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Developing and Validating the Measurement Model for Technology Acceptance Factors of Online Food Delivery Applications (OFDA) Usage Constructs in Sarawak Using Confirmatory Factor Analysis (CFA)

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Abstract

The purpose of this study is to develop and validate the instruments for measuring the technology acceptance factors of Online Food Delivery Applications (OFDA) usage constructs. In this study, the selection of respondents was based on the coverage areas of online food delivery services by Food Panda and Grab Food in Sarawak. Therefore, this study focused on online food delivery applications users aged above 18 years old and focusing on those who has experience using the online food delivery applications in Sarawak. Therefore users experience usage in this study defined as those who had used online food delivery applications at least between less than a year and more than 3 years. Data were collected based on convenience sampling methods by using a self-administered online questionnaire. Of the 411 returned questionnaires, 400 questionnaires were valid for Confirmatory Factor Analysis (CFA) via IBMSPSS-AMOS version 24. The findings showed that the technology acceptance factors of Online Food Delivery Applications (OFDA) usage constructs measurement model fulfilled the requirements for construct validity and reliability, suggesting that it can be used in future research.

Keywords: Technology Acceptance Factors, Behavioural Intention to Use, Usage, Online Food Delivery Applications, Exploratory Factor Analysis, Confirmatory Factor Analysis (CFA)

Introduction

Online food delivery applications (OFDA) are a type of web-based service that is mostly accessible through mobile devices. These applications offer services that allow customers to order meals to be delivered to their homes (Ray et al., 2019). Customers now have access to a broader variety of options and enjoy a higher level of convenience as a result of the proliferation of online food delivery services. Customers can use these services to place orders

with a variety of eateries using their mobile devices. Customers who are accustomed to making purchases online or through mobile apps are increasingly anticipating having a similar experience when they place orders for food and beverages (Shankar et al., 2022). The apps used for online food delivery manage a variety of tasks, such as order payment, tracking, and monitoring (Gupta & Duggal, 2021). According to the findings of some researchers, factors such as a high demand for workers and the prevalence of one-person households have all played a role in the growing of the OFDA market (Saad, 2021).

As more people have access to the internet and the rapid penetration of smartphones has led to the growth of OFDA which let customers order food online and have it delivered (Cho et al., 2019; Zhao & Bacao, 2020). Cho et al (2019), argues that OFDA is an innovative way that allows consumers to purchase a wide range of food selection via platform(s). OFDA platforms collect orders from consumer and pass on the information to restaurants and delivery personnel (Troise et al., 2021). This opens up new opportunity for restaurants to reach new market while increasing their revenues and consumers the convenience of having food delivered to their home. In addition, because of the increase in economics activity created by technology companies that fulfil consumer demand via the immediate delivery of goods and services, OFDA have become very popular and rapidly increasing market, and the size of the global market reached around US$100 billion in 2019 and the revenue is expected to increase to US$164.5 billion by the year 2024 (Muangmee et al., 2021). Further, the global online food-delivery sector is anticipated to grow to US$223.7 billion by 2027, with a 11.44% of compound annual growth rate (CAGR) (Statista, 2022).

Therefore, it is important to study the factors affecting the intention to use this technology in the food segment (Alalwan, 2020a; Tandon et al., 2021). Hence, The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model was adopted as a theoretical base that comprehensively captured the components of technology acceptance factors (Tamilmani et al., 2021). However, even though The Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) model have been assessed and clarified to some extent in several previous studies between technology acceptance factors and consumers' behavioural intention to use OFDA (see Gârdan et al., 2021; Alalwan, 2020a; Jasim, Kasim, & Mahmoud, 2022; Muangmee, Kot, Meekaewkunchorn, Kassakorn, & Khalid, 2021; Puriwat & Tripopsakul, 2021;Ramos, 2022; Zanetta et al., 2021; Zhao & Bacao, 2020) and became one of the widely used models for information, communication, and technologies acceptance which has much higher predictive ability, which explaining about 74 per cent of the variance in consumers' behavioural intention and 52 per cent of the variance in consumers' technology usage of focal technology (Venkatesh et al., 2016). Therefore this study sought to examine the factors between users' of behavioural intention to use and their usage of OFDA in the Sarawak context. This is because relatively few studies have investigated the usage of OFDA in the aforesaid context. Current studies seem to ignore some of the crucial factors that can assist with giving a precise and comprehension of Online Food Delivery Applications (OFDA) Usage Constructs in the aforesaid context.

Hence, The Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) model provides a theoretical base to broaden the scope by introducing components that capture the uniqueness of Online Food Delivery Applications (OFDA), however the extended version of UTAUT 2 model was adopted due to its beneficial for explaining why individuals continue to

use the apps service (see Jasim et al., 2022). Yet, it was determined that the original UTAUT 2 model needed some expansion in the form of additional components in order to adequately represent the behaviours of customers who purchase food from an OFDA context. This was done in order to ensure that the model could accurately predict future outcomes (Tamilmani et al., 2021). Since the majority of studies have specified new modifications to UTAUT 2 model while ignoring the potential extensions with novel contributions, it has been emphasized that it is required to emphasis on a novel contribution via new conceptualisations of technology acceptance and use and/or of new phenomena. This is because this model has been the topic of a significant number of investigations, and yet, the bulk of these studies have neglected the possibility that UTAUT 2 model could be extended with unique contributions (Venkatesh et al., 2016). An in-depth review of the related literature shows that Unified Theory of Acceptance and Use of Technology (UTAUT) model , UTAUT 2 model, Theory of Planned Behaviour, and Technology Acceptance Model have been the commonly used theories in online food delivery research (Shankar et al., 2022). The primary focus of these theories is to investigate how consumers are influenced by a wide variety of socio-psychological and contextual factors to adopt OFDA. However, it appears that the existing online food delivery literature has, for the most part, ignored a number of constructs that can potentially be used in future research. Based on a synthesis of the existing research on online meal delivery, customers' reactions to online food delivery services are influenced by several factors, including the benefits and the costs of using these services. Customers benefit from convenience (Shah et al., 2021), discounts and special promotions (Wang & Scrimgeour, 2022), ease of use (Hong et al., 2021), and perceived usefulness (Troise et al., 2021) from online food delivery platforms, which have elicited positive feedback from customers regarding their online food delivery services.

There are suggestions for consumers to be sceptical about using online food delivery services due to the numerous risks linked with online food delivery platforms. However, it has not studied how the trade-off between benefits and costs affects consumers' reactions to platforms (Cai & Leung, 2020; Hwang & Choe, 2019). Shroff, Shah, and Gajjar (2022) and Shankar et al. (2022) conducted a literature study on online food delivery and discovered that customers had unfavourable perceptions of the risk and level of trust associated with using online food delivery services, which, in turn, made them less likely to the apps. Consumers were also found to have a tendency to accept a new technology if they believed that it would provide them with a greater number of benefits than the costs it would entail (Hwang & Kim, 2019; Jebarajakirthy et al., 2021; Shankar et al., 2022).

