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Determinants of Continuance Usage Intention and Customer Service: Evidence from Food Delivery Application Users in the Philippines

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Abstract

The COVID-19 pandemic has drastically affected people's economic and social activities due to the extended quarantine, which resulted in limited mobility within and across communities and borders. Businesses must reinvent their activities using online ordering systems and other means to generate business, continue, and survive. Given this information, the research aims to investigate the level of influences of information quality, performance expectancy, effort expectancy, social influence, hedonic motivation, facilitating conditions, price value, and habit toward the continuance intention and satisfaction of customers in using food delivery applications during the COVID-19 pandemic, using a regression model. It also tested the mediating effects of effort and performance expectancies on the relationship between information quality and continuance intention. The data was collected from 172 users of mobile food applications using an online survey instrument. This study used multiple and simple linear regression estimations and mediation analysis to analyze the data. The results reveal that performance expectancy, social influence, price value, and habit significantly and positively influence users' continuance usage intention of FDA.

On the other hand, performance, effort expectancies, and price value are significant predictors of customer satisfaction. The partial mediation effects of effort expectancy and performance expectancy on the relationship between information quality and continuance intention were evident. It can be deduced that when customers or users are satisfied with the mobile food platform service, they intend to reuse it. This information obtained during the COVID-19 pandemic may serve as a reference to researchers and marketing analysts who want to conduct future studies in this area.

Keywords: Continuance Usage Intention, Customer satisfaction, Food Delivery Applications, Performance Expectancy

Introduction

The economic and social landscape was drastically affected by the COVID-19 pandemic worldwide, as countless lives have been taken, and most businesses were temporarily shut down or even forced into bankruptcy. This affected a huge portion of the workforce, who were forced to work part-time or were laid off. Among the issues that affect those who live in urban and suburban cities is the procurement of food and other necessities.

Before the pandemic, food ordering and delivery applications were introduced. Chung & Nam (2015, as cited in Song, Jeon & Jeon, 2017) mentioned that it serves as a venue for users to locate shops, choose food from websites, or pay for purchases. Users can conveniently choose different cuisines at affordable prices. The increasing growth of online food deliveries for necessities was recognized as an effective and cheaper marketing strategy among vendors (Lee, Sung, & Jeon, 2019) while increasing customers' behavior toward online shopping (Tribhuvan, 2020).

In another study, Prabowo & Nugroho (2019) mentioned that customers consider convenience, satisfaction, and efficiency in using in-app purchases. It also offers many benefits, such as price discounts on orders, cash giveaways, travel incentives, and a point reward system. The need for these services has increased during the pandemic because of the convenience it provides while helping local restaurants maintain or increase their sales, despite operating at 50 percent seating capacity.

Against this backdrop, this study investigates the determinants of customer satisfaction and continuance intention in using food delivery applications during the pandemic.

Objectives of the Study

The study seeks to examine the effects of these factors on continuance behavior. Specifically, it seeks to answer the following specific objectives:

1. To examine the level of effect of information quality, performance expectancy, and effort expectancy on the continuance usage intention of food delivery applications during the pandemic.

2. To examine the level of effect of performance expectancy, effort expectancy, social influence, and facilitating conditions on the continuance usage intention of food delivery applications during the pandemic.

3. To examine the level of effect of information quality, performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit on continuance usage intention of food delivery applications during the pandemic.

4. To examine the effect of customer satisfaction on the continuance usage intention of food delivery applications during the pandemic.

5. To examine the influence of information quality, performance expectancy, effort expectancy, social influence, facilitating conditions, and price value on customer satisfaction in using food delivery apps during the pandemic.

6. To examine the mediating effects of performance and effort expectancies on the influence of information quality on the continuance usage intention of food delivery apps.

This study will provide an impetus among business owners in undertaking creative activities to shift business paradigms in culinary and hospitality management and allow for a better way to manage the ordering system that can facilitate the management of their time and efforts related to food and hospitality management.

Literature Review

Information Quality

Information Quality (IQ) refers to the level of accuracy and consistency of the information provided by a firm related to its direction and the product and service offerings. Limited studies were found on the influence of information quality on either customer satisfaction or continuance intention.   Prasetyo et al. (2021) mentioned that users consider the basic features embedded in the OFD application and will demand complete and updated information before its use. IQ was also found to have a significant direct influence on the intention to use and eventually resulted in satisfaction and loyalty among users of these applications (Y. Lee et al., 2020).

Lee, Tsai, and Ruangkanjanases (2020) found using e-appointment in Taiwan's public health services helpful. This was also confirmed in the study of Song et al. (2017), where informativeness, using its reliability and a good application's information configuration, was a significant factor in the reuse intention and customer satisfaction among app users in Daejeon,

Korea. The same findings were also evident in the study by Tam, Santos, and Oliveira (2020). Lee et al. (2019) utilized reliability, usefulness, timeliness, and understandability as indicators of information quality, where a positive but weak influence on the customer's reuse intention was evident. Kang & Namkung (2019) revealed that it has a significant and positive influence on performance and effort expectancies, measured in terms of contextual, intrinsic, representational, and accessibility quality.

