Received: May 2023 Accepted: June 2023 DOI: https://doi.org/10.58262/ks.v11i2.236

# Factors Impact On Decision-Making Online Food Delivery Apps Use in Can Tho City, Vietnam

Kiet Hong Vo Tuan Truong\*1, Kim Ngoc Thien Ly, Anh Vu Thai Nguyen, Anh Thi Van Nguyen, Trang Thi Huyen Truong, Thoa Thi Kim Truong, Thien Chi Ngo, Son Hoang Tran²

### Abstract

The objective of this study is to investigate and ascertain the factors that impact the decision-making process of Can Tho City inhabitants when it comes to engaging in online meal purchases. This study obtained primary data by administering questionnaires to a sample of 512 users of online food delivery service applications. The findings indicated that individuals use the mobile applications Shopee Meal and Grab meals as a means to conveniently make orders for midday and evening meals. These applications are among the most widely used platforms for placing meal orders. Purchase Food and Order a Meal from Shopee. A significant number of consumers choose to purchase their meals using online platforms as opposed to dining at restaurants due to the heightened convenience, time-saving benefits, and the availability of discounts and exclusive offers. On average, the accessibility of food-related products online occurred fewer than eleven times each month. Cash continues to be the predominant and well recognized medium of financial transaction. When considering the purchase of food from online markets, empirical evidence indicates that three distinct elements have a substantial influence on the preferences of individual customers. Based on the results of a study examining the factors that social influence and decision-making, it was seen that these variables had a favorable effect on the selection of meal ordering apps by customers. Furthermore, empirical study has shown that some facets of meal-ordering applications have a positive impact on consumers' decision-making processes. Using online food applications are influenced by the quality of information, often referred to as WQ1. Furthermore, it was determined that the degree of privacy and security provided by an application (WO3) played a pivotal role in the decision-making process pertaining to meal ordering applications.

**Keywords:** online food, apps, decision making, order.

### 1. Introduction

In Vietnam, there is a growing trend among customers to rely on quick-service restaurants, delivery services, and online shops as their preferred options for fulfilling their purchasing requirements. Customers have the capability to avail themselves of a diverse range of services and carry out transactions by using the interfaces on their mobile devices. It is advisable to avoid the crowd and use one of the services offered by the business at one's own preferred speed. Online food delivery services (OFDS) may be used by consumers to facilitate the process of ordering and delivering meals (Ray et al., 2019). These services facilitate the connection between customers and restaurants

<sup>&</sup>lt;sup>1</sup> Department of Business Administration, FPT University, Can Tho City, Vietnam

<sup>&</sup>lt;sup>2</sup> Student in Department of Business Administration, FPT University, Can Tho City, Vietnam

<sup>\*</sup>Corresponding author: kietthvt@fe.edu.vn

via their online platforms, such as websites or mobile applications. This feature enhances the convenience for consumers in placing orders and receiving meals. Due to the implementation of OFDS, restaurants have expanded their offerings, so affording their customers a wider range of choices. Nevertheless, the inclusion of OFDS in the restaurant industry raises apprehensions among both restaurant owners and customers over issues such as food temperature, the hygiene practices of delivery personnel, and potential food tampering (Kim et al., 2008; Maimaiti et al., 2018). The aforementioned problems were brought out by researchers in two distinct investigations. Customers using OFDS platforms are not immune to these challenges and have voiced a certain level of ambiguity about the service platforms (Kim et al., 2008). Just as consumers who use online or mobile platforms often encounter challenges pertaining to interface design, communication speed, privacy, and security of service interfaces, including payment processors (Yeh & Li, 2009), customers who utilize OFDS platforms are not immune to these issues. Nevertheless, the confidence of users in the platform and their ability to use technology despite the perceived risks may contribute to mitigating some issues (Kim et al., 2008; Hsiao et al., 2010). Based on the findings of Kim et al. (2008), it can be inferred that consumers who possess trust in a certain e-commerce website or platform have a greater propensity to engage in transactions via that medium. The consensus among many writers (Liébana-Cabanillas et al., 2016; Aslam et al., 2020; Assaker et al., 2020) is that the sustained success of a service provider relies on the cultivation of customer loyalty and satisfaction. Scholars have conducted investigations on the purchase intention of OFDS by considering several influencing elements, including consumer characteristics (Gunden et al., 2020), technological features (Ray and al., 2019), moral duties in meal preparation, and consumer views of the COVID-19 pandemic (Hong et al., 2021). Several studies have been conducted by academics to investigate the purchase intention of OFDS, focusing on several significant elements, including customer attributes (Gunden et al., 2020). However, there has been little scholarly focus on the importance of trust in the context of OFDS.

The digital environment has led to the emergence of meal delivery services, which provide convenience to customers and attract their attention. The spread of smartphone apps enabling customers to pre-order meals has led to heightened expectations among consumers. Based on the research conducted by Gupta (2019), it was observed that consumers from diverse geographical locations had preferences for different types of delivery and takeout service alternatives. Customers are presented with a diverse range of choices while using these systems for monitoring the progress of their item deliveries. Customers are provided with many payment methods to choose from when making an order, including cash on delivery, cash, and credit card. Considerable effort is exerted by the individuals involved to ensure that the cuisine they provide has an appealing character, while also being abundant and of superior caliber. Consumers have the option to use online food delivery (OFD) platforms in order to conveniently obtain their preferred meals from the convenience of their residences, eliminating the need to physically go outside. This specific function proves to be very advantageous in adverse weather conditions, peak traffic periods, or after a strenuous day of work. The duration required for order processing and dispatch is rather brief. Upon delivery to the customer, the food exhibits exceptional quality, accompanied by aesthetically pleasing packaging, and is promptly provided. The continuous progression of technology is an additional aspect that leads to the proliferation of Internet delivery services. Various aspects contribute to determining the degree of customer satisfaction with a product or service, including alterations in application interface design, the presence of user-friendly websites and applications, simplicity of use, visually appealing aesthetics, prompt accessibility, a wide range of choices, and expedited payment processes.

