Consumers' Motives and Intentions to Use Third-Party Food Delivery Services: Understanding the Role of Technology Anxiety

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Abstract

With the development of technology, consumers now want easy, quick, and convenient dining experiences. The food service sector is always coming up with new ideas to keep up with these demands and remain competitive. The emergence of third-party delivery services in the restaurant industry has offered a practical way to enhance delivery capabilities and expand the customer base. Thus, the purpose of the current study is to evaluate the factors motivating customers on placing meal orders using third-party food delivery service. Convenience sampling was employed to gather customer responses from online surveys. The findings demonstrated that consumers' perceived ease of use, perceived usefulness, habit, and trust are essential elements that have significant impacts on their intentions to use third-party food delivery service. It was also shown that consumers' perceptions of usefulness depended on convenience of service and the variety of food choices offered. Furthermore, it was proved that customers' anxiety about technology had an impact on the relationships between their behavioural intentions and their perceptions of its ease of use or usefulness. The research provides suggestions on how restaurants and third-party food delivery service providers could work together and alter meal delivery service to satisfy both the customer's wants and their own objectives.

Keywords: Third-Party Food Delivery Service, Perceived Ease of Use, perceived Usefulness, convenience, Technology Anxiety.

1. Introduction

As online technology advanced, food delivery methods shifted from phone orders to website orders, and finally to mobile orders on smartphones and app platforms. As a result, food delivery service including apps has become popular in the dining establishment sector, and an innovative food business structure that mixed mobile devices and restaurants to meet changing consumer expectations was developed (Li & Wang, 2020; Ahmed at al., 2023). In addition, the emergence of internet platforms has left a substantial impact on both social and commercial activities. As a result, the food and beverage sector has been significantly affected by such shifts, which have drove it to work with outside services (Bresciani, 2017;

Özoğlu & Büyükkeklik, 2017; Arora et al., 2023; Ahmed at al., 2023).

Regarding customers, platforms and mobile apps offered by third-party food delivery service let customers connect with different restaurants. Using the quick search function, customers may add the meals they wish to order to their shopping basket. Customers may choose their preferred delivery time or obtain an estimated delivery time right away, depending on where they are located. After that, the delivery person moves to the establishment to pick up the order, delivers it to the customer's location, and the service is completed (Chen et al., 2020). Third-party businesses rely on this to generate income in two ways as stated by Özoğlu and Büyükkeklik (2017), restaurants incur large commissions for each order, while people are charged delivery costs simultaneously.

According to Haldar et al. (2017) and Raut et al. (2019), restaurants may enhance their operational efficiency, acquire more flexibility, and concentrate on their main business by outsourcing their food delivery needs to third-party suppliers. This also enhances customer service. In the food delivery sector, See-Kwong et al. (2017) posit that three primary variables incentivize restaurants to collaborate with third-party delivery platforms: augmented revenue, enhanced brand recognition, and a broader sales market. besides that, restaurants who wish to operate a meal delivery service just need to pay the commission to an independent platform in order to boost orders and revenue. They do not need to build their own system for placing orders or recruit workers. Due to restricted sales and a limited number of seats available inside, third-party delivery services allow restaurants to reach a larger market and generate significant income despite their

limited seating capacity (Huang & Siao, 2023).

On the other hand, a lot of dining establishments are still unsure about how to utilize third-party delivery services. According to See-Kwong et al. (2017), the primary drivers of this are the need to preserve the freshness and quality of food supplied by outside vendors. Restaurant operators understand that there would be less control over the quality of the food. In addition, physical factors that might lower food quality include delays in delivery and variations in room temperature during the transportation process, which may have an impact on the meal's quality (Sin et al., 2021). Moreover, a lot of restaurant managers discover a clear link between the delivery services and a decline in their revenue (Chen et al., 2019). Due to the commissions and fees associated with third-party delivery services, restaurants and customers must pay more for online food delivery. Restaurants see these fees as a way to squeeze their profitability, and they are able to use third-party services when their online demand is low (Niu et al., 2021).