Performance Expectancy

Muangmee, Kot, Meekaewkunchorn, Kassakorn, and Khalid (2017) showed that performance expectancy significantly and positively influences the consumer's continued intention to use FDAs, as shown in an increase in the confidence level of consumers in using food delivery applications. Nam & An (2021) revealed that it is the second most influential determinant of customer satisfaction and the highest significance level with continuance intention among Vietnamese millennials. Lee et al. (2019) found its significant indirect contribution to the effect of information quality on their intention to reuse the FDA.

Cho et al. (2019, as cited in Higuera, 2021) and Roh and Park (2018) added that food delivery applications give consumers the comfort they need when ordering their meals. Tomacruz & Flor (2018, as cited in Ramos, 2021) concluded that ride-hailing food services address the issue of vehicle congestion. Jafari et al. (2017) found that perceived usefulness (performance expectancy) significantly influenced the satisfaction and continuance behavior on food and vegetable consumption among older people in Iran. These findings were also evident in the study conducted by Hossain, Hossain & Jahan (2018), where the significant and positive influence of perceived usefulness on perceived ease of use on customer satisfaction in using mobile payment applications in Bangladesh was evident. Among the users of food ordering

applications, Masrurin, Adi & Shaferi (2021) found it an influential indicator of customer satisfaction. On the other hand, Ray et al. (2019) did not find significant findings related to the user's experience towards their continuous intention.

Effort Expectancy

As defined by Muangmee et al. (2021), effort expectancy refers to the convenience of the consumer's experience when using mobile food delivery applications. Nam & An (2021) revealed its positive effects on continuance intention and customer satisfaction. It serves the overall needs of the consumers and explains why it is one of the critical bearers of consumers' continuance intention, satisfaction, and use intention on food delivery applications. Higuera (2021) revealed that effort expectancy significantly predicts continuance usage intention during the COVID-19 pandemic. This was also validated in the study by Ling & Chyong Ho (2021), who found it to be a powerful driver of customer satisfaction.

Roh & Park (2018) added that users who have less familiarity with the app find it more satisfying to use, thus, increasing their continuous intention metric. Thus, food merchants must develop a user-friendly system (Cho et al., 2019, as cited in Higuera, 2021). Ray et al. (2019) argued that FDA companies should employ a directory of dine-ins within the circumference of the consumers. However, his findings did not significantly influence the consumer's reuse intention, as they would perceive these systems as needing clarification. This was also evident in the study conducted by Indrawati & Putri (2018) among Go-pay application users.

Social Influence

The relationships of social influence on continuance intention and customer satisfaction to use FDAs were examined by Palau-Saumell, Forgas-Coll, Sanchez-Garcia, & Robres (2019),

Roh & Park (2019), Zhao and Bacao (2020) while Zhou and Li (2014), among others, found its influence among other forms of cellular device's automation.

Alalwan (2020) revealed the impact of social influence on Jordanian customers' continuous intention to use the FDA. Individuals are most likely to use their social origins to attain more insightful education when using a more advanced level of technology. Khalilzadeh, Ozturk, & Bilgihan (2017), and Verkijika (2018, as cited in Alalwan, 2020) also discovered how it could predict the continuous intention to use mobile applications in paying bills or transferring money. Okumus et al. (2018) also found a positive and significant effect on the intention of US consumers to use mobile applications as an instrument to monitor their diet.

Facilitating Conditions

Wang, Li, Li, & Wang (2014) defined facilitating conditions as the characteristics that involve the mutual decisions of people as one. Maillet, Mathieu & Sicotte (2015, as cited in Alalwan, 2020) documented the strong relationship between facilitating conditions and customer satisfaction and a mild affirmation rate on continuance intention on health informatics applications. Fuksa (2013), in his investigation of Latvian mobile internet users, found its positive and significant effect on FDA usage and mentioned that the user's knowledge about its users and their actual experiences contributed to their usage intention. Palau-Saumell et al. (2019) emphasized that when facilitating conditions are high, users tend to have higher usage intention. Although, it was found to be the least driver for both intentions to use and actual usage of mobile-based applications.

Alalwan (2020) noted that the timeliness of customer service representatives is valuable for attaining customer satisfaction in online food-to-go service. He found that facilitating conditions positively affected the consumer's continuance intention in using FDAs among

Jordanian; however, it did not influence their reuse intention, as its usage is based on one's experience and actual usage. Nam & An (2021) and Okumus et al. (2018) found its indirect and weak influence on continuous usage intention. While Nam & An's study (2021) did not provide a similar concrete relationship with the other antecedents, it stood as the third influential variable towards customer satisfaction. This is also similar to the findings of Teck Ling & Chyong Ho (2021), which showed its weak effect on both satisfaction and continuance intention to use the app. Its effect on satisfaction is higher than the latter, being also one of the top influencers of satisfaction derived from their experience using the app.