The expansion of OFD services in Vietnam began in 2018, primarily targeting niche markets

including a restricted demographic of young urban professionals who face time constraints due to their hectic schedules. Despite the relatively small size of the online meal delivery sector, accounting for just 0.2% of the global market, its presence in Vietnam is rapidly expanding and gaining significant popularity. Notwithstanding the fact that Vietnam is a comparatively youthful nation. In 2020, the importance of OFD services increased significantly, mostly because they provided convenience and served as a relatively secure means of protecting Vietnamese citizens from the spread of the Covid-19 pandemic. Based on the data provided by Statista (2021), the sales revenue generated from the sales of OFD services in Vietnam had a notable surge, amounting to an increment of 95 million dollars compared to the preceding year. Consequently, the total revenue reached a sum of 302 million dollars. Based on a study conducted by Imarcgroup (2020), it is projected that the OFD services market in Vietnam is expected to see a compound annual growth rate (CAGR) of around 34% over the period from 2021 to 2026. The market shares of OFD websites and applications in Vietnam are seeing rapid growth because of the enhanced convenience and transparency they provide to customers. To achieve success in the contemporary and fiercely competitive industry, enterprises offering on-demand delivery (ODD) services must prioritize the key factors that have the utmost significance for their customer base.

The use of food delivery services in Can Tho City has seen a surge due to changes in customer behavior and environmental circumstances. Digital technology is a significant determinant that shapes consumer behavior in Can Tho City and enhances the overall quality of life for its residents. In the Vietnamese capital of the Mekong Delta, a diverse range of food and beverage options is now available to consumers. Residing in Can Tho City presents challenges due to several factors such as the City's escalating problems with elevated tides, flooding, intense precipitation, the implementation of daylight saving time for occupational purposes, and the exacerbation of extreme weather events. Consequently, the technological advancements enabling the delivery of meals to clients from various locations align well with their urban lifestyle. Individuals are not obligated to undertake lengthy journeys, tolerate high temperatures and large gatherings at street food vendors, or wait in lengthy queues at highly regarded dining establishments or grocery stores. Individuals residing in Can Tho City who are now experiencing hunger may conveniently address their needs by using their smartphone to access a mobile application, whereby they can proceed to make their desired food order and afterward await its delivery to their place of residence.

In light of this, the purpose of this study is to discuss how the decision of online food order in Can Tho City to explore the determinants affecting customers' purchase decisions. Based on some previous related research, this study selects the independent variables that influence customer satisfaction as follows: website quality (information quality, website design, security privacy, and payment), service quality (food quality, delivery, and promotion, and customer service), time-saving benefits, price saving benefits, and social influence. So, the result of this research would be helpful for the company to design effective digital industries that start to grow but a small number of researchers discuss online food delivery service with application because it is a new phenomenon in Can Tho City.

## 2. Methodology

### 2.1 Sampling technique

A comprehensive examination of the current corpus of scholarly literature is necessary to provide the foundation for generating research inquiries that are tailored to a given research model. The questionnaire was specifically designed to target the citizens of Can Tho City as its

major demographic. The robustness of the findings is attributed to the inclusion of respondents who had availed themselves of the services offered by OFD in completing the survey. Furthermore, we have provided the questionnaire in Vietnamese to facilitate the respondents' comprehension of the questions and minimize the likelihood of any misinterpretation. Furthermore, we collect demographic data to conduct a comprehensive analysis, which aids in achieving a deeper understanding of the topic under investigation. Additionally, this allows us to assess the characteristics of the dataset through tests of normality and reliability. This study is conducted in tandem with investigations into the general level of customer satisfaction with the services offered by OFD. The dataset contains data pertaining to the demographic characteristics of the individuals, including age, gender, educational attainment, marital status, and employment status. Furthermore, the dataset has data pertaining to the participant's choices of online meal delivery services, together with information regarding their use patterns of those services. The degree of satisfaction with the services provided by OFD is assessed using a five-point Likert scale. A score of 1 represents the utmost level of disagreement, while a score of 5 represents the furthest level of agreement. The objective of this scale is to evaluate the extent to which participants express agreement or disagreement towards a certain statement or perspective. The customer's reaction to an inquiry about their purchasing behavior, specifically pertaining to their utilization of a meal delivery service, is used to compute the customer's comprehensive score. A digital survey instrument was developed using Google Forms to facilitate online completion. In order to initiate initial contact with potential participants and invite them to participate in the survey, electronic communication methods, such as email or a website, may be used. As stated by Szwarc (2005), this approach may be used in the construction of a survey instrument that has both visual appeal and user-friendliness, hence fostering prompt and efficient answer submissions from participants. This study uses primary data by distributing questionnaires to 512 users of food delivery service applications through online service in Can Tho City. This research takes samples with a non-probability sampling technique. Amount of sample taken more than 5 times existing indicators.

#### 2.2 Literature Review

#### Website quality

Several recent empirical studies have examined the concept of website quality. Notable examples include the works of Dickinger & Stangl (2013); Liu et al. (2013); Xu et al. (2013) among others. The assessment of a website's performance often revolves around many key variables, including information quality, website design, privacy security, and payment system efficacy. Each of these aspects has been thoroughly discussed in the preceding sections. The evaluation of a website's quality encompasses many dimensions, such as its visual appeal, the information it presents, its technical performance, its user-friendliness, and its search engine optimization.