In addition, because people use online apps to place their orders, they are susceptible to the numerous threats associated with online food delivery applications (Hwang et al., 2019; Hwang & Choe, 2019; Hwang & Kim, 2019). Findings indicate that consumers' perceptions of the risk involved are the main impediments that hamper the widespread adoption and utilisation of online food delivery services (Cai & Leung, 2020; Hwang & Choe, 2019). Concerns about consumers' privacy are sparked when they are required to disclose sensitive information such as their names and bank account numbers on the platforms that facilitate online food delivery applications services (Islam et al., 2019; Kumar et al., 2021; Shankar & Jain, 2021).

Moreover, it is essential to investigate the role of risk in influencing how customers react to the food delivery services offered online. Moreover, an unintended consequence of online food delivery platforms is the information failure between platforms and restaurants which can reduces service efficiency, as the orders are received by platforms and fulfilled by the restaurants without any integration (Dai et al., 2020). Thus, automated food delivery is an outcome of the coordination between platforms, food delivery drivers, and restaurants (Richardson, 2020). Therefore, in order to study the association between users' behavioural intention to use and OFDA usage, this study integrated the trust and risk variables with technology usage. Hence, with regard to this investigation, the potential for assessing the actual usage would be an important development for future research, which have not been considered despite their ability to contribute to an improved knowledge of the OFDA context.

Therefore, this paper intends to develop and validate the instruments for measuring technology acceptance factors of Online Food Delivery Applications (OFDA) usage constructs in aforesaid context. This study adapted the instruments form the previous study and modified to suit the present study. On top of that, the researchers had added a few more items to measure the construct. All items were measured using the ten-point interval scale using 1 for strongly disagree and 10 as strongly agree with the given statement. The interval-scale was employed to meet the assumption of parametric statistical analysis. The study has gone through Pretest, pilot test, and field study. In the pre-test, content validity, face validity, and criterion validity have been obtained from the relevant expert. In the Pilot Study stage, the study obtained pilot study data and employed the Exploratory Factor Analysis procedure, and in the field study stage, the study obtained data from the field. The data from the field was used to validate the constructs for validity (construct validity, convergent validity, and discriminant validity) and composite reliability.

Literature Review

Performance Expectancy

Performance expectancy is the anticipation of a user, in which a person feels that by utilising a system, they would be able to improve their task or professional performance. This may be thought of as an individual's belief that they will be able to get better results as a result of using the system. Therefore, people are more willing to use new technology if they believe it will increase their performance at work. This is because people tend to be more optimistic about their own abilities (Venkatesh et al., 2003, 2012). According to Ramos (2022), on the intention towards food delivery apps could be predicted by the elements of performance expectancy, believed that users perceived as an increased benefit, such as saving the time and effort needed to prepare meals. Therefore in this study, performance expectancy can be defined as the degree to which a user's in Sarawak believes that using OFDA contributes to better performance.

Effort Expectancy

A system's ease of use can be defined as having a specific effort expected in relation to the degree of simplicity associated to the operation of the system. This can also be thought of as having a given level of simplicity. Customers may have the impression that there are some challenges associated with the utilization of the technology when they first begin various tasks (Venkatesh et al., 2003). Therefore, the structure of an online food delivery application and its capacity to effectively execute the online food orders placed by customers

are the most critical factors in determining whether or not a consumer would make a purchase from that particular online food delivery application (Gunden et al., 2020a, 2020b; Saad, 2021). Therefore, a user's intention to utilise the OFDA could be influenced by their view of how easy and uncomplicated it is to use those services on their mobile device. Therefore in this study, effort expectancy can be defined as the degree to which a user's in Sarawak thinks an OFDA is user-friendly.

Social Influence

Social influence refers to the extent to which an individual considers the perspectives of other people to be essential in modifying their behaviour towards using a new system (Venkatesh et al., 2003). Individual's decision to use particular technology may also be influenced by the views of other people such as family members, friends, and co-workers, and this phenomenon is a reflection of social influence. Jasim et al (2022), indicated that effect of social influence on the customers' behavioural intention have an important relationship on the consumers' intentions. According to what was discussed, user's ability to motivate themselves may improve if they are surrounded by a certain degree of support from individuals in their personal and professional lives, such as family members, friends, and co-workers. Therefore in this study, indicates how strongly a user's in Sarawak feels that they should use OFDA based on the opinions of the people who matter to them, such as their family, friends, and co-workers.

Facilitating Condition

The extent of use and the level of customer satisfaction with the technology applications are largely determined by the amount of readily available technical infrastructure and human support (Venkatesh et al., 2003). Zanetta et al (2021), revealed the influence of facilitating conditions on continuance intention was significantly stronger in the context of OFDA in Brazil due to sufficient information technology infrastructure provided for technology support. This situation will encourage consumers to use the technology. Therefore, when establishing the facilitating conditions, elements like the availability of money and time, as well as knowledge and resources for using OFDA, could have an impact on one's decision to continue using it. Therefore in this study, the extent to which a user's in Sarawak is willingly to accept that the relevant stakeholder that would provide technical assistance, such as internet connection and knowledge, for the OFDA usage.

Price Value

Price value defined as the cognitive exchange between the perceived benefits of an application and the monetary cost of using it (Venkatesh et al., 2016). When users believe that the value they receive from using an OFDA is greater than the cost of using it, the price value has a positive influence on their intention to use the OFDA to purchase food and beverages. As previous research has suggested that the use of applications for online food delivery does not incur any kind of financial cost, as there is no additional fee that must be paid for the installation of a free OFDA (Alalwan, 2020b; Shaw & Sergueeva, 2019). However, customers can obtain significant monetary savings through loyalty programmes or discounts, availability of comparative prices, and simplicity of choosing (Koiri et al., 2019; Tomacruz & Flor, 2018; Jain, Verma, & Jaggi, 2020; Saad, 2021). Therefore in this study, can be defined as the level to which users in Sarawak feel that use of OFDA will result in cost reductions.

Hedonic Motivation

Hedonic motivation can be stated as playfulness, enjoyment, fun, and pleasure resulting from using new products, services, and applications (Venkatesh et al., 2012). For instance, applications such as mobile food ordering apps (MFOAs) are regarded as being cutting-edge and innovative, which may give customers a sense of satisfaction and pleasure when utilising the innovative new software (Okumus, Ali, Bilgihan, & Ozturk, 2018b; Yeo, Goh, & Rezaei, 2017b). Therefore, hedonic motivation might had a positive effect on how users saw the convenience and usefulness of OFDA. For example, how customers felt about how much fun they were having affected their desire to use mobile online food delivery apps (Yeo et al., 2021). Therefore in this study, can be defined as the extent to which a user's in Sarawak feels fun or feels motivated about using OFDA.