Hedonic Motivation

Yeo et al. (2017) described hedonic motivation (HM) as the emotional arousal derived from the entire shopping experience influences. Brown & Venkatesh (2005, as cited in Hooi, Leong, & Yee, 2021) and Yeo et al. (2017) described hedonic motivation as the level of pleasure and happiness the consumer derives when using the delivery application. It can also determine a user's willingness to adapt to new technology. They concluded that hedonic motivation influences users' intention to buy food using mobile ordering and delivery applications. This was also affirmed by Hariadi & Rahayu (2022) among 150 Indonesian users who enjoy the advancements in the ordering system in the culinary business.

Chen, Liang, Liao & Kuo (2020) found its strong influence on usage intention for online searches consistent with online use of the system applications. Nejati (2013) revealed that utilitarian motivation significantly and positively influences customer satisfaction and usage intention among fast-food diners in Iran. This was affirmed by Akel & Armağan (2021) for the positive effect of HM on the continuance usage intentions among public schools in Turkey and

by Teck Ling & Chyong Ho (2021) in their examination of the determinants of customer satisfaction and continuance intention among FDA users in Ho Chi Minh.

Habit

Palau-Saumell et al. (2019) and Lee et al. (2019) investigated the positive and significant association of habit with continuance intention to use FDAs, while Morosan & DeFranco (2016, as cited in Nam & An, 2021), Amoroso & Lim (2017), and Rana et al. (2017) confirmed its sheer relevance to continuance intention and its critical role on online businesses and cellular applications. As Nam & An (2021) concluded, habit stood as the third most affirmative indicator of the user's continuance intention. People spend long hours using their phones to keep abreast with new economic trends. Once the habit of using new technology is developed, their conception regarding this updated technology adjusts (Amoroso & Lim, 2017).

Venkatesh et al. (2016) discovered the correlation between habit and intention to use and habit and actual use. Its positive and significant influence on the behavioral intention of the user was confirmed by Lee et al. (2019) and Alalwan (2020), while Hariadi & Rahayu (2022) showed a negative effect on continuance usage in Indonesia.

Price Value

Yeo et al. (2017) defined it as price savings derived by the consumers in their perception of the application's usefulness after usage and the convenience motivation derived from it. Venkatesh et al. (2016, as cited in Chotigo and Kadono, 2021) showed that price value positively affects customer satisfaction during the COVID-19 pandemic. This was also confirmed among users of the food delivery application in Vietnam, where price saving was found to be one of the most influential determinants of customer satisfaction and continuance intention.

Price and promotion are significant determinants of customer satisfaction among online FDA users (Prasetyo et al. (2021). Yeo et al. (2017) revealed an indirect effect on attitude when it was used as a mediating variable for post-usage usefulness. The savings or the discount that the customers could derive from using the application can be a crucial factor. The study of Hariadi & Rahayu (2022) also corroborates this adverse effect as costs are irrelevant among application users as long as they are comfortable buying online and delivering it.

Customer Satisfaction

In the study of Nam & An (2021), the variables PE, EE, SI, FC, and HM are classified as the second most powerful indicators of customer satisfaction among millennials in Ho Chi Min. The impact of satisfaction as the most responsive variable in food delivery applications has been verified in various research (Alalwan, 2020; Hossain et al., 2018; Masrurin et al., 2021; and Zhao & Bacao (2020). Masrurin et al. (2021) mentioned that a customer's e-satisfaction leads to their use of the food ordering app due to the services provided.

Indrawati & Putri (2018) utilized eight (8) psychological indicators that influence the Go-Pay application among Indian customers and found that habits, social influence, hedonic motivation, trust and performance expectancy, and price savings orientation have positive and significant effects. The effect of customer satisfaction on continuance intention to use Go-pay was also positive and significant. Similarly, Alalwan (2020) investigated online food ordering systems in Jordan using two stages of the structural equation model and found the same results for performance expectancy, hedonic motivation, and habits. When these psychological variables were examined on their impact on customer satisfaction, it showed that the three variables, together with facilitating conditions, were positive and significant. They also used online review,

tracking, and online rating to influence customer satisfaction and continuance intention and found positive and significant effects.

Al Amin et al. (2020) pointed out that when customers' expectations about FDA usage are met, they form this e-satisfaction about the services, will have a positive perception of the technology use and will make repeated purchases for their order/delivery needs. Song et al. (2017) consider customer satisfaction a very important determinant of continuance intention, as satisfaction leads to repurchase or reuse intention and fewer complaints to be received by the vendor. Akel & Armağan (2021) found a moderate influence of satisfaction on continuance usage intention and a significant mediating effect between the relationship of hedonic motivation and continuance usage intention. This is also evident in the study of Chen & Chung (2019) for both the direct and mediating effect of satisfaction between hedonic motivation and usage intention behavior among Taiwanese mobile payment users.