H1: Website quality positively influences online food order decision

H1.1: Information quality positively influences online food order decision

H1.2: Website design positively influences online food order decision

H1.3: Privacy security positively influences online food order decision

H1.4: Payment system positively influences online food order decision

Service quality

Lau & David (2019) claim that the amount of client satisfaction is directly influenced by the quality of service provided by an online business. The research conducted by Devaraj et al. (2002) indicates that the quality of service offered plays a pivotal role in determining the extent of consumer satisfaction. Furthermore, Zulkarnain et al. (2015) propose that organizations should prioritize the quality of their services and devise unique tactics to maintain and enhance them. Numerous studies have consistently shown that customers who experience a state of contentment have exhibited a propensity to invest in services of superior quality in previous instances, and this inclination is expected to persist in forthcoming periods. Consequently, corporations have the potential to accrue significant benefits by prioritizing the provision of highquality services (food quality, delivery, promotion, and customer service). According to the study conducted by Chandon et al. (2000), E-service quality may be defined as a comprehensive assessment and evaluation of the quality of electronic service delivery within a hypothetical market. The organization offers two services, namely shipping assistance and customer support, which are offered both before and after the conclusion of a transaction. Donni et al. (2018) assert that consumers have elevated expectations about the punctuality of product delivery. Online purchasers greatly value customer service that is quick and uncomplicated, especially with regard to return policies. Based on the research conducted by Dastane et al. (2020), it has been determined that the primary concerns of consumers revolve around two key aspects, namely product returns and punctual delivery. The influence of poor customer service on consumer repurchase intentions has been examined in prior research (Jallow & Dastane, 2016; Dastane & Fazlin, 2017). These studies have consistently shown that unpleasant customer service experiences have a detrimental effect on consumers' propensity to engage in future purchases of a certain product or service. The first hypothesis posits that an enhancement in service quality would result in heightened customer inclination towards online food delivery (OFD) orders. The following notion has been suggested as a potential elucidation:

H2: Service quality positively influences online food order decision

**H2.1:** Food quality positively influences online food order decision

H2.2: Delivery quality positively influences online food order decision

**H2.3:** Promotion and customer service influence on online food order decision

### Time-saving

The relevance of time in the commercial and service realms is derived from the direct correlation between promptness and the degree of customer delight. The use of the Key Performance Indicator (KPI) referred to as "on-time delivery" is a widely accepted approach for assessing the efficacy of a service provider in fulfilling its commitments. The significance of scheduling and delivery is seen in the prompt provision of meals within a certain timeframe, which has great value for both the customer and the service provider. The notion of early delivery has significant importance as it reduces the amount of time spent due to poor use, hence exerting an impact on customers. Individuals have a greater propensity to refrain from using their time and financial resources on pursuits devoid of purpose when situated inside a dynamic milieu. Customers are afforded a significant level of freedom when engaging with services that are available around the clock (Suryadev & Mahik, 2018). This is due to the absence of temporal limitations to cope with.

**H3:** Time-saving positively influences online food order decision

### Price saving

Frequently, clients' ultimate selections are significantly impacted by the price of the product or service under consideration. In the study conducted by Al-Msallam (2015), it was shown that price has significant importance in the assessment of customer satisfaction. The perceived value of a service by clients is significantly influenced by the costs associated with accessing and using that service. Martín-Consuegra Navarro et al. (2007) suggest that the perception of price by customers is contingent upon their level of satisfaction with the organization. The level of client loyalty has an indirect influence on their impression of price fairness and subsequently affects their willingness to pay. Susanti (2019) posited that the pricing of a product or service has a crucial role in influencing the degree of consumer satisfaction associated with that product or service. This phenomenon may be attributed to the fact that customers tend to evaluate the worth of a product or service in relation to the monetary investment they have made. Hence, in the event that consumers see the costs of a certain brand as exorbitant, they may choose to discontinue their patronage of that brand altogether or transition to a competitor's brand. Determining the reasonableness of pricing is a crucial factor in assessing customer happiness and fostering brand loyalty, as shown by the study done by Rothenberger (2015).

**H4:** Price saving influences on online food order decision

#### Social influence

According to the findings of Bonn et al. (2016), persons who assimilate the perspectives of their peers in response to the information they get about a particular service are more like to perceive the service's worth positively. Based on the research conducted by Bonn et al. (2016), it was shown that consumers have a greater propensity to recognize the advantages associated with online wine purchases when they see influential persons engaging in such behavior. In the context of online food delivery services (OFDS), when orders are often placed using a smartphone application by customers, it is essential to comprehend the underlying motivations driving their purchase decision. According to the research conducted by Utami & Yuliawati (2020) as well as Al Shishani (2020), consumer behavior is primarily influenced by several components, including the individual, social, and psychological aspects of an individual. When engaging in a consumer transaction, individuals are susceptible to a considerable degree of influence exerted by their social network, including friends and acquaintances. Social variables include a range of factors, such as the intricate dynamics seen within groups, the intricate interconnections within both offline and online social networks (including those facilitated by social media advertising), and the interpersonal exchanges prevalent within familial contexts.