Habit

Limayem, Hirt, and Cheung (2007), defined habit as an individual's propensity to act without a conscious thought as a result of the individual's accumulated learning experience. People are becoming more dependent on their smartphones and have developed a pattern of behaviour regarding the use of the mobile applications that are associated with them. The formation of habitual behaviour as a result of learning experience, could have an impact on users' attitudes and beliefs, which, in turn, predict their continued intention to behave in the same manner as they did in the past. In addition, the effect of habit on intention is might dependent on awareness with OFDA. This means that intention develops as an individual becomes more aware of OFDA (Zanetta et al., 2021). Therefore in this study, it is the extent of repeated previous experiences which are linked to the level of interactions and which develop familiarity in using OFDA.

Trust

In the context of online commerce, trust was defined as the subjective probability that customers expect a web merchant to carry out a specific transaction in accordance with their confident expectations (Pavlou, 2002). It would appear that the suitability of technology in terms of its fit, perceived trust, and operational period should be examined in order to improve the overall success of online food delivery apps. This is particularly important in light of the fact that these applications are becoming increasingly popular (Muangmee et al., 2021; Wen et al., 2022). Therefore in this study, it is the extent of previous repeated experiences which are linked to trust when using OFDA.

Risk

A person's risk perception can be defined as their comprehension and judgement of the potential unfavourable consequences that could be the result of technology usage (Dowling & Staelin, 1994). Hwang and Choe (2019), establish that perceived risk had a positive influence on the intention to use and the willingness to pay more in the context of drone delivery service. The most important contribution of the study is pertaining to the suggestion to foodservice companies providing this apps services on how to reduce the perceived risk of their services. Hwang and Choe (2019), establish that perceived risk had a positive influence on the intention to use and the willingness to pay more in the context of drone delivery service. Therefore in this study, how well a user's in Sarawak knows and thinks about the positive things that might happen if they use OFDA.

Behavioural Intention to Use and Usage

Behavioural intention evaluates a user's likelihood to perform a future action (Venkatesh et al., 2003, 2016). It can also be referred to as a person's propensity to use technology or to maintain current level of technology use in the perspective of different factors or determinants that may impact technology use (Tang et al., 2022). Other study uses customers' stated intentions to predict their usage patterns (Alassafi, 2022). In other word, acceptance begins when a person first encounters a new technology. This is because acceptance is a process that builds on familiarity. In later stages, the significance of other choice variables will become more apparent. Therefore in this study, referring as to examine the users in Sarawak maintain current level of OFDA usage in the perspective of different factors or determinants that may impact technology use. The interest in use will increase as each belief uses OFDA in their food and beverages purchases.

Methodology

In this study, the conceptual domains of the constructs were mainly adopted from UTAUT 2 model (Venkatesh et al., 2012), consisting of the constructs of performance expectancy, effort expectancy, social influence, facilitating condition, price value, hedonic motivation, habit, intention to use, and usage, along with two additional constructs comprising trust and risk. All the constructs were adapted with relation to Sarawak's usage of online food delivery applications. After creating a pool of relevant constructs and items from the literature review, a total of 11 constructs (performance expectancy, effort expectancy, social influence, facilitating condition, price value, hedonic motivation, habit, trust, risk, intention to use, and usage) and 48 items were selected.

Table 1
Summary of Items to Measure Each Construct

Construct	No. of items	Source
Performance expectancy	6	(Gunden et al., 2020a; Palau-Saumell et al., 2019; Venkatesh et al., 2003, 2012).
Effort expectancy	6	(Palau-Saumell et al., 2019; Venkatesh et al., 2003, 2012).
Social influence	4	
Facilitating condition	5	
Hedonic motivation	3	(Palau-Saumell et al., 2019; Venkatesh et al., 2012)
Price value	3	(Venkatesh et al., 2012) (Palau et al. 2019) (Lee et al., 2019)
Habit	4	(Gunden et al., 2020a; Limayem et al., 2007; Palau-Saumell et al., 2019; Venkatesh et al., 2012)
Behavioural intention to use	4	(Venkatesh et al., 2003) (Gunden et al., 2020a) (Palau-Saumell et al., 2019)
Usage	4	(Venkatesh et al., 2003)
Trust	5	(Hamid et al., 2022)
Risk	4	(Yen, 2022)

The validation methods need to accomplish with the assistance of a representative sample, displaying an appropriate level of reliability and validity. If no existing survey is available, or none that is considered to be adequate, it is appropriate to design a new questionnaire. In the event there is a questionnaire, but it is only available in a different language, the questionnaire needs to be translated and the translated questionnaire needs to be validated (Tsang et al., 2017). As suggested by Brislin (1970), using only one forward translator is the minimum requirement for forward translation. Therefore, the initial translation (forward translation) of the instrument from English to Bahasa Melayu (BM) or Malay was carried out by two translators who were native Malay speakers and who had been identified as competent users of the English language. The translators were selected based on their academic and professional qualifications.

Then, a comparison between the two versions of the translated questionnaire was carried out to produce a common version of the Malay questionnaire. The comparison was carried out by a linguistic expert in the Malay language from the Faculty of Language and Communication University Malaysia Sarawak (UNIMAS) who was selected due to her proficiency in English and Malay languages. After that, another qualified translator translated the questionnaire from Malay to English. The Malay version of the questionnaire was translated back into English by one translator who was not part of the initial translation team. The back translator was also selected based on academic and professional qualifications. The back translator did not see the original instrument to ensure that that she was not influenced by it. Then, a comparison of the back translated questionnaire to the original questionnaire was carried out to identify areas where the meaning was unclear or slightly incorrect. The comparison was carried out by a freelance linguistic expert in the English language who was selected due to her proficiency in English and Malay languages.

For the selection of the expert reviews, it is important to select individuals who are knowledgeable in the subject matter, either because of their academic background, work experience, or recognition in the community, and with respect to experience, it is recommended that at least two of the judges be measurement and evaluation experts (Fernández-Gómez et al., 2020). In this study, five experts were selected based on published criteria while considering a procedure that ensures the assertiveness of their assessments. The criteria were based on the experts' experience in issuing judgements and decision-making, their academic and scientific reputation, their willingness and motivation to collaborate, their objectivity and compliance with what has been established. As well as their ability to perform the question classification techniques required to validate the content.

During the expert panel review meeting, members evaluated the instrument and provided suggestions and revisions, with the researcher acting as a facilitator. The panel compared the original items in English and the back-translated version to validate the accuracy of the translation in the Malay version. This was to ensure that there were no mistranslations, missing texts, and other translation errors. Each panel member was given a checklist. The instruments were rewritten in response to the comments and suggestions made by the experts. Based on the expert committee review process, several items needed refining to the wording to avoid misunderstanding during the actual study.

