability and convergent validity of the constructs were acceptable.

4.2. Results of testing hypothesis:

The purpose of this study to explore the quality attributes of the food delivery apps (convenience, Application design, Price, Trust worthiness, Various food choices) and their impact on customer attitude towards the food delivery apps. Hypothesis relationship is tested through the regression analysis. The relationship is testing between the six constructs. Our structural equation model is over all fit because the value of r square is less than two and the $p < 0.01$.

	Item no	Mean	S.D.	CON	DES	TW	PRI	VFC	Attitude towards FDA
Convenience	3	4.1758	.61341	0.81					
Design	3	4.0259	.61667	0.541	0.82				
Trustworthiness	3	3.9353	.70362	0.517	0.618	0.81		t	
Price	3	3.8824	.75175	0.522	0.540	0.644	0.83		
Various food choices	3	4.0680	.71071	0.606	0.583	0.551	0.570	0.87	
Attitude towards FDA	3	4.0097	.64318	0.536	0.574	0.604	0.613	0.612	0.80

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Convenience	309	1.00	5.00	4.1758	.61341
Application design Avg	309	1.00	5.00	4.0259	.61667
trustworthiness_Avg	309	1.00	5.00	3.9353	.70362
price_Avg	309	1.00	5.00	3.8824	.75175
variousfoodchoice_Avg	309	1.00	5.00	4.0680	.71071
Attitude towards food apps Avg	309	1.00	5.00	4.0097	.64318
Valid N (listwise)	309				

Table 3**Discriminant validity and correlations coefficients:**

Note: CON = Convenience; DES = Design; TW = Trustworthiness; VFC = Various food Choices; FDA = Food Delivery App.

Hypothesis 1 to 5 was tested. The result is show in thew table 4. The five attributes out of five (convenience, price, trustworthiness, design, various food choices) have a significant and positive effect on the attitude towards food delivery apps. The results values show that the goodness and the fitness of the model. The SPSS software is used for analyze the statistical technique.

The mean and the standard deviations are show in the Table.3. And the correlation of the variables is representing in the Table.3. The five attributes of the food delivery apps have a positively corelated with the attitude towards the food delivery apps. All the square root of AVEs ranging is 0.81 to 0.87 thus these are the supported.

4.6 Hypothesis testing:

Results of testing and analysis for hypothesis 1 to 5:**Table 4**

	Coefficient beta	t-value	Sig	Tolerance	VIF	supported
Constant	0.671	3.427	0.001			
Convenience	0.105	1.895	0.059*	0.511	1.022	Yes
Design	0.151	2.632	0.009	0.508	1.999	Yes
Trust worthi- ness	0.171	3.247	0.001	0.566	1.145	Yes
Price	0.196	4.123	0.000	0.500	1.969	Yes
Various food choices	0.211	4.176	0.000	0.595	1.815	Yes

Note: R-squared = 0.53; Durbin-Watson (DW) = 1.97; F-value = 69.09
Dependent Variable = Attitude towards food delivery apps

The purpose of this study to explore the quality attributes of the food delivery apps (convenience, Application design, Price, Trust worthiness, various food choices) and their impact on customer attitude towards the food delivery apps. The value of F distribution proves the model fitness (table 7). The value of DW lies within acceptable range, hence prove there is no autocorrelation issue in the data. Collinearity diagnostic proves that there is no multicollinearity in the data (Hair et al., 1998).

The 1st hypothesis has a insignificant and not supported ($\beta=0.105$ and $p=0.059$) because the value of the significant is $p >$ than .05. 2nd hypothesis has significant

and supported ($\beta=0.151$ and $p=0.009$). 3rd hypothesis significant and supported ($\beta=0.001$). 4th hypothesis are significant and supported ($\beta=0.196$ and $p=0.000$). 4th hypothesis is significant and not supported because ($\beta=0.211$ and $p=0.000$). and other four hypothesis are significant and the acceptable because the value of the $p < .05$. All the results are shows in the table.7. The coefficient beta values also measure the table 7. The beta value ranging from 0.105 to 0.211.