H5: Social influence impact on online food order decision

# 2.3 Data analysis

The study used several statistical techniques available in SPSS version 22, such as descriptive statistics, and binary logistic regression was used on each variable to ascertain the relative significance of the predictors. Logistic Regression Analysis (LRA) was used in this study to investigate the presence of a statistically significant association between the decision-making processes of online consumers and the various components of applications designed for online food ordering. This study used logistic regression analysis to examine the relationship between a set of independent variables and a binary outcome variable. A binary dependent variable is characterized by its ability to assume just two distinct values, either 0 or 1, which are associated with two distinct groups. Tabachnick & Fidell (2012) claim that the primary objective of

Logistic Regression (LR) is to analyze data and establish the relationship between a dependent binary variable and one or more independent variables using nominal, ordinal, interval, or ratiolevel measurement scales. The achievement of this objective may be attained by using nominal, ordinal, interval, or ratio-level measures. The objective of the logistic regression approach is

$$P(Y=1) = 1/1 + e - (\beta 0 + \beta 1X1 + \beta 2X2 + ...\beta iXi)$$
 (1)

where P is the probability that the event Y occurs,

Y is binary dependent variable (Y = 1 if event occurs; Y = 0 otherwise),

" $\beta$ "'s are the logistic regression coefficients, and "X"'s are independent variables.

In the study, the dependent variable Y is assigned a value of 1 (Y=1) when participants choose to employ the online meal order application. Conversely, the value of Y is equal to zero (Y=0) in the event that customers do not make use of online meal order applications. The perceived level was determined by considering many factors, including the quality of the website in terms of information, website design, security, privacy, and payment. Additionally, the evaluation took into account the service aspects such as food quality, delivery, advertising, and customer support. Furthermore, the benefits of time and money savings, as well as the social effect, were also included in calculating the perceived level.

#### Results and Discussion

Table 1 provides detailed information about the characteristics of online customers in the study area. Total sapling observation was 512, of which females occupied 53.7% and the male was 46.3%. Moreover, the most outstanding feature of the table is that respondent education at the university level was the most prevalent background at 57.9%. High school level ranked second in terms of popularity, at 23.0%, followed by others with 19.1%.

**Table 1.** General information of respondents

Description	Quantity(N)	Percentage(%)	
Gender			
Female	275	53.7	
Male	237	46.3	
Education			
High School	118	23.0	
College	98	19.1	
University	296	57.9	

Source: Field Survey Data, 2023

In Can Tho City, Shopee food accounted for a significant proportion with 62.3%. Grab food ranked second in terms of popularity, at 51.6%, followed by Beamin with 48.0%. Loship made up approximately one out of three, and Hey U was responsible for about one out of four. Shopee Food is popular among consumers because of the appealing deals it often gives, the convenience of its one-tap ordering and delivery, the low prices it charges, and its dedication to continuously bettering its customers' experiences. Shopee Food and Grab Food provide customers with regular discounts and speedy delivery. Furthermore, many applications provide loyalty programs to keep customers coming back to their websites to buy meals (Figure 1).

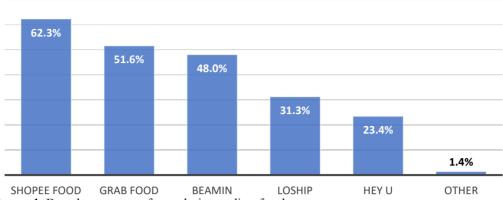
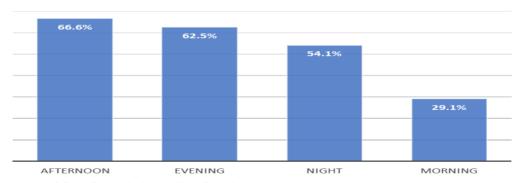


Figure 1. Popular apps use for ordering online food

Information about the popular time of the day for ordering online food is presented in the bar chart (Figure 2). Overall, there was a disparity in online food orders at different times of the day. The greatest proportion of online food order time was generated by the afternoon (10 Am – 13 PM), at 66.6%. Evening (after 13-19 PM) and night (after 19-22h30 PM) took the second and third position in terms of popularity, at 62.5% and 54.1% respectively, followed by morning (before 10 AM) with 29.1%. Since most consumers have to leave their homes in the morning for school or work, mornings are a slow time for online food ordering services. Customers all go outside to have breakfast, so there isn't much of a need for online food ordering. In addition, many of the respondents are students in the research. Students who don't go to school often wake up late since they have a habit of staying up late and sleeping in. This means that you probably won't need to make an early morning online food order.



**Figure 2.** Time for ordering online food in a day

Figure 3 displays remarkable reasons why clients are interested in ordering online food. It is interesting to note that "Do not move out" was the most common reason, at 60.7%, whereas the opposite is true of the "quality of service" reason (31.6%). More restaurant/Food shop options, many promotion programs, and saving time showed similar levels of popularity, i.e. between 46.9% and 56.1% each. Jobs and education that may be done entirely online are becoming more common these days. The health of a population may be negatively impacted by both extreme weather and inadequate transportation networks. Each of these factors causes people to spend less time interacting with others. They think it's safer and more convenient to order food online and have it delivered. Users are relieved of the burden of traveling to restaurants, shops, and groceries. They may save time on travel and time spent standing in line. Customers are enticed

and feel they are getting greater value for their money when discounts, buy-one-get-one offers, and free shipping are offered. Since there is a chance of receiving a discount while ordering meals from unknown businesses, those who have never tried them before may take advantage of promotions by doing so. A wide variety of restaurants, from mom-and-pop establishments to national chains, may be available via online meal delivery services. Thanks to this, businesses may offer their clientele a diverse menu that incorporates several cooking styles. Fast responses to client orders and inquiries are a major selling point for online food delivery businesses. Timely delivery is a crucial part of providing excellent service to customers since it ensures that their food will be brought to their door at the appointed time.