After that, this study employed declared pre-testing, in which the respondents were informed before completing the questionnaire that they would be asked to complete more than just the questions. Declared pre-test and undeclared pre-test are two types of pre-tests that can be used for a survey questionnaire (Babonea & Voicu, 2011). As a result of increasing awareness of the disadvantages of conventional pre-testing, which entails performing a small-scale survey in which the interviewer discovers questionnaire-related issues, the experts who advocated conventional pre-testing agreed that getting a set of 12 to 25 questionnaires completed is sufficient for detecting questionnaire errors (Babonea & Voicu, 2011). For this study, 12 respondents were selected for pre-testing. Cognitive interviews were also held as part of the pre-testing process. When selecting the sample for a cognitive interview, it is important to consider the diversity of the participants (Buschle et al., 2022). Therefore, the respondents were chosen based on their ethnicity to assess their comprehension of the questionnaires in English and Malay.

The cognitive interviews were conducted via face to face and the questionnaire was distributed via Google Form, a survey administration software. Before the questionnaire was distributed, this approach was followed to discover and eliminate any misunderstandings or inaccurate assumptions regarding the questionnaire. This pre-testing was designed to find out how the intended respondents might interpret the questions they were asked. The sessions were held separately for each respondent depending on the day and time that was agreed upon by the respondent. A link to an identical survey was shared with each respondent at some point throughout their session. When answering the questionnaire, the respondents were asked to take note of any possible input they had. The interviews focused on explaining what they should think about, such as the spelling, language, and rationale behind the statements and instructions in the questionnaire.

Next, 100 respondents were selected from i-CATS University College in Kuching, Sarawak for the pilot study. The pilot study was conducted by posting a Google Form questionnaire link using the WhatsApp application. The researcher believes that the pilot respondents have similar demographic characteristics in the online food delivery context and most importantly, have experienced ordering food and beverages through online food delivery. Questionnaires that were delivered to a total of 100 randomly selected respondents at i-CATS University College located in Kuching, Sarawak, were valid for analysis. Exploratory Factor Analysis (EFA) was performed on the collected data to determine and quantify the dimensionality of the items used to measure the constructs. Many researchers, including Awang (2010, 2012), Hoque et al. (2017, 2018), and Yahaya et al. (2018), have emphasised the importance of performing EFA for every construct in order to determine whether the items will create different dimensions from previous research. If items are adapted from different fields to a new field of study, the dimensionality of the items may shift as a result of this adaptation. Furthermore, differences in the cultural background and socioeconomic status of the population as well as the lapse in time (duration) between the current study and earlier studies may also play a role in altering the dimensionality. In other words, it was anticipated that the current study would result in the development of new facets, particularly given the fact that the current study was carried out in an unfamiliar setting (Awang, 2010, 2012; Hoque et al., 2018).

Based on the EFA results, The Kaiser-Meyer-Olkin (KMO) value for measuring the adequacy of sampling must exceed the required value of .6, and Bartletts' test of sphericity is significant if the *p*-value <.05 (Awang, SH., & Zainudin, 2018; Sobihah & Awang, 2020). Therefore based on the findings, the significance level of Bartlett's test of *p*-value <.05 and the KMO value is exceed the required value of .6 showed that the data was adequate for the data reduction procedure. The total variance explained is acceptable if it exceeds the minimum requirement of 60% (Awang, 2010, 2012; Hoque et al., 2017, 2018; Yahaya et al., 2018; Bahkia et al., 2019; Sobihah & Awang, 2020). Based on the findings, all components of each constructs were greater than 1.0 emerged from the eigenvalue computation, and the total variance explained measuring all constructs was exceeded the minimum requirement of 60%. As well as the relation and factor loading between the component and its associated items for all constructs were retained due to high factor loading (>0.6).

Next, Cronbach's alpha statistics were used in this study to measure the internal consistency reliability of the data. Cronbach's alpha is a statistical test that is used to measure the reliability of internal consistency (Bonett & Wright, 2015). A Cronbach's alpha value of .60 is considered to be average reliability, and a coefficient of .70 or above indicates that the instrument has better reliability (Awang, Hui, & Zainudin, 2018; Awang, 2015b). Table 2 presents the Cronbach's Alpha result of each dimensions.

Table 2
The Cronbach's Alpha Result of Each Dimensions

Construct	No. of Items	Cronbach's Alpha
Performance expectancy	6	.905
Effort expectancy	6	.936
Social influence	4	.888
Facilitating condition	5	.940
Price value	3	.787
Hedonic motivation	3	.943
Habit	4	.939
Trust	5	.909
Risk	5	.854
Behavioural intention to use	4	.962
Usage	4	.893

Results and Findings

Based on the result of CFA, unidimensionality is reached in which all measuring items that scored lower than the ideal value of 0.6 were deleted in accordance to the assertation made by (Zainudin Awang, 2015b). Table 3 demonstrates the summaries of CFA of latent variables involved in this study:

Table 3
Summaries of CFA of Latent Variables

Item	Coding	Loading	Status
Performance Expectancy			
The use of Online Food Delivery system is an efficient way to order my food.	PE1	Higher MI	Deleted
The use of Online Food Delivery system makes my life easier.	PE2	0.847	Proceed
The use of Online Food Delivery system gives me more chance to complete important tasks.	PE3	0.817	Proceed
The Online Food Delivery system helps me to complete my tasks quickly.	PE4	0.931	Proceed
The use of Online Food Delivery system increases my productivity.	PE5	0.754	Proceed
Overall, the use of Online Delivery System is a useful way to order food.	PE6	0.792	Proceed
Effort Expectancy			
It is easy for me to learn how to use the Online Food Delivery system.	EE1	0.971	Proceed
I found that it is easy to make the system do the things that I want done.	EE2	Higher MI (7.832)	Deleted
My interaction with the Online Food Delivery system is clear and easy to understand.	EE3	0.908	Proceed
I found the system to be flexible to interact with.	EE4	0.906	Proceed
It is easy for me to become skilled in using the Online Food Delivery system.	EE5	0.913	Proceed
I found the system easy to use.	EE6	0.923	Proceed
Social influence			
People who are important to me (e.g., family members, close friends, and colleagues) recommend I use food delivery apps.	SF1	0.795	Proceed
People who are important to me think food delivery apps are beneficial.	SF2	0.834	Proceed
People who are important to me think it is a good idea to use food delivery apps.	SF3	0.927	Proceed
People who are important to me support me to use food delivery apps.	SF4	0.87	Proceed
Facilitating condition			