Framework of the Study

Theoretical Framework

The Unified Theory of Acceptance and use of Technology (UTAUT) incorporates four main constructs: performance expectancy, effort expectancy, facilitating condition, and social influence on users' behavioral usage intention or continuance intention (Baishya & Samalia, 2020) to use mobile applications. It was derived from the Technology Acceptance Model (TAM), where performance and effort expectancies were used as drivers in explaining the adoption of new technology.

The modified theory, also called UTAUT2, was introduced by Venkatesh et al. (2016) and included additional constructs related to the psychological and cognitive determinants, such as hedonic motivation, price value, and habit. They are also crucial in the technology's

acceptance, use, and continued usage intention. Information quality, as an additional factor, was highlighted in the study of Kim and Park (2013, as cited in Lee et al., 2019) because this is considered a primary communication capacity between users and providers of services and goods in an online environment in building trust in this activity. Likewise, Wang et al. (2021) considered customer satisfaction in using technology as an influential factor in the continuance usage intention.

Conceptual Framework

Figure 1

Conceptual Paradigm
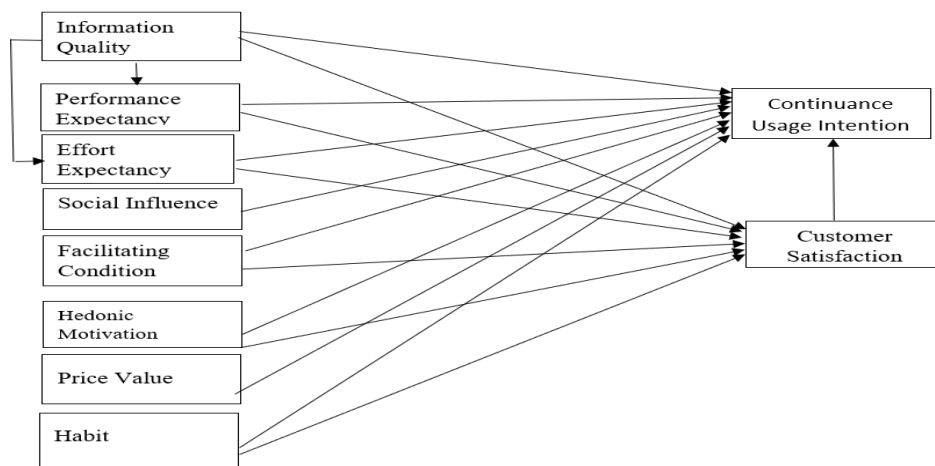
This study initially uses the four exogenous indicators used in UTAUT mentioned above and will also adopt performance expectancy, effort expectancy, facilitating condition, and social influence**.** These are the variables used in the study, as shown in the conceptual paradigm below. Moreover, the mediating effect on the performance and effort expectancies between the association of information quality and behavioral intention, which in this study is continuous

intention. The two mediating variables indicated in the study came from the study, which are perceived ease of use and perceived usefulness.

The study was adopted from the study undertaken by Lee et al. (2019) and Venkatesh et al. (2016) and incorporates customer satisfaction in the investigation. As mentioned in Chapter 1, the study measures the effects of the four (4) technological acceptance models (performance expectancy, effort expectancy, social influence, and facilitating condition), the psychological and cognitive constructs (habit, monetary value, and hedonic value), and information quality. Moreover, it also examines the mediating effect of performance expectancy and effort expectancy on the relationship between information quality and behavioral intention, which is used as continuance intention. Additional investigations were undertaken on the effect of information quality, 4 UTAUT variables, and Price value on customer satisfaction and the effect of customer satisfaction on the continued usage intention of the FDA.

Hypotheses

The following hypotheses will be tested:

H1: Information quality, performance expectancy, and effort expectancy significantly influence the continuance usage intention of food delivery applications.

H2: Performance expectancy, effort expectancy, social influence, and facilitating conditions significantly influence the continuance usage intention of food delivery applications.

H3: Information quality, performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit significantly influence the continuance usage intention of food delivery applications during the pandemic.

H4: Customer satisfaction significantly influences the continuance usage intention of food delivery applications during the pandemic.

H5: Information quality, performance expectancy, effort expectancy, social influence,

facilitating conditions, and price value significantly influence customer satisfaction in

using food delivery apps.

H6: The influence of information quality on the continuance usage intention of food delivery

apps is mediated by performance and effort expectancies.