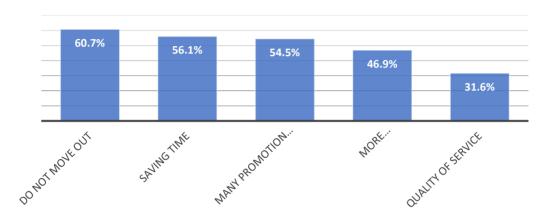
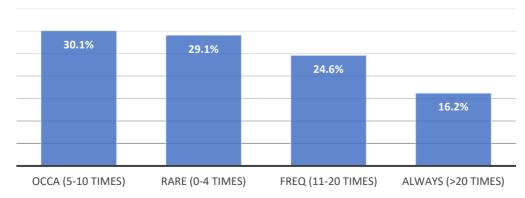


Figure 3. Reasons for ordering online food

Figure 4 presents a ladder depicting the regularity with which Can Tho residents make online food orders. Figure 4 displays the results showing how online food ordering may be broken down into four separate groups of customers. The first category contains 29.1% of respondents who make infrequent online food purchases (between once a month and four times a month). Group 2 includes the 30.1% of the population that only sometimes buys meals online (anywhere from 5-10 times a month). Group 3 covers the 24.6% of consumers who buy food from restaurants online between 11 and 20 times a month. Group 3 includes the 16.2% of the population that places an online order for a meal at least 20 times a month. So, almost 60% of all online food orders come from customers who buy food fewer than 11 times per month, whereas 40% come from customers who buy food more than 11 times per month.



**Figure 4.** Frequent online food orders in a month

It is expected that the expansion of E-commerce in general and online meal ordering, in particular, would encourage the use of cashless payments. The statistics shown in Figure 4.5 indicate that payments made using credit cards and payments made using electronic wallets each constitute a relatively modest portion of overall expenditure, namely 28.7% and 25.2%, respectively. On the other hand, the greatest proportion of cash payments was carried out by online customers, at 45.9%. Customers choose cash transactions owing to the convenience of always having a large amount of cash on hand. People's lack of faith in electronic wallets and card payments prevents them from being utilized as often as they might be. Customers are concerned that they will be misinformed about the reliability of their electronic payment method and the quality of the goods they are purchasing. Because of this, they prefer to pay in cash upon delivery and inspect the merchandise before making a payment decision (Figure 5).

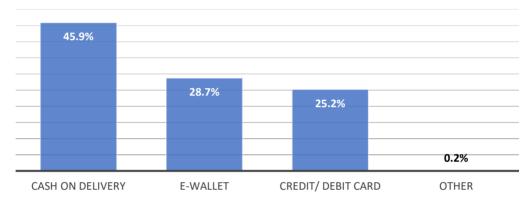


Figure 5. Payment for ordering online food

The chi-square test shows that the model has a satisfactory fit with a value of Chi-squared = 78.882 and a probability of Prob > Sig = 0.000 (Table 2). This indicates that the model is relatively accurate. Therefore, each of the model's variables has an impact on the choice of whether or not to purchase and consume processed foods. The independent variables in the model are responsible for explaining 34.8% of the dependent variable, as shown by the model's Nagelkerke coefficient  $R^2 = 0.348$ . According to the findings of the logistic regression analysis, the factors that are most significantly related to the suggestion to purchase food online are information quality, security privacy, and social influence.

**Table 2.** Test parameters in Binary Logistic analysis

Parameters of test	
Initial -2 Log Likelihood	482.221
Model -2 Log likelihood	403.339
Chi-square	78.882
Sig. (Chi-square Model)	0.000
Nagelkerke R -Square	0.348

**Source:** Field Survey Data, 2023

It is usual practice to use the binomial logistic regression model in order to assess the degree of accuracy with which instances may be predicted based on independent variables. The classification table is used in the process of determining how accurate the predictions made by the logistic regression model are. This table does a comparison between the observed and predicted values for the dependent outcome (with a threshold value of 0.5) and then classifies www.KurdishStudies.net

them in accordance with the results (Park, 2013). We can see in Table 3 that there is a note that says "The cut-off value is 0.500." For the sake of this discussion, a particular occurrence is categorized as belonging to this category if the chance that it should be placed in the "yes" group is larger than 0.50%. If that is not the case, then we cannot proceed with this plan. When Table 3 of the model was used, the model properly identified 12 of the 92 individuals who did not place their meal orders online. Both the estimate for 13% of customers and the estimate for 98.1% of consumers sound fair to me. The algorithm was able to accurately predict, with an accuracy rate of 82.8%, a preference for buying meals online.

**Table 3.** Probability prediction of online food order decision

Probability prediction	Online food order decision		
Online food order decision	No	Yes	Percentage correct (%)
No	12	80	13.0
Yes	8	412	98.1
Overall percentage (%)			82.8

Source: Field Survey Data, 2023

As shown in Table 4, the use of Wald statistics, which are a component of LR, enables us to determine that WQ1 (Sig=0.019), WQ3 (Sig=0.028), and SI (Sig=0.000) each made a considerable contribution to the improvement of the model (Sig=0.05), as shown by the Sig value through the information in Table 4, this can determine that the chance of placing an order for food through the internet is [P(Y=1)].

**Table** Error! No text of specified style in document. Equation of Binary Logistic Analysis

	В	S.E.	Wald	df	Sig.	Exp(B)
Constant	-4.829	1.016	22.613	1	0.000	0.008
WQ1	0.326	0.139	5.523	1	0.019	1.386
WQ2	0.146	0.125	1.378	1	0.240	1.157
WQ3	0.313	0.143	4.799	1	0.028	1.367
WQ4	-0.095	0.139	0.468	1	0.494	0.909
SQ1	0.019	0.136	0.02	1	0.887	1.020
SQ2	0.091	0.133	0.469	1	0.494	1.096
SQ3	0.086	0.136	0.406	1	0.524	1.090
TS	0.160	0.124	1.661	1	0.197	1.174
SI	0.657	0.123	28.687	1	0.000	1.928
PS	0.121	0.127	0.911	1	0.340	1.129

Source: Field Survey Data, 2023

When the related independent variable is increased, odds ratios that are more than one (Exp(B)) suggest an increase in the chance that a person would make a food buy online [P(Y=1)], while odds ratios that are less than one implied a drop in the probability of making such a purchase. After dividing the chances ratio by one, multiply the resulting number by one hundred to determine if the odds have improved or deteriorated.