Considering the previous conversation, even while the third-party delivery service manages delivery services and acts as an intermediary for restaurants and clients, allowing them to concentrate on managing their primary business (Rivera, 2019; McCain et al., 2021). Nevertheless, with so many benefits provided by outside delivery providers, restaurant owners can encounter additional difficulties. For example, they have to address the issue of customer feedback. It is challenging to gauge consumer approval and product quality when the items are provided by several parties (Ilham, 2018; Tarmazi et al., 2021). Restaurants also have to pay commission costs. According to reports, third-party food

delivery platforms impose restaurant fees of around 20–25% on each purchase from these exclusive restaurants and 30–35% on each order from non-exclusive restaurants (Griesbach et al., 2019). Moreover, restaurants will have to pay for the advertising services if they want to advertise their brands on the apps or websites of the third-party food delivery platforms (Chan et al., 2023).

As the most effective approach for analysing technology adoption, research have utilized the technology acceptance model (TAM) to assess the variables that affect attitudes about using a certain technology (Piroth et al., 2020; Lee et al., 2022; Arora et al., 2023). TAM clarified how an innovative technology or service's usefulness and ease of use affects its adoption (Han & Ji, 2021). TAM states that user-friendliness is thought to be able to forecast its perceived usefulness, which in turn can forecast an individual's intent to use the system (Natasia et al., 2022). Since TAM is unique to the application of the principles of usefulness and ease of use in the context of information systems, it is thus used in this study and more appropriate for use in an online setting (Lazim et al., 2021).

Furthermore, this study used the extended unified theory of acceptance and use of technology (UTAUT2), which is thought to be a more unifying theory than previous models and theories of technological adoption because of its excellent predictive capacity (Ramos, 2022; Abed, 2023). According to Venkatesh et al. (2012), UTAUT2 has the capacity to evaluate many technologies and may be extended to encompass more pertinent criteria that may enhance its potential applicability for a broader spectrum of users, contexts, and technologies. In order to describe how consumers perceive technology, UTAUT2 comprises seven basic constructs: performance expectancy, effort expectancy,

helping conditions, social impact, price value, habits, and hedonic motivation (Venkatesh et al., 2012; Leong et al., 2021). As a result, the UTAUT2 approach has been successfully applied and verified by academics in the field of e-commerce to investigate various technologies from the viewpoint of consumers. Abed (2023) adds trust as an extra construct. Therefore, this study will leverage the two UTAUT2 constructs—habit and trust—to investigate the factors influencing customers' behavioural intention to use third-party food delivery services.

Four components were identified by the study as potential determinants influencing customers' behavioural intention to utilize third-party food delivery services, based on TAM and UTAUT2. Since there is still much to learn about the moderating influence of technology anxiety, the study included technology anxiety as a moderator and one of the most significant personality qualities in the area of technology adoption. Additionally, it was suggested that convenience and food variety can have an impact on perceived usefulness; one of the primary constructs in this study used to predict customers' behavioural intention to utilize third-party food delivery services. Although a number of studies have examined the variables influencing customers' use of third-party food delivery services, little is known about how customers see the difficulties they encounter on these platforms. The study's eight components may assist narrow that gap by offering a more comprehensive knowledge of how customers see third-party food delivery services. It can show if customers are making well-informed decisions or whether extra transparency would be helpful with regarding their impact on dining establishments. The research model was developed in light of the discussion, as seen in figure 1.
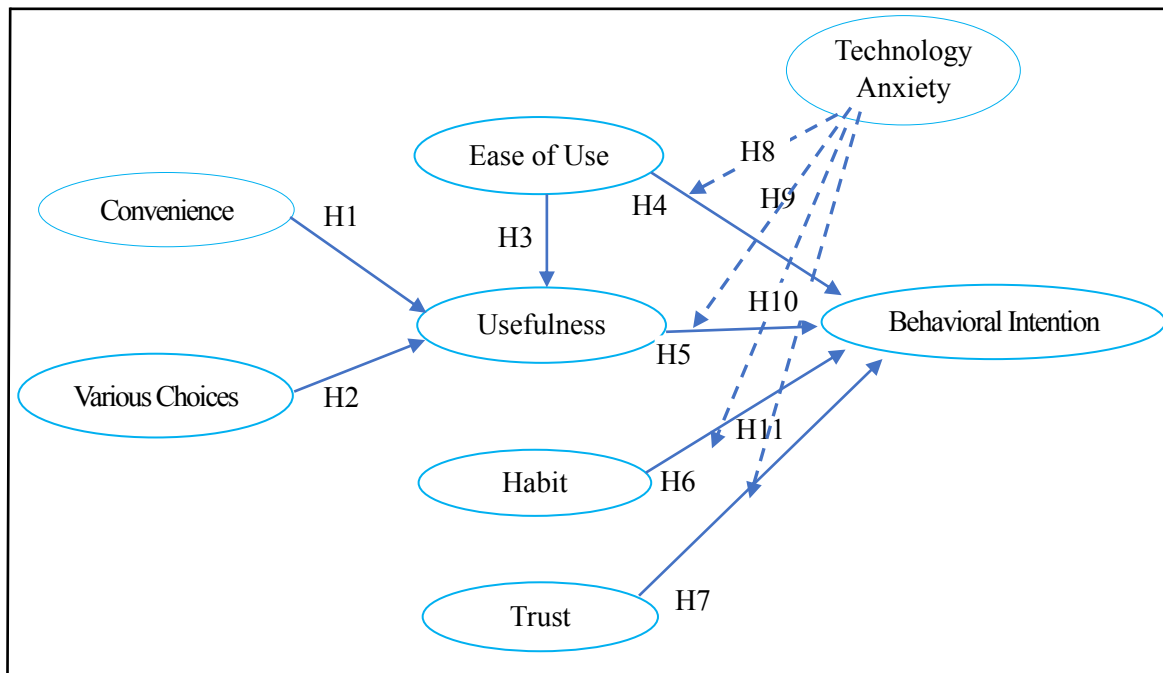
Figure 1: The framework of the Study