I have the required resources to use the Online Food Delivery system.	FC1	0.76	Proceed
I have the required knowledge to use the Online Food Delivery system.	FC2	0.87	Proceed
The Online Food Delivery system is compatible with other technologies that I use.	FC3	0.89	Proceed
I can get help from other people when I face difficulties in using the Online Food Delivery system.	FC4	0.72	Proceed
Based on sources, opportunity, and required knowledge to use this system, it is easy and comfortable for me to use this system.	FC5	0.82	Proceed
Hedonic motivation			
Use of the Online Food Delivery system gives joy.	HM1	0.937	Proceed
Use of the Online Food Delivery system is fun.	HM2	0.933	Proceed
Use of the Online Food Delivery system is entertaining.	HM3	0.927	Proceed
Price value			
I can save money by using food delivery apps for purchasing foods by comparing the prices offered at different online stores.	PV1	0.913	Proceed
I like to search for cheap deals at different online stores when I purchase foods through food delivery apps.	PV2	0.826	Proceed
I believe online food delivery apps offer better value for my money.	PV3	0.847	Proceed
Habit			
Use of the Online Food Delivery system has already become my habit.	HA1	0.792	Proceed
I am addicted to the use of Online Food Delivery System.	HA2	0.879	Proceed
I must use the Online Food Delivery system.	HA3	0.858	Proceed
Use of the Online Food Delivery system has become customary for me.	HA4	0.863	Proceed
Trust			
The Online Food Delivery system that I use now fulfils its promises and commitments.	PT1	0.795	Proceed
The Online Food Delivery System that I use now can be depended on.	PT2	0.834	Proceed
The Online Food Delivery System that I use now cares about its customers.	PT3	0.927	Proceed
The Online Food Delivery System that I use now is capable of performing its job.	PT4	0.87	Proceed
The Online Food Delivery System that I use now can be trusted.	PT5	0.903	Proceed
Risk			

Use of the Online Food Delivery Applications will not cause my personal information to be stolen	PR1	Higher MI (36.369)	Deleted
There is no possibility that using online food delivery applications will below user expectations (foods and beverages ordered process)	PR2	0.963	Proceed
I am confident that the online food delivery applications will perform the functions that were described (foods and beverages ordered process)	PR3	Higher MI (32.654)	Deleted
There no chance that there will be something wrong with the online food delivery applications because it always work properly	PR4	0.918	Proceed
I believe no negative effects from using the Online Food Delivery Applications.	PR5	0.894	Proceed
Behavioural Intention to Use			
I intend to continue using the Online Food Delivery system in the future.	BI1	0.60	Proceed
I can feel that I will be using the Online Food Delivery system in the future.	BI2	0.95	Proceed
I plan to use the Online Food Delivery system in the future.	BI3	0.96	Proceed
I expect that my usage of the Online Food Delivery system will continue in the future.	BI4	0.96	Proceed
Usage			
I consider myself a regular user of the Online Food Delivery system.	UB1	0.975	Proceed
I prefer to use the Online Food Delivery system when it is available.	UB2	0.947	Proceed
Most of my food orders are made through the Online Food Delivery system.	UB3	0.963	Proceed
I tend to use the Online Food Delivery system at any time that it can be used.	UB4	0.906	Proceed

Once CFA has been successfully conducted, the next step is performing Structural Equation Modelling (SEM). CFA verifies the measurement model, and SEM visualises the path analysis of the relationships among the components (Dash & Paul, 2021). In this study, the SEM approach using the pool measurement model was employed as the analysis technique in order to determine the outcomes. The pool measurement model is a structural model that entails examining the connections between many exogenous and endogenous constructs that were generated based on the hypotheses (Awang, 2015b; Awang et al., 2018; Hair et al., 2014).

The initially model fitness indices indicated a poor fit and modification indices were observed to improve the overall fitness of the model. Modification indices have shown that some of the same error terms needs to be correlated and some new error terms covariances popped up. High value of MI (above 15) indicates there are redundant items in the model (Zainudin Awang, 2015b). Few values were above this cut-off value and thus by correlating the error terms in each iteration one by one, the model fitness estimates (x2/df=2.693,

IFI=0.923, TLI=0.915, CFI=0.923, RMSEA= 0.065) improved significantly and are mostly meeting the standards or are very close to them. If the majority of fit estimates meet the required threshold values, the model will be considered a good fit as it is very difficult to get a perfect fit estimates while analysing large sample size (Hair et al., 2010). Besides these estimates, all the factor loadings of the items are meeting and even exceeding the required standards.

Considering all of the above mentioned factors, the model fulfils the requirements to be called a good fit model for the sample data. Final measurement model of the study as presented in Figure 1 provides evidence that the model's construct validity was acceptable, as the fitness indices satisfied all three model-fit criteria (Awang, 2015; Awang et al., 2018). The fitness indexes which reflect the construct validity for the model are assessed in the following Table 4.

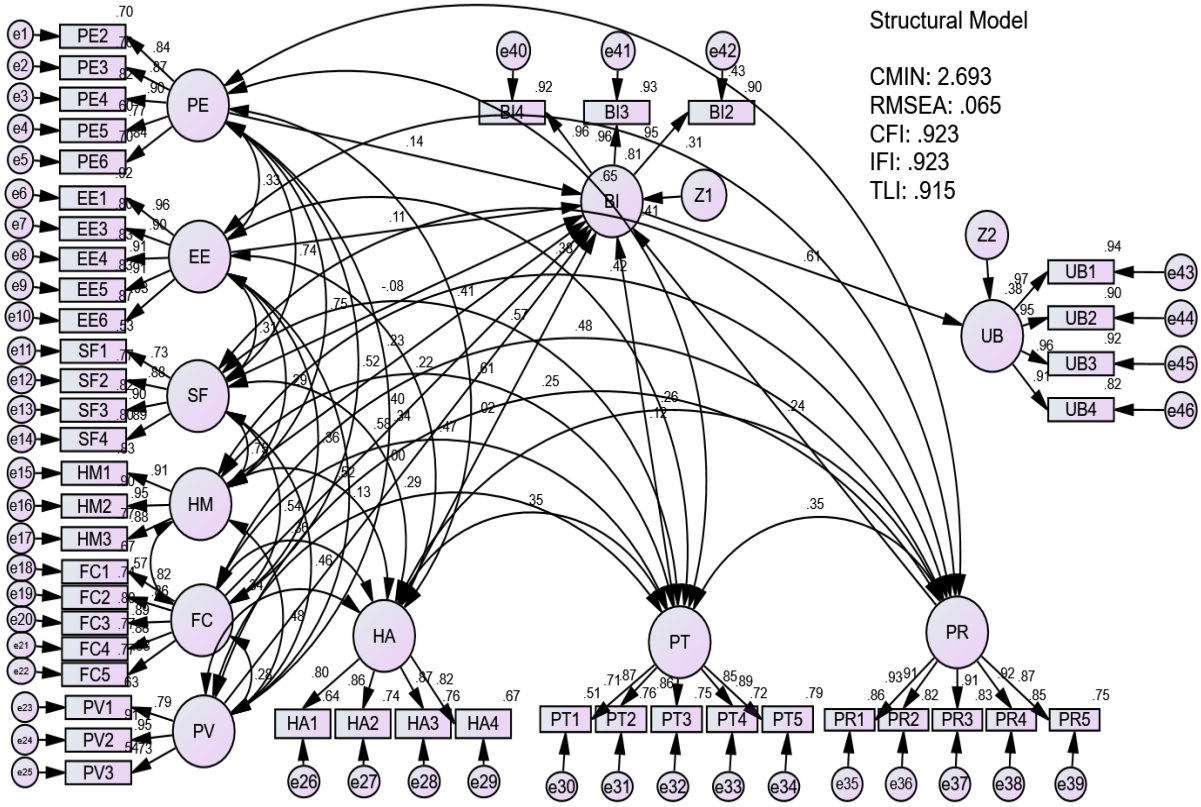

Figure 1. The Standardized Path Coefficients between Constructs in the Model

Table 4
Fit Indices for Measurement Model (Zainudin Awang, 2015b; Zainudin Awang et al., 2018)