For example, the result of subtracting one from the odds ratio of the variable WQ1 and multiplying it by 100 is 38.6%. The formula for this calculation is (1.386-1)\*100. When expressed another way, this means that there is a rate of 38.6% increase in the possibility that a client would buy food online if WQ1 increases by one unit. For each unit increase in the value of WQ3, there is a corresponding 36.7% increase in the chance of making an order for food online [(1.367-1)\*100 = 36.7%].

When the same procedure was applied to the remaining criteria, it was found that adding only one extra SI unit to the equation increased the likelihood of placing an online food order by 92.8%. The Hosmer-Lemeshow test was used in order to arrive at a conclusion on how well the analysis suited the data. This statistical test compares the values of the dependent variable that were seen to those that were expected. According to Hair et al. (2014), a better model fit in this scenario is shown by a reduced amount of misclassification between the observed and predicted labels. The Hosmer-Lemeshow test begins with the assumption, known as the null hypothesis (H0), that the data are in agreement with the model. The outcomes of the test suggested that H0 ought to be accepted, and it was found that the created model was in agreement with the datasets at the 0.05 level of significance.

The findings indicated that the decision of individuals to engage in online food purchasing was mostly influenced by social influence (SI). While many studies (Al Amin et al., 2021; Roh & Park, 2019; Troise et al., 2020) have shown the role of social influence in the decision-making process of online meal purchases, it is important to note that it does not emerge as the predominant determinant in this context. The research findings indicate that the online meal-purchasing choices of the study participants were impacted by their social environment. This hypothesis is predicated on the notion that customers attribute significant importance to the viewpoints of their personal networks when making determinations on the trustworthiness of various applications for online meal ordering. Based on the available data, it can be shown that the variable "social influence" (SI) had a substantial effect in determining the ultimate judgment, as indicated by an epsilon value of 1.928. The study found that the element of information quality (WQ1) had a considerable impact, with an exponential coefficient of 1.386, ranking it second in importance. The major focus of this research was on consumer expectations pertaining to the correctness, reliability, utility, and comprehensiveness of websites. The finding reached by Rita et al. (2019) aligns with the conclusions given by Kim and Niehm (2009). The third element influencing the decision to use an application is the privacy security factor (WQ3), which has an exponential value of 1.367. Numerous academic investigations have been conducted to examine the impact of consumers' privacy views on their propensity to engage with mobile meal ordering services. This finding was included in previous scholarly investigations. The likelihood of a user engaging in a purchase when engaging in online window shopping is positively correlated with their level of trust in the security and dependability of the website. Flavian et al. (2006) performed research that revealed that consumers prioritize the safety and security of their personal information as a primary concern while engaging in online transactions. According to Mukherjee and Nath (2007), individuals are more inclined to participate in electronic commerce if they have a positive perception of the security and privacy protocols established by online platforms. The potential for customers to exhibit a greater sense of confidence about the protection of their personal data while engaging in online buying. Prominent scholars such as Liao and Cheung (2002) and Poon (2007) have made noteworthy scholarly contributions to the existing body of literature pertaining to security and privacy concerns associated with eservice providers.

#### Conclusion

All things considered, consumers mostly order food by using food order apps for their lunch and dinner with two main apps Shopee Food and Grab Food. One of the major reasons for online food order decisions are "do not move out, "saving time", and "many promotions programs". The frequency of online food orders per month was less than 11 times. Cash was still the most famous payment form.

This study examined the impact of several factors associated with food delivery applications on customer decision-making processes. Additionally, it explored methods for monitoring the frequency of app use within Can Tho city.

First, the analysis of the influence of food order app usage factors on customer decision showed that decision with the usage factors positively influences decision with food order apps. In particular, the social influence (SI) factor, measured by items such as "People who influence my behavior think that I should use the online food delivery platform", "People who are important to me think that I should use the online food delivery platform", and "My friends want me to use the online food delivery platform", were found to significantly influence customer decision. The social influence factor was found to have the greatest influence.

Research has shown that some factors associated with the use of meal-ordering apps have a favorable influence on customers' decision-making processes. Previous research has shown that the quality of information (referred to as WQ1) plays a significant impact on the decision-making process of individuals when it comes to using online food apps. The impacts were particularly notable for the categories of "accurate information," "reliable information," "updated information," "useful and relevant information," "detailed information," and "appropriate presentation of information". In order to facilitate improved decision-making among their clientele, delivery application companies could potentially enhance their services by offering more precise and current menu selections. The present study's results indicate that the quantity of information provided by delivery applications influences consumers' decision-making processes. A customer utilizes a delivery application and furnishes inaccurate information, they retain the capacity to alter their decision. The study results underscore the need to maintain open channels of communication between consumers and companies, as well as address any apprehensions about the safety of the food being offered.

Third, the privacy security factor (WQ3) comprised items of "It feels safe to use a delivery app", "The personal information entered is safe when using a delivery app", and "Purchasing on the website will not cause financial risk" were found to have a large influence on the decision with food order apps, companies should make sure payments can be made more conveniently. In addition, if safety can be improved by strengthening the personal information protection system, this will have a positive influence on the safety factors, which will increase customer decisions with food order apps.