Research Methodology

Research Design

Descriptive and causal-explanatory research designs were utilized to examine the

influence of information quality and psychological factors on customer satisfaction and

continuance usage intention of the food delivery applications (FDAs). Cooper (2014) explained

that this would explain the reason for which the phenomenon that the descriptive study only

observed. This research design is used as several hypotheses were tested to examine how the

independent variables' movement results in the dependent variables' movement. It also measures

the mediating variables' effects on the relationship between the dependent and independent

variables using multiple linear regression models. A descriptive research design is also used, as it

will provide a picture of the occurrence of an activity or behavior to support the study's findings.

This is supported by the findings from previous research that was undertaken.

Method of Data Collection

The study used convenience sampling, given the current situation during the pandemic.

The researcher chose online food shoppers working or residing in the Philippines. The survey

method was used as a primary method using Google Forms to distribute and collect respondents'

data. The questionnaire was developed using a five-point Likert Scale.

A total of 180 questionnaires were distributed. Only 172 were used, as some of the respondents discontinued answering the survey or the answers needed to be completed. The respondents are users of the FDA to ensure they are knowledgeable and qualified to answer the questions or items included in the instrument. Most data or information came from primary sources to answer the problem statements raised in Chapter 1.

Instrumentation

A survey questionnaire was utilized using the different constructs used by Lee et al., 2019 and Nam & An (2021), and Baishya & Samalia (2020). Eight psychological indicators were used to measure their effects on customer satisfaction and continuance usage intention of mobile FDA's. The questionnaire is subdivided into two, namely, the personal profile of the respondents and the respondents' responses related to the constructs' influence on the dependent variables. For the second part of the survey question, a five-point Likert scale was used as follows:

Rating	Verbal Interpretation
5	Strongly Agree
4	Agree
3	Neutral
2	Disagree
1	Strongly Disagree

Each of the constructs has a subset of questions or topics. The scoring was based on the answers to the 5-point Likert Scale that was used to measure the agreement or disagreement of each statement provided, and scoring was made by getting the average. The answers for the

group of items per construct were averaged and processed using Jamovi Software. Individual

responses were interpreted and analyzed as a whole.

Method of Data Analysis

Statistical Tools Utilized

Multiple and simple linear regression model was used to run the data and establish the

influence of the independent variables on dependent variables. Eight predictor variables, namely,

information quality, performance expectancy, effort expectancy, social influence, hedonic

motivation, facilitating condition, price value, and habits, were tested on their influence on

continuance intention, and six variables were used on their effect on customer satisfaction.

Mediation analysis was also applied to address some of the problems raised in Chapter 1

to examine if effort and performance expectancies mediate the influence of information quality

and continuance usage intention of the FDA.

Reliability Test

Table 1

Reliability Statistics of the Independent and Dependent Variables -Cronbach's Alpha Comparison

Constructs	Abbreviation	Mean	sd	No. of Items	Cronbach's α		
					Lee et al. (2019).	Pretesting	Sample
Information Quality	IQ	3.98	0.699	6	0.831	0.917	0.903

Construct		Mean					
Performance Expectancy	PE	4.27	0.74	4	0.85	0.916	0.891
Effort Expectancy	EE	4.36	0.737	4	0..905	0.915	0.896
Social Influence	SI	3.51	0.866	3	0.902	0.937	0.904
Facilitating Condition	FC	4.32	0.781	2	0.691	0.918	0.899
Hedonic Motivation	HM	3.72	0.872	3	0.916	0.916	0.895
Price Value	PV	3.5	0.899	2	0.874	0.924	0.898
Habit	HA	2.93	0.986	4	0.889	0.917	0.910
Continuance Intention	CI	3.71	0.837	4	0.916	0.911	0.892
Customer Satisfaction	CS	4.15	0.702	3		0.923	0.896

The scale reliability test was conducted, and it generated an overall Cronbach's α of 0.908. In comparison with the results of the Cronbach's Alpha of the constructs used in the study vis-à-vis Lee et al. (2019) study and the pretested data sample of 30, the results for the Cronbach's alpha of the ten study constructs used in the study exhibited values that are greater than 0.7. This shows internal consistency between the constructs and reveals that each has high component reliability, with performance expectancy having the lowest Cronbach's value of 0.891

and habit having the highest Cronbach's Alpha of 0.910. It was also able to generate scale

reliability.

Results and Discussions

Descriptive Statistics

The data was processed using JAMOVI software to analyze and present the data. Table 2

on the next page shows the summary statistics of the constructs used in the study. The mean

scores were derived from the 5-point Likert Scale on the questions raised related to the use of

online food delivery applications.