Type	Index	Ideal Threshold Value	Measurement Model Indexed Value	Remarks
Absolute Fit Measures	Root Mean Square Error of Approximation (RMSEA)	< 1.0 still acceptable (the best value is < 0.08)	0.065	Achieved
Incremental Fit Measures	Comparative Fit Index (CFI)	>0.90	0.923	Achieved
	Tucker-Lewis Index (TLI)	>0.90	0.915	Achieved
	Incremental Fit Index (IFI)	> 0.90 or >0.85	0.923	Achieved
Parsimonious Fit Measures	Chi Square/Degree of Freedom (Chisq/df)	<3.0	2.693	Achieved

As shown in Table 5, the correlation value between two latent exogenous constructs in this model was less than .85 (Awang, 2015), indicating that the discriminant validity between exogenous constructs was reached. Thus, the model did not face any multicollinearity issue.

Table 5
Correlation Value between Exogenous Construct

Construct			Estimate
PE	<-->	EE	.334
EE	<-->	SF	.307
PE	<-->	SF	.742
SF	<-->	FC	.535
PE	<-->	FC	.516
FC	<-->	HM	.572
SF	<-->	HM	.753
EE	<-->	HM	.294
PE	<-->	HM	.751
HM	<-->	PV	.477
FC	<-->	PV	.283

SF	<-->	PV	.456
EE	<-->	PV	.128
PE	<-->	PV	.340
PV	<-->	HA	.340
PV	<-->	PT	.288
PV	<-->	PR	.254
PT	<-->	PR	.353
HA	<-->	PT	.345
PE	<-->	HA	.409
PE	<-->	PT	.646
PE	<-->	PR	.433
EE	<-->	HA	.222
EE	<-->	PT	.383
EE	<-->	PR	.310
SF	<-->	HA	.580
SF	<-->	PT	.569
SF	<-->	PR	.407
FC	<-->	HA	.357
FC	<-->	PT	.467
FC	<-->	PR	.478
HM	<-->	HA	.521
HA	<-->	PR	.264
HM	<-->	PT	.611
HM	<-->	PR	.416
EE	<-->	FC	.356
PE	<-->	BI	.680
BI	<-->	EE	.469
BI	<-->	SF	.617
BI	<-->	HM	.711
BI	<-->	FC	.775
BI	<-->	PV	.342
BI	<-->	HA	.407
PE	<-->	PT	.646
PE	<-->	PR	.433
EE	<-->	HA	.222
EE	<-->	PT	.383
EE	<-->	PR	.310
SF	<-->	HA	.580
SF	<-->	PT	.569
SF	<-->	PR	.407
FC	<-->	HA	.357
FC	<-->	PT	.467
FC	<-->	PR	.478
HM	<-->	HA	.521
HA	<-->	PR	.264
HM	<-->	PT	.611

HM	<-->	PR	.416
EE	<-->	FC	.356
PE	<-->	BI	.680
BI	<-->	EE	.469
BI	<-->	SF	.617
BI	<-->	HM	.711
BI	<-->	FC	.775
BI	<-->	PV	.342
BI	<-->	HA	.407
BI	<-->	PT	.624
BI	<-->	PR	.636
BI	<-->	UB	.606
UB	<-->	EE	.226
UB	<-->	SF	.457
UB	<-->	FC	.501
UB	<-->	PV	.289
UB	<-->	HA	.684
UB	<-->	PT	.403
UB	<-->	PR	.391
UB	<-->	HM	.557
PE	<-->	UB	.477

Next is R-squared shows the amount of variance explained by the exogenous variable. The findings showed that the R-squared of behavioural intention was .806 and usage was .375.

Table 6
R Square

Endogenous Variable	Estimate
BI	0.806
UB	0.375

At the initial stage, there were a total of 48 items for all constructs. However, some of the items were deleted because the items failed to achieve the minimum acceptable levels of Average Variance Extracted (AVE) and composite reliability. This study deleted the items with low outer loadings until the constructs attained the minimum adequate levels of AVE and composite reliability. According to Hair et al. (2014), if an item loaded less than .7, consider deletion only if the deletion leads to increased AVE or composite reliability. Table 6 shows the AVE and composite reliability for the constructs, together with the outer loading of each item in the constructs. Items EE2 and PR1 were deleted. After these items were deleted, this study performed a re-evaluation of the factor model. Table 6 shows that after the model re-evaluation, 46 items were retained. All the retained items had outer loadings greater than .4.

Table 7
Convergent Validity

Construct	Factor Loading	AVE	CR
Performance expectancy		0.69	0.92
PE2	0.85		
PE3	0.82		
PE4	0.93		
PE5	0.75		
PE6	0.79		
Effort expectancy		0.85	0.97
EE1	0.97		
EE2	**Deleted**		
EE3	0.91		
EE4	0.91		
EE5	0.91		
EE6	0.92		
Social influence		0.6963645	0.90
SF1	0.68		
SF2	0.87		
SF3	0.91		
SF4	0.91		
Facilitating condition		0.7323804	0.92
FC1	0.76		
FC2	0.87		
FC3	0.89		
FC4	0.72		
FC5	0.82		
Hedonic motivation		0.87	0.95
HM1	0.94		
HM2	0.93		
HM3	0.93		
Price value		0.91	0.97
PV1	0.91		
PV2	0.83		
PV3	0.85		
Habit		0.73	0.91
HA1	0.79		
HA2	0.88		
HA3	0.86		
HA4	0.86		
Trust		0.70	0.92
PT1	0.77		
PT2	0.84		
PT3	0.87		
PT4	0.86		
PT5	0.88		

Risk		0.57	0.85
PR1	**Deleted**		
PR2	0.672		
PR3	0.745		
PR4	0.854		
PR5	0.862		
Behavioural Intention To Use		0.77	0.93
BI1	0.6		
BI2	0.95		
BI3	0.961		
BI4	0.96		
Usage		0.92	0.98
UB1	0.975		
UB2	0.947		
UB3	0.963		
UB4	0.906		
FL:Factor Loading CR:Composite Realibility AVE: Average Variance Extracted			

Finally, Table 8 shows that the values were sufficient to satisfy the criteria for discriminant validity. Therefore, all the constructs met the discriminant validity requirement.