The research exhibits some limitations. Its exclusive use of the analytical technique of conjoint analysis, and secondly, its limited sample size. The study's narrow scope limited to Can Tho raises concerns about the generalizability of the findings to the broader topic under investigation. In order to enhance the credibility of a study and establish it as a reputable scientific undertaking, researchers might consider using the following measures:

- The inclusion of a greater number of research with varied levels of quality enhances the
  potential for conducting meaningful comparisons among them. This aspect is of utmost
  importance given the potential for technological advancements to result in changes in
  consumer expectations.
- To examine alternative internet-based services, such as online transportation networks, digital goods delivery systems, and online marketplaces.
- To enhance the empirical rigor of the study, it is recommended that the research use a more comprehensive approach by conducting a nationwide survey of customers.

**Funding:** This research received no external funding.

**Availability of data and materials:** Availability

### References

- Al Amin, M., Arefin, M. S., Alam, M. R., Ahammad, T., & Hoque, M. R.(2021). "Using mobile food delivery applications during COVID-19 pandemic: An extended model of planned behavior". *Journal of Food Products Marketing*, Vol. 27, No. 2, pp. 105-126.
- Al Shishani, D.(2020). "Factors influence the buying behaviours of consumers". *International Journal of Recent Research in Social Sciences and Humanities (IJRRSSH)*, Vol. 7, No. 3, pp. 14-21.
- Al-Msallam, S.(2015). "Customer satisfaction and brand loyalty in the hotel industry". International Journal of Management Sciences and Business Research, Vol. 4.
- Aslam, W., Hussain, A., Farhat, K., & Arif, I.(2020). "Underlying factors influencing consumers' trust and loyalty in E-commerce". *Business Perspectives Research*, Vol. 8, No. 2, pp. 186-204. doi:<10.1177/2278533719887>.
- Assaker, G., O'Connor, P., & El-Haddad, R.(2020). "Examining an integrated model of green image, perceived quality, satisfaction, trust, and loyalty in upscale hotels". *Journal of Hospitality Marketing & Management*, Vol. 29, No. 8, pp. 934-955. doi:<10.1080/19368623.2020.1751371>.
- Bonn, M. A., Kim, W. G., Kang, S., & Cho, M.(2016). "Purchasing wine online: The effects of social influence, perceived usefulness, perceived ease of use, and wine involvement". *Journal of Hospitality Marketing & Management*, Vol. 25, No. 7, pp. 841-869.
- Chandon, P., Wansink, B., & Laurent, G.(2000). "A benefit congruency framework of sales promotion effectiveness". *Journal of marketing*, Vol. 64, No. 4, pp. 65-81.
- Dastane, O., & Fazlin, I.(2017). "Re-investigating key factors of customer satisfaction affecting customer retention for fast food industry". *International Journal of Management, Accounting and Economics*, Vol. 4, No. 4, pp. 379-400.
- Dastane, O., Goi, C. L., & Rabbanee, F.(2020). "A synthesis of constructs for modelling consumers' perception of value from mobile-commerce (M-VAL)". *Journal of Retailing and Consumer Services*, Vol. 55. doi:<10.1016/j.jretconser.2020.102074>.
- Devaraj, S., Fan, M., & Kohli, R.(2002). "Antecedents of B2C channel satisfaction and preference: validating e-commerce metrics". *Information Systems Research*, Vol. 13, No. 3, pp. 316-333.
- Dickinger, A., & Stangl, B.(2013). "Website performance and behavioral consequences: A formative measurement approach". *Journal of Business Research*, Vol. 66, No. 6, pp. 771-777.
- Donni, R., Dastane, D. O., Haba, H. F., & Selvaraj, K.(2018). "Consumer perception factors for fashion M-commerce and its impact on loyalty among working adults". *Business and Economic Research*, Vol. 8, No. 2, pp. 168-192.
- Flavian, C., Guinaliu, M., & Gurrea, R.(2006). "The role played by perceived usability, satisfaction and consumer trust on website loyalty". *Information & Management*, Vol. 43, No. 1, pp. 1-14.
- Gunden, N., Morosan, C., & DeFranco, A.(2020). "Consumers' intentions to use online food delivery systems in the USA". *International journal of contemporary hospitality management*, Vol. 32, No. 3, pp. 1325-1345. doi:<10.1108/IJCHM-06-2019-0595>.
- 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 Analytical Reviews*, Vol. 6, No. 1, pp. 889-893.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM). Los Angeles: SAGE Publications.
- Hong, C., Choi, H. H., Choi, E.-K. C., & Joung, H.-W. D.(2021). "Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic". *Journal of Hospitality Tourism Management*, Vol. 48, pp. 509-518. doi:<10.1016/j.jhtm.2021.08.012>.