Table 2

Descriptive Statistics of the Independent and Dependent Variables

Constructs	N	Mean	SE	95% CI Lower	95% CI Upper	SD	Skewness Skewness	Skewness SE	Kurtosis Kurtosis	Kurtosis SE
IQ	172	3.98	0.0533	3.87	4.08	0.699	-0.880	0.185	1.9761	0.368
PE	172	4.27	0.0564	4.16	4.38	0.74	-1.826	0.185	5.4395	0.368
EE	172	4.36	0.0562	4.25	4.47	0.737	-2.060	0.185	6.294	0.368
SI	172	3.51	0.066	3.38	3.64	0.866	-0.607	0.185	0.3322	0.368

FC	172	4.32	0.0596	4.2	4.44	0.781	-1.792	0.185	5.029	0.368
HM	172	3.72	0.0665	3.58	3.85	0.872	-0.533	0.185	0.6792	0.368
PV	172	3.5	0.0686	3.36	3.63	0.899	-0.211	0.185	-0.0672	0.368
HA	172	2.93	0.0752	2.78	3.08	0.986	0.095	0.185	-0.6591	0.368
CI	172	3.71	0.0639	3.58	3.83	0.837	-0.529	0.185	0.7096	0.368
CS	172	4.15	0.0535	4.04	4.25	0.702	-1.256	0.185	3.7613	0.368

It shows that effort expectancy, facilitating conditions, performance expectancy, and customer satisfaction had the highest mean ratings of 4.36, 4.32, 4.27, and 4.15, respectively. The highest standard deviation (98.6%) was apparent in the habit (HA), with a mean score of 2.93, and price value, with a standard deviation of 89.9% and a mean score of 3.5. Among the dependent variables, CI got a 3.71 mean score compared to CS, with a mean score of 4.15.

Regression Results and Analyses

Three models were used on the impact of the groups of independent variables on continuance usage intention to address problem statements nos. 1 to 3. The results on the level of the effect of information quality, performance expectancy, and effort expectancy on the continuance usage intention of FDAs can be found in Table

Table 3

Model 1 on Regression Coefficient on Continuance Usage Intention of FDA

Hypothesis	Predictor	Estimate	SE	t	Result
	Intercept	0.217	0.321	0.677	
H1a	IQ	0.008	0.082	0.095	Not Supported
H1b	PE	0.684*	0.095	7.195	Supported
H1c	EE	0.123	0.093	1.324	Not Supported
R	0.69		F	50.9	
R²	0.476		p	< .001	
Adjusted R² 0.467					

In evaluating the effects of information quality, performance expectancy, and effort expectancy on the continuance usage intention of Filipino users of the food delivery applications, only performance expectancy (*B=0.684; p= < .001)* exhibited the most significant influence. All predictor variables positively influenced the FDA users' continuance usage intention during the pandemic.   This is consistent with the findings of   Jafari et al. (2017) and Muangmee et al. (2021), where direct effects of the three independent variables on continuance intention were evident.

As contrasted with the findings of Lee et al. (2019), only performance expectation was influential. Table 3 shows an R-square value, meaning that IQ, PE, and EE explain 47.6% of the variability in continuance usage intention. The findings on effort expectancy are consistent with

Ray et al. (2019) and Indrawati & Putri (2018) among Go-pay application users, where no significant yet positive effect on CI was evident.

Table 4

Model 2- Regression Coefficient on the Effect of UTAUT Variables on Continuous Usage Intention

Hypothesis	Predictor	Estimate	SE	t	Result
	Intercept	-0.009	0.297	-0.029	
H2a	PE	0.587***	0.095	6.186	Supported
H2b	EE	0.06	0.105	0.572	Not Supported
H2c	SI	0.221***	0.059	3.751	Supported
H2d	FC	0.04	0.095	0.422	Not Supported
R	0.648		F	26.6	
R²	0.42		p	< .001	
Adjusted R²	0.404				

Notes: ***, ** denote statistical significance at the 0.01 and 0.05 levels, respectively.

To address problem statement 2, Table 4 shows the model fit measures of the multiple regression results of the UTAUT variables on Continuance Intention with an obtained R-value of 0.648. An adjusted R-squared value of 0.404 was generated, which explains that 40.4 percent of the changes in continuance usage intention can be attributed to performance expectancy, effort expectancy, social influence, and facilitation conditions. The results indicate that performance expectancy and social influence positively and significantly influence the continuance usage

intention of the FDA in the Philippines; thus, H2a and H2c are supported. The result for social influence corroborates the findings of Alalwan (2020) and Okumus et al. (2018). The attitudes of FDA users are sometimes psychologically modified and shaped by their peers and family members' opinions.

All of the UTAUT variables showed positive influence, with performance expectancy having a beta coefficient of 0.587 and facilitating condition expectancy having the lowest beta of 0.043. Similar to Hypothesis 1, performance expectancy stood out to be the most influential factor in the continued usage intention of FDAs in the Philippines.