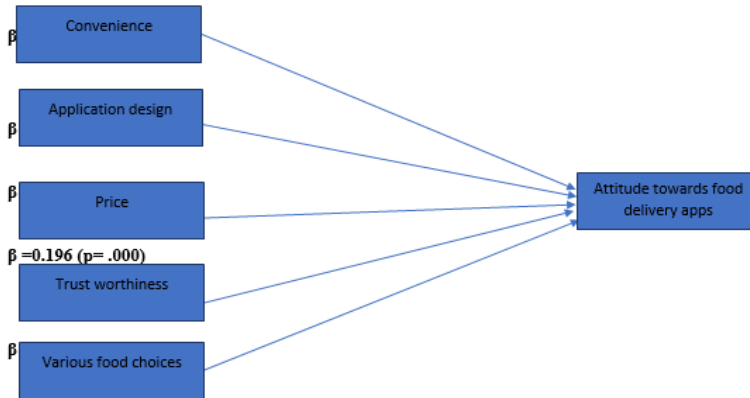


Fig 2 results of testing hypothesis 1-5

Hypothesis one to five results are shows in the figure 2. Among the food delivery quality attributes, we found four attributes have a significant and positive effect (price, design, various food choices and trustworthiness) on the attitude towards the food delivery apps. And the one attributes have a negative and insignificant (convenience) effect on the attitude towards the food delivery apps.

CONCLUSION AND IMPLEMENTATION:

The results provide the actual support shows the importance of usage of the mobile apps must provide to today Pakistani consumer when applied within the circumstance of the FD business. FDA has become the famous business in Pakistan due to the swiftly growing in online to offline business model. Our study results provide a very remarkable and the timely information. This information is very useful for the restaurants. our findings show that how to make affective business strategies for the FD business in Pakistan. We mark the critical issues associated with marketing strategies exist to Pakistani market and increment in number of single people house hold. And these results may imply for the mobile food applications and the Pakistani restaurants and other Asian countries like Bangladesh India and China. We provide some important implementation based upon our findings that's are very helpful.

Studying the findings results the most important element for the improving the

consumer perceived value and their success full application on the online food deliver app business is the TW. Trustworthiness plays a key role for the online food delivery business. For the online transaction satisfaction trust play key role and it's an extant literature in the line (Y.-M. Li & Yeh, 2010). It's very important for the developers of the online food delivery apps and their food sellers they just focus on the user demand trustworthiness by using the food delivery app. So, we can't ignore the appearance of the competition between the food delivery apps it's a very helpful for the trustworthiness of the consumer on the online food delivery apps. Budling a trust is a very complicated process due to the lot a variety of the restaurants. So, the capability of the online food delivery apps business and the capability of the online food sellers are the directly effect on each other. And further its highlights the collaboration between the online food delivery apps and their online food sellers. For creating the value of the trustworthiness between the all the partners of the online food delivery app business this situation can handle very effectively. Both online food app developer and online food sellers are involved in this process. We gain more trust through the applying different techniques that's very helpful for the costumer ratification and build their trust on the online food shopping for example regular based update the information of the food sellers menu card and their items, updating about items price, and minimize the price of the delivery charges, this process minimizes the confusion of the buyers. So, we suppose that the right use of the ITon the online food app business we make the transaction process very effective and create positive online shopping environment through the removing the human interference for most of parts and creating a smooth shopping experience that facilitate the user trustworthiness. By eliminating the human involvement in online business, we build the trust of buyers on the online food delivery apps.

The other attributes of the food delivery apps like a various food choice and the design of the app have a significant and a positive impact on consumer perceived value of the FDA and followed by the other characteristics like a price and the convenience (Grøtnes, 2009)observe that convenience is the only reason of using the mobile apps and their user-friendly display design attract the costumer they brows the app and purchase the products. The efficiency of the mobile apps and their functionality have been identifying the basic element of design in recent studies(Lee, Ha, & Widdows, 2011). Therefore, it could be identified that and agreed that FDA are intended for the ease of consumer for ordering food online and it designed for availability at any time and at any place. When the consumer accesses the food delivery app for ordering food it should not be ignored when consumer purchasing the food products, they compared this with other products like as cloths, jewelry and commodity products it's not possible because these products are returnable after purchasing but the food products are not return able after the purchasing. Before the era of the mobile's apps the method of the online food ordering was changed costumers registered their mobile numbers with the restaurant mobile number and they get offer through the SMS they get discount coupons, pamphlets and the flayers and use this purchasing products with discounts from restaurants.

Sometime consumer not feel relaxed due to the price of the food and the taste of the food and the money that to be spent. These examples provide idea how to design food delivery apps properly so easily build the trust of costumer on food delivery

apps. Similarly a app that's name was Yelp eat24 designed in united states of America based upon the yelp the ability of the app its provide the feature of feedback for their costumer so they share their dining experience through the app that's build the consumer interest on restaurants and it's an efficient way to build a relation with their customers. Now the food delivery apps using the new technique through this they provide the more user-friendly online food shopping environment to their costumers they allow the costumer to post their reviews about the restaurant's and then order food easily and provide the facility of clicking few times pay. Design and the convenience becoming the major quality attributes of the online FDA that's offer a much more significantly positive and efficient experience to buyers. Design and the convenience are the main attributes that's built consumer trust on the online food delivery apps.