Table 8
Discriminant Validity

Construct	PE	EE	SF	FC	HM	PV	HA	PT	PR	BI	UB
PE	**0.83**										
EE	0.33	**0.92**									
SF	0.74	0.30	**0.83**								
FC	0.52	0.35	0.54	**0.86**							
HM	0.75	0.30	0.75	0.57	**0.93**						
PV	0.34	0.13	0.46	0.28	0.48	**0.96**					
HA	0.41	0.22	0.57	0.36	0.52	0.34	**0.85**				
PT	0.65	0.38	0.58	0.47	0.61	0.29	0.34	**0.84**			
PR	0.43	0.31	0.41	0.48	0.42	0.25	0.26	0.35	**0.76**		
BI	0.68	0.61	0.62	0.78	0.71	0.34	0.41	0.62	0.64	**0.88**	
UB	0.68	0.23	0.46	0.50	0.56	0.29	0.84	0.40	0.39	0.61	**0.96**

Conclusion

In this study, the requirements for content validity, face validity, and criterion validity for the instruments were fulfilled through pre-testing. The EFA process was carried out to assess the requirements for the KMO measure of sample adequacy, Bartlett's test for sphericity, and Cronbach's alpha for internal reliability, and all of the requirements for EFA were met. Through CFA, all of the necessary criteria for construct validity, convergent validity, and discriminant validity, as well as composite reliability and normality of item distribution, were satisfied. As a result, this study successfully established and validated the essential instruments for measuring technology acceptance factors of Online Food Delivery Applications (OFDA) usage constructs for practical use.

References

Gârdan, D., Epuran, G., Pas, C., Gârdan, I., Jiroveanu, D., Tecău, A., … Pop, R.-A. (2021). Enhancing Consumer Experience through Development of Implicit Attitudes Using Food Delivery Applications. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(7), 2858-2882

Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International Journal of Information Management*, *50*, 28–44.

Alassafi, M. O. (2022). E-learning intention material using TAM: A case study. *Materials Today: Proceedings*, *61*, 873–877.

Antipode, L. R.-, & 2020, undefined. (2020). Platforms, markets, and contingent calculation: The flexible arrangement of the delivered meal. Wiley Online Library, *52*(3), 619–636.

Zainuddin, A., Hui, L. S., & Zainudin, N. F. (2018). *Pendekatan Mudah SEM- Structural Equation Modelling*.

Zainudin, A. (2015a). *SEM Made Simple: A Gentle Approach to Learning Sructural Equation Modelling*. MPWS Rich Publication.

Zainudin, A. (2015b). *SEM made simple: A gentle approach to learning structural equation modeling*. MPWS Rich Publication, Bandar Baru Bangi.

Zainudin, A., S. H. L., & Zainudin, N. (2018). *Pendekatan Mudah SEM- Structural Equation Modelling*. Bandar Baru Bangi, MPWS Rich Resources.

Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, *36*(1), 3–15.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1*(3), 185–216.

Buschle, C., Reiter, H., & Bethmann, A. (2022). The qualitative pretest interview for questionnaire development: outline of programme and practice. *Quality and Quantity*, *56*(2), 823–842.

Cai, R., & Leung, X. Y. (2020). Mindset matters in purchasing online food deliveries during the pandemic: The application of construal level and regulatory focus theories. *International Journal of Hospitality Management*, *91*, 102677.

Cho, M., Bonn, M. A., & Li, J. (Justin). (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, *77*, 108–116.

Dai, H., Ge, L., & Liu, Y. (2020). Information Matters: an Empirical Study of the Efficiency of On-Demand Services. *Information Systems Frontiers*, *22*(4), 815–827.

Dowling, G. R., & Staelin, R. (1994). A Model of Perceived Risk and Intended Risk-Handling Activity. *Journal of Consumer Research*, *21*(1), 119.

Fernández-Gómez, E., Martín-Salvador, A., Luque-Vara, T., Sánchez-Ojeda, M. A., Navarro-Prado, S., & Enrique-Mirón, C. (2020). Content Validation through Expert Judgement of an Instrument on the Nutritional Knowledge, Beliefs, and Habits of Pregnant Women. *Nutrients*, *12*(4).

Statista. (n.d.). Global online food delivery market size 2027. [Online] Available at https://www.statista.com/statistics/1170631/online-food-delivery-market-size-worldwide/. [Assesed on March 21, 2023].

Gunden, N., Morosan, C., & DeFranco, A. (2020a). Consumers' intentions to use online food delivery systems in the USA. *International Journal of Contemporary Hospitality Management*, *32*(3), 1325–1345.

Gunden, N., Morosan, C., & DeFranco, A. L. (2020b). Consumers' persuasion in online food delivery systems. *Journal of Hospitality and Tourism Technology*, *11*(3), 495–509.

Gupta, V., & Duggal, S. (2021). How the consumer's attitude and behavioural intentions are influenced: A case of online food delivery applications in India. *International Journal of Culture, Tourism, and Hospitality Research*, *15*(1), 77–93.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (7th ed.). Essex: Pearson Education Limited.

Hamid, S., Azhar, M., & Sujood. (2022). Behavioral Intention To Order Food And Beverage Items Using E-Commerce During COVID-19: An Integration Of Theory Of Planned Behavior (TPB) With Trust. *British Food Journal*, *125*(1), 112-131.

Hong, C., Choi, H. (Hailey), Choi, E. K. (Cindy), & Joung, H. W. (David). (2021). Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic. *Journal of Hospitality and Tourism Management*, *48*, 509.

Hwang, J., & Choe, J. Y. (Jacey). (2019). Exploring perceived risk in building successful drone food delivery services. *International Journal of Contemporary Hospitality Management*, *31*(8), 3249–3269.

Hwang, J., & Kim, H. (2019). Consequences of a green image of drone food delivery services: The moderating role of gender and age. *Business Strategy and the Environment*, *28*(5), 872–884.

Hwang, J., Lee, J. S., & Kim, H. (2019). Perceived innovativeness of drone food delivery services and its impacts on attitude and behavioral intentions: The moderating role of gender and age. *International Journal of Hospitality Management*, *81*, 94–103.

Islam, H., Jebarajakirthy, C., & Shankar, A. (2019). An Experimental Based Investigation into the Effects of Website Interactivity on Customer Behaviour In On-Line Purchase Context. *Journal of Strategic Marketing*, *29*(2), 117–140.

Jain, R., Verma, M., & Jaggi, C. K. (2020). Impact on bullwhip effect in food industry due to food delivery apps. *OPSEARCH*, *58*(1), 148–159.

Jasim, N. I., Kasim, H., & Mahmoud, M. A. (2022). Towards the Development of Smart and Sustainable Transportation System for Foodservice Industry: Modelling Factors Influencing Customer: Intention to Adopt Drone Food Delivery (DFD) Services. *Sustainability*, *14*(5), 2852.