Table 5

Model 3 on Multiple Linear Regression for Continuance Intention to use OFDAs

Hypothesis	Predictor	Estimate	SE	t	Conclusion
	Intercept	-0.0452	0.2681	-0.169	
H3a	IQ	-0.0974	0.0703	-1.384	Not Supported
H3b	PE	0.3916***	0.0883	4.437	Supported
H3c	EE	0.0935	0.0913	1.023	Not Supported
H3d	SI	0.0867	0.0559	1.55	Not Supported
H3e	FC	0.0861	0.0817	1.054	Not Supported
H3f	HM	-0.0259	0.065	-0.398	Not Supported
H3g	PV	0.1662***	0.0588	2.828	Supported
H2h	HA	0.3067***	0.0478	6.421	Supported

R	0.812	F	39.6
R²	0.66	p	ako n
Adjusted R²	0.643		

Notes: ***, ** denote statistical significance at the 0.01 and 0.05 levels, respectively.

The R-squared value shows that any changes in CI can be ascribed to the change in the predictors. As can be gleaned in Table 5, the model fit measures of the linear regression for CI about its determinants revealed that the model could generate an R-squared value of 0.420 and an adjusted R-square of 0.404. This means that changes in CI were prompted by IQ, PE, PV, and H, and the overall test showed a p-value < 0.001; thus, the multiple regression results are statistically valid.

The multiple regression results for the seven independent variables used in the UTAUT2 model and information quality vis-a-vis CI are shown in Table 5. It indicates that performance expectancy, *p*rice value*,* and habit directly and significantly influence the FDA users' Continuance Intention (CI) to use the app, given that their p-values were less than 0.01. The results for performance expectancy and habit are supported by the study of Lee et al. (2019) and Indrawati & Putri (2018), which found a significant and positive influence on CI. While our results showed that price value positively and significantly affects continuous intention, both studies found it to be an insignificant indicator of CI.

Unlike the study of Lee et al. (2019), Table 5 also revealed the negative influence of information quality on continuance intention, which supports the findings of Hariadi & Rahayu (2022). The hedonic motivation (HM) findings are also consistent with Lee et al. (2019). This means that FDA users will continue using the app as they might find the use of this technology as part of their activities but do not find added value to its use.

It is quite surprising that the effect of IQ on CI is negative, as contrasted to the positive test result generated for Hypothesis 1a. This means that the respondents will continue using the app despite the issues related to the features, configuration, and reliability of the information found in the food application.   While effort expectancy and facilitating conditions have insignificant influence on Filipino users' continuance usage intention, their effects are positive. The other four independent variables (IQ, EE, FC, and HM) acquired p-value scores of more than 0.10, which implies that the H2a, H2C to H2F are rejected.

As shown in Table 5, the computed R-squared of the regression is 0.660 or 66%. It indicates that the eight independent variables explain 66% of the change in CI. With a value of computed F-statistics probability of 39.6, the result implies that all the independent variables influence the continuance usage intention.

Table 6

Regression Results on the Effect of Customer Satisfaction on Continuous Usage Intention

Hypothesis	Predictor	Estimate	SE	t	Result
	Intercept	0.445	0.289	1.54	
H4	CS	0.786***	0.0688	11.43	Not Supported
R	0.659		F	131	
R²	0.435		p	< .001	
Adjusted R²	0.431				

Notes: ***, ** denote statistical significance at the 0.01 and 0.05 levels, respectively.

The result presented in Table 6 states that customer satisfaction (β=0.786; p= <0.001***) is a significant predictor of continuance intention, which is consistent with the findings of Lee et al. (2019) and Tam et al. (2020). Hypothesis 4 is supported and validates that when customers are satisfied using the app, they will continue using it because of the pleasant experience they encountered.

The R-squared value shows that any changes in CI can be ascribed to the change in CS. The model fit measures of the linear regression for CI about CS generated an R of 0.659 and an adjusted R-square of 0.431. This means that CS prompted the 43.1% change in CI, and the overall test for the p-value <.001 only indicates that the linear regression results are statistically valid. This supports the study of Indrawati & Putri (2018) and Song et al. (2017), where a positive and significant influence of satisfaction on continuance usage intention is evident.

Table 7

Multiple Linear Regression for Customer Satisfaction to use OFDAs.

Hypothesis	Predictors	Estimate	SE	t	Conclusion
	Intercept	0.7644	0.2445	3.127	
H5a	IQ	-0.0169	0.0635	-0.266	Not Supported
H5b	PE	0.3891***	0.0798	4.875	Supported
H5c	EE	0.2301***	0.083	2.772	Supported
H5d	SI	0.0209	0.0483	0.432	Not Supported
H5e	FC	0.0655	0.0745	0.879	Not Supported

H5f	PV	0.1229**	0.0505	2.434	Supported
R	0.766		F	39.2	
R²	0.587		p	< .001	
Adjusted R²	0.572				

Notes: ***, ** denote statistical significance at the 0.01 and 0.05 levels, respectively.