- Hsiao, K. L., Chuan-Chuan Lin, J., Wang, X. Y., Lu, H. P., & Yu, H. (2010). "Antecedents and consequences of trust in online product recommendations: An empirical study in social shopping". *Online Information Review*, Vol. 34, No. 6, pp. 935-953. doi:<10.1108/14684521011099414>.
- Imarcgroup.(2020). "Vietnam Online Food Delivery Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2021-2026.". Available:<a href="https://www.imarcgroup.com/vietnam-online-food-delivery-market">https://www.imarcgroup.com/vietnam-online-food-delivery-market</a>.
- Jallow, H., & Dastane, O.(2016). "Effect of sales promotion schemes on purchase quantity: A study of Malaysian consumers". *Management & Marketing*, Vol. 14, No. 2, pp. 299-320.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). "A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents". *Decision Support Systems*, Vol. 44, No. 2, pp. 544-564. doi:<10.1016/j.dss.2007.07.001>.
- Kim, H., & Niehm, L.(2009). "The Impact of Website Quality on Information Quality, Value, and Loyalty Intentions in Apparel Retailing". *Journal of Interactive Marketing J INTERACT MARK*, Vol. 23, pp. 221-233. doi:<10.1016/j.intmar.2009.04.009>.
- Lau, T., & David, N.(2019). "Online Food Delivery Services: Making Food Delivery the New Normal". Research Gate.
- Liao, Z., & Cheung, M. T.(2002). "Internet-Based e-Banking and Consumer Attitudes: An Empirical Study". *Information & Management*, Vol. 39, No. 4, pp. 283-295. doi:<10.1016/S0378-7206(01)00097-0>.
- Liébana-Cabanillas, F., Muñoz-Leiva, F., Sánchez-Fernández, J., & Viedma-del Jesús, M. I.(2016). "The moderating effect of user experience on satisfaction with electronic banking: empirical evidence from the Spanish case". *Information Systems e-Business Management*, Vol. 14, pp. 141-165. doi:<10.1007/s10257-015-0277-4>.
- Liu, Y., Li, H., & Hu, F.(2013). "Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions". *Decision Support Systems*, Vol. 55, No. 3, pp. 829-837.
- Maimaiti, M., Zhao, X., Jia, M., Ru, Y., & Zhu, S.(2018). "How we eat determines what we become: opportunities and challenges brought by food delivery industry in a changing world in China". *European journal of clinical nutrition*, Vol. 72, No. 9, pp. 1282-1286.
- Martín-Consuegra Navarro, D., Molina Collado, A., & Esteban, Á.(2007). "An integrated model of price, satisfaction and loyalty: An empirical analysis in the service sector". *Journal of Product & Brand Management*, Vol. 16, pp. 459-468. doi:<10.1108/10610420710834913>.
- Mukherjee, A., & Nath, P.(2007). "Role of electronic trust in online retailing". *European Journal of Marketing*, Vol. 41, No. 9/10, pp. 1173-1202. doi:<10.1108/03090560710773390>.
- Park, C.-H., & Kim, Y.-G.(2003). "Identifying key factors affecting consumer purchase behavior in an online shopping context". *International Journal of Retail & Distribution Management*, Vol. 31, pp. 16-29. doi:<10.1108/09590550310457818>.
- Poon, W.(2007). "Users' adoption of e-banking services: the Malaysian perspective". *Journal of Business & Industrial Marketing*, Vol. 23, No. 1, pp. 59-69.
- Ray, A., Dhir, A., Bala, P. K., & Kaur, P.(2019). "Why do people use food delivery apps (FDA)? A uses and gratification theory perspective". *Journal of Retailing and Consumer Services*, Vol. 51, pp. 221-230. doi:<10.1016/j.jretconser.2019.05.025>.
- Rita, P., Oliveira, T., & Farisa, A.(2019). "The impact of e-service quality and customer satisfaction on customer behavior in online shopping". *Heliyon*, Vol. 5, No. 10. doi:<10.1016/j.heliyon.2019.e02690>.
- Roh, M., & Park, K.(2019). "Adoption of O2O food delivery services in South Korea: The moderating role of moral obligation in meal preparation". *International Journal of Information Management*, Vol. 47, pp. 262-273.

- Rothenberger, S. (2015). Fairness through transparency: The influence of price transparency on consumer perceptions of price fairness.
- Statista.(2021). "Revenue of the online food delivery market in Vietnam from 2018 to 2027. ". Available: <a href="https://www.statista.com/forecasts/1230463/revenue-online-food-delivery-vietnam">https://www.statista.com/forecasts/1230463/revenue-online-food-delivery-vietnam</a>.
- Suryadev, R. S., & Mahik, C.(2018). "Consumer's Perception on Online Food Ordering". *International journal of Management and Business Studies*, Vol. 8, No. 4, pp. 6-9.
- Susanti, C. E. (2019). "The effect of service quality and perceived price fairness on consumer loyalty through consumer satisfaction on budget hotel in East Java". The Effect of Service Quality and Perceived Price Fairness on Consumer Loyalty through Consumer Satisfaction on Budget Hotel in East Java, Vol. 12, No. 6, pp. 1-7.
- Szwarc, P. (2005). Researching customer satisfaction & loyalty: How to find out what people really think: Kogan Page.
- Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics. 6th ed.* New York: Pearson Education.
- Troise, C., O'Driscoll, A., Tani, M., & Prisco, A.(2021). "Online food delivery services and behavioural intention—a test of an integrated TAM and TPB framework". *British Food Journal*, Vol. 123, No. 2, pp. 664-683.
- Utami, W., & Yuliawati, Y.(2020). "Social, Personal and Psychological Factors Which Influence The Decision To Purchase Coffee Drinks In Agrilan: Jurnal Agribisnis Kepulauan". Vol. 8, No. 2.
- Xu, J., Benbasat, I., & Cenfetelli, R. T.(2013). "Integrating service quality with system and information quality: An empirical test in the e-service context". MIS quarterly, pp. 777-794.
- Yeh, Y. S., & Li, Y. M.(2009). "Building trust in m-commerce: contributions from quality and satisfaction". *Online Information Review*, Vol. 33, No. 6, pp. 1066-1086. doi:<10.1108/14684520911011016>.
- Zulkarnain, K., Ahasanul, H., & Selim, A.(2015). "Key success factors of online food ordering services: An empirical study". *Malaysian institute of Management*, Vol. 50, No. 2, pp. 19-36.