Jebarajakirthy, C., Maseeh, H. I., Morshed, Z., Shankar, A., Arli, D., & Pentecost, R. (2021). Mobile advertising: A systematic literature review and future research agenda. *International Journal of Consumer Studies*, *45*(6), 1258–1291.

Karulkar, Y., Pahuja, J., Uppal, B. S., & Sayed, S. (n.d.). Examining UTAUT Model To Explore Consumer Adoption In Online Food Delivery (OFD) Services. *Pramana Research Journal*, *9*(8),146-162.

Koiri, S. K., Mukherjee, S., & Dutta, S. (2019). A Study on Determining the Factors Impacting Consumer Perception Regarding the Online Food Delivery Apps in Guwahati. *Procedia - Social and Behavioral Sciences*, *62*, 1138–1143.

Kumar, S., Jain, A., & Hsieh, J. K. (2021). Impact of apps aesthetics on revisit intentions of food delivery apps: The mediating role of pleasure and arousal. *Journal of Retailing and Consumer Services*, *63*.

Lee, S. W., Sung, H. J., & Jeon, H. M. (2019). Determinants of Continuous Intention on Food Delivery Apps: Extending UTAUT2 with Information Quality. *Sustainability*, *11*(11), 3141.

Limayem, M., Hirt, S. G., & Cheung, C. M. K. (2007). How Habit Limits The Predictive Power Of Intention: The Case Of Information Systems Continuance. *MIS Quarterly: Management Information Systems*, *31*(4), 705-737.

Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., & Khalid, B. (2021). Factors determining the behavioral intention of using food delivery apps during covid-19 pandemics. *Journal of Theoretical and Applied Electronic Commerce Research*, *16*(5), 1297–1310.

Okumus, B., Ali, F., Bilgihan, A., & Ozturk, A. B. (2018). Psychological factors influencing customers' acceptance of smartphone diet apps when ordering food at restaurants. *International Journal of Hospitality Management*, *72*, 67–77.

Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J., & Robres, E. (2019). User Acceptance of Mobile Apps for Restaurants: An Expanded and Extended UTAUT-2. *Sustainability*, *11*(4), 1210.

Pavlou, P. A. (2002). What Drives Electronic Commerce? A Theory of Planned Behaviour Perspective. *Academy of Management Proceedings*, *2002*(1), A1–A6.

Puriwat, W., & Tripopsakul, S. (2021). Understanding food delivery mobile application technology adoption: A utaut model integrating perceived fear of covid-19. *Emerging Science Journal*, *5*(Special issue), 94–104.

Ramos de Luna, I., Thursamy, R., Javier Montoro-Ríos, F., M Christino, J. M., Aurélio Abreu Cardozo, É., Petrin, R., … de Aguiar, L. H. (2021). Factors Influencing the Intent and Usage Behavior of Restaurant Delivery Apps. *Review of Business Management*, *23*(1), 21–42.

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*, *51*, 221–230.

Saad, A. T. (2021). Factors affecting online food delivery service in Bangladesh: an empirical study. *British Food Journal*, *123*(2), 535–550.

Shah, A. M., Yan, X., & Qayyum, A. (2021). Adoption Of Mobile Food Ordering Apps For O2O Food Delivery Services During The COVID-19 Outbreak. *British Food Journal*, *124*(11), 3368-3395.

Shankar, A., & Jain, S. (2021). Factors affecting luxury consumers' webrooming intention: A moderated-mediation approach. *Journal of Retailing and Consumer Services*, *58*, 102306.

Shankar, A., Jebarajakirthy, C., Nayal, P., Maseeh, H. I., Kumar, A., & Sivapalan, A. (2022). Online food delivery: A systematic synthesis of literature and a framework development. *International Journal of Hospitality Management*, *104*.

Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019). Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender. *Electronic Commerce Research and Applications*, *33*.

Shaw, N., & Sergueeva, K. (2019). The non-monetary benefits of mobile commerce: Extending UTAUT2 with perceived value. *International Journal of Information Management*, *45*, 44-55.

Shroff, A., Shah, B. J., & Gajjar, H. (2022). Online food delivery research: a systematic literature review. *International Journal of Contemporary Hospitality Management*, *34*(8), 2852–2883.

Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management*, *57*.

Tandon, A., Jabeen, F., Talwar, S., Sakashita, M., & Dhir, A. (2021). Facilitators and inhibitors of organic food buying behavior. Food Quality and Preference, 88, 104077.

Tandon, A., Kaur, P., Bhatt, Y., Mäntymäki, M., & Dhir, A. (2021). Why do people purchase from food delivery apps? A consumer value perspective. *Journal of Retailing and Consumer Services*, *63*.

Tang, D., Gong, X., & Liu, M. (2022). Residents' behavioural intention to participate in neighbourhood micro-renewal based on an extended theory of planned behaviour: A case study in Shanghai, China. Habitat International, 129.

Tomacruz, M. D. G., & Flor, N. T. (2018). Family perception and their buying behaviour for home-delivered food. *Undefined*, *18*(4), 237-246.

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*, *123*(2), 664-683.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance Of Information Technology: Toward A Unified View. *MIS Quarterly: Management Information Systems*, *27*(3), 425-478.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance And Use Of Information Technology: Extending The Unified Theory Of Acceptance And Use Of Technology. MIS Quarterly: *Management Information Systems*, *36*(1), 157-178.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2016). Unified Theory Of Acceptance And Use Of Technology: A Synthesis And The Road Ahead. *Journal of the Association for Information Systems*, *17*(5).

Wang, O., & Scrimgeour, F. (2022). Consumer adoption of online-to-offline food delivery services in China and New Zealand. *British Food Journal*, *124*(5), 1590–1608.

Wen, H., Pookulangara, S., & Josiam, B. M. (2022). A comprehensive examination of consumers' intentions to use food delivery apps. *British Food Journal*, *124*(5), 1737–1754.

Yen, Y. S. (2022). Channel Integration Affects Usage Intention In Food Delivery Platform Services: The Mediating Effect Of Perceived Value. *Asia Pacific Journal of Marketing and Logistics*, *35*(1), 54-73.

Yeo, S. F., Tan, C. L., Teo, S. L., & Tan, K. H. (2021). The role of food apps servitization on repurchase intention: A study of FoodPanda. *International Journal of Production Economics*, *234*.

Yeo, V. C. S., Goh, S. K., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services*, *35*, 150–162.

Zanetta, L. D. A., Hakim, M. P., Gastaldi, G. B., Seabra, L. M. A. J., Rolim, P. M., Nascimento, L. G. P., … da Cunha, D. T. (2021). The use of food delivery apps during the COVID-19 pandemic in Brazil: The role of solidarity, perceived risk, and regional aspects. *Food Research International (Ottawa, Ont.)*, *149*, 110671.

Zhao, Y., & Bacao, F. (2020). What factors determining customer continuingly using food delivery apps during 2019 novel coronavirus pandemic period? *International Journal of Hospitality Management*, *91*, 102683