The multiple regression estimation was again used to evaluate the impact of the six predictor variables on customer satisfaction. The results in Table 7 on the preceding page revealed that performance expectancy (β=0.3891; p=<.001), effort expectancy (β=0.2301; p=.006), and price value (β=0.1229; p=0.016) significantly influence customer satisfaction; thus, H5b, H5c, and H5f are supported. Except for information quality, which negatively influences customer satisfaction, all other variables' effects are positive.

Table 7 reveals that the regression result is significant since the p-value is < .001. The coefficient of determination, as shown in its R-squared value, is .587, while the adjusted R-Squared value of .572 means that 57.2% of the changes in Customer Satisfaction can be ascribed from the changes in the six predictors.

Mediation Analysis

To answer Hypothesis 6 and understand the relationship between IQ and CI, the mediation test was applied to determine how performance expectancy and effort expectancy mediate between the two.

Table 8

Mediation Estimates of Performance Expectancy and Effort Expectancy on Information Quality influence on Continuance Intention.

Effect	Label	Estimate	SE	Z	p	% Mediation
Performance Expectancy						
Indirect	a × b	0.4456	0.1017	4.381	< .001	93.48
Direct	c	0.0311	0.0924	0.337	0.736	6.52
Total	c + a × b	0.4767	0.1179	4.043	< .001	100
Effort Expectancy						
Indirect	a × b	0.289	0.0798	3.63	< .001	60.7
Direct	c	0.187	0.0938	2	0.046	39.3
Total	c + a × b	0.477	0.116	4.11	< .001	100

As shown in Table 8, the direct effect of IQ on CI was examined, and it shows that it is positive. The mediation effect of performance expectancy was examined and revealed that the mediation estimates of the indirect effect [IQ to PE x PE to IQ] (β= 0.4456; p =<.001) differs significantly from zero. This only proves that a partial mediation exists between the relationship between Information Quality and Continuance Usage Intention of Filipino users of the FDA. As contrasted to the effect of IQ on CI, its direct effect was higher compared with (β=0.924; p=<.736). This also confirms H6a, which only indicates that Performance Expectancy partially mediates the influence of IQ on CI.

On the other hand, the findings on the mediating effect of Effort Expectancy (EE) on the relationship between IQ and CI are also evident, as shown in the table above. This only reveals that there is also a partial indirect effect of Effort Expectancy where the latter mediates the relationship between IQ and CI (β= 0.289; p =<.001). Thus, Information Quality is a significant predictor of Continuance Usage Intention of the food delivery app when effort expectancy is included in the mediation model.

Conclusions

The study seeks to utilize the Unified Theory of Acceptance and Use of Technology (UTAUT) and UTAUT2 2 by examining the influence of information quality, effort expectancy, performance expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit together with their dependent variables, namely, continuance intention and customer satisfaction using three models. The three models used to measure groups of independent variables on the continuance intention of users to use food delivery applications show that performance expectancy stood out as a very influential factor. While social influence was a significant predictor of continuance intention, the addition of other psychological factors in Model 3 proved SI insignificant; hence, price value and habit exhibited an equal significant positive effect on CI. These antecedents are the highly responsive indicators of people's reuse behavior, especially during the pandemic. The usability of the application (performance expectancy), price value, and habit can explain the changes in how users would consider reusing food delivery applications. This can be ascribed to the convenience and comfort they derive from using it.

From the perspective of gaining satisfaction from using the FDA, performance, effort expectancies, and price value proved to be very influential factors. While they find the food

delivery application easy to use and very useful, especially during the pandemic, the savings they derive from its use proved to be a plus factor for them to find satisfaction and eventually reuse the application. Users who are pleased with the value-added incentives may constantly reuse this delivery channel. Given these findings, business owners of these establishments that offer these services must become very creative in enticing users for continuous patronage by offering discounts, reinventing or updating their websites, and other information that can be provided.

The influence of IQ on CI, as mediated by EE and PE, is enhanced and reinforces the continuance usage intention of the customers in using the FDA. While the results revealed partial mediation, the information attached to the applications, their reliability, and other features enhanced by the application's usefulness and ease of use which encourages users to reuse, must be considered. Customers or users of the applications usually regard these features as creating satisfaction and enhancing continued use of the OFDAs. Their good experiences enhance their engagement in using it. It only exhibits that the proliferation of online food delivery applications has facilitated changing how people socialize and live during the pandemic. Thus, online food delivery applications will continue to prosper even after the pandemic, given the sophistication of how customers transact businesses or undertake their daily activities. Owners of restaurants, food businesses, and other caterers/suppliers must be able to repackage their products and services to make them more appealing to online users as their requirements shift from their continuance usage intention to their actual use. Given that food delivery applications are becoming a global trend or phenomenon in this digital world, companies and small businesses should be very technology savvy and implement effective marketing strategies that are sustainable and responsive to customer needs.

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