In other findings the value able and important findings is VFC. Now it's available on the online food delivery apps and it has a positively impact on the user perceived value and contribute to improve the user perceived value. Before the era of the online food delivery apps no more choices are available for the people they just focus on the limited menu like a pizza, Chinese, and fried chicken only the limited items available but food delivery apps end this era and introduced the various food choices under the roof. Given that the users of the online food delivery apps rapidly growing and they move local market to online food delivery apps. They use mobile phone food delivery apps for ordering their mails more frequently because food delivery apps allowing the customer to choose VFC under the one table from expending the number of restaurants types. It's becoming a very important quality attributes its effecting the sustainability of the restaurant's environments. This also represents those challenges that face both the foo delivery apps decouplers and the food sellers. They face the product quality issues because the same category products are available in different restaurants.

Unique products and their quality aspects are very important for this food delivery business. So, the price table directly affects the mobile apps food delivery business. Because the people how prefer the low-price dinner, they not accept the high price table of the online food delivery app. So, it's must the online food sellers facing the high competition in the local market and online both. Food delivery apps face high competition when they move offline to online business. Invest more revenue through the advertisement and marketing and the work on the search engine optimization strategies, how gain traffic on your apps and what channels used for advertisement. The important thing is that the restaurants industry operates with very small margins. Restaurants increase their annual sales only 2 to 6 % itconsiders a value able margin in the highly competitive market place(Tandon et al., 2021).

(i) Our finding that's related to the food delivery apps based upon the demographic are very interesting and the managerial implementation that can be form our research. Just focusing in the single person household and multi person user differences of the food delivery apps, in the findings the single person household give the importance to the quality attributes of the food delivery apps for "various food choices" "price" and "trust worthiness" on the other hand multi person household focus on the other key attributes like a "design" and the "convenience" and the

“trust worthiness” of the food delivery apps. The main point is that the trust attribute is very important for the both single person house hold and the multi person house hold. Thus, the security in the all-food delivery apps ordering system is very important. So, the accuracy and the reliability are also related to the trust worthiness in the term of what restaurants are reported and what the costumer viewed by.

(ii) For the purpose of the food delivery apps marketing address the challenges for the single person house hold. For the various food choices attribute some suggestions can be made. For this segment this attribute turned into very important quality attributes with “price”. Limited income of house hold have impact on the various food choices it’s may also limit the variety of the food choices. Opportunities find in managerial implementation they appeal to the single person house hold of the food delivery apps users. Perhaps a large variety of food products can be offered to the smaller size portion of people unique food delivery experience able to be order this type of segment of people for a reason able value.

(iii) For a several reasons the quality attributes “price” is one of the great interests. This segment represents the largest segments perspective of the single person house hold of the un-married person market that are the 85 % person but the most of single person earn the less than Rs. 15000 per months. So, the price attribute is very responsible for the single person house hold but it’s not more responsible for the multi person house hold.

(iv) For the purpose of the marketing of the food delivery apps addressing to the multi person house hold about “design” simplicity is the formula of the success for this group. For the perceived value of the costume design is the most top-quality attributes. The card payment method is very important and essential for this segment of the group and reported to the lower-level education compare to the single person house hold user group simple click use for food ordering is very essential for this segment.

(v) The quality attributes “convenience” is very important for the food delivery apps. Using the food delivery apps ordering the food any time or any place is very important for the multi person house hold user groups as more of the single person house hold user group. Because the most of the people ordering their food while on the go never matter, they are at home or at their working place.

MANAGERIAL IMPLEMENTATION:

This behavioral data allows the managers of the restaurants to take advantages by using this data and developing the strategies to the earn more profit and boot their sales. During low peak hours by using direct promotion method for the both segment single person house hold users and the multi person house hold users. For example, with the late-night feature target the single persons house hold users they usually create a new business in the market by using the information of the data base of the consumer. Creating the reward for the regular user of the food delivery app become helpful for the build loyalty with brand. Loyalty of the single person house hold users is very important for the food delivery apps. Finally continue fo-

cus on getting feedback from costumer about the costumer experience of the with the food delivery apps. And continue to ask the costumers what services they would like to receive and which type of services thy would like to receive that they not get from you and your competitors.

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