2. Literature Review

2.1 Convenience and Perceived Usefulness

According to Prabowo and Nugroho (2019), convenience refers to how well consumers feel that an application or component of technology would enable them to get through challenging situations. Furthermore, it describes how simple and effective it is for a user to engage with a product or service. It includes elements like low work necessary, accessibility, and time savings (Goh et al., 2021). Since most consumers want convenience and are reluctant to put up with difficult, time-consuming, or unpleasant experiences, convenience is now a need rather than a replacement (Abdien, 2019; Azizul et al., 2019). Because of this, several studies have been done to investigate how convenient it is to utilize food delivery apps. Their findings indicate that consumers may view a technology as more valuable and useful if it is convenient and saves their time and effort (Chang, 2012; Yeo et al., 2017; Ray et al., 2019; Troise et al., 2020; Hassan et al., 2024).

In addition, Azizul et al.'s (2019) study revealed that rewards like discounts and coupons may increase consumers' perceptions of the value and use of food delivery apps. A study conducted in the context of food delivery services by Goh et al. (2021) found that convenience significantly improves customer satisfaction with mobile food delivery apps. The convenience of using the apps—such as the ability to access them whenever you want without having to move—helps users save time and has an overall favourable experience. In light of this, the third-party food delivery service may increase their perceived utility and draw in more clients by providing more convenient and practical features, as suggested by the following hypothesis:

H1: *Convenience has a positive impact on the perceived usefulness of third-party food delivery service.*

2.2 Various Food Choices and Perceived Usefulness

Online meal delivery services should offer a wide range of products and services with

several options, since this is a quality feature known as "*food variety* or *Various Food Choices*" (Cho et al., 2019; Arora et al., 2023). It also refers to the capacity to offer affordable and competitive costs, enabling customers to select from an assortment of meals that are essential in ordering meals online (Cho & Park, 2001; Deepika & Joe 2021). The ability of customers to select from a wide range of food selections and use food delivery apps to purchase from many restaurants at various prices is a key factor in fostering favorable attitudes and, consequently, affecting purchase intentions (Choe & Kim, 2018; Cho et al., 2019).

Numerous studies have demonstrated that one important factor influencing consumers' diet choices is the availability of healthy food options. For example, a study conducted in 2023 by Buettner et al. discovered a correlation between customers' opinions of a "healthy meal" and the inclusion of a variety of vegetables in the meal. With 18 % of participants saying that the availability of healthy alternatives affected their decision to order meals using food delivery apps, they discovered that the availability of healthy options was a major factor in deciding food choice. Thus, a well-planned menu with a wide range of choices can enhance the overall usefulness of the meal delivery service (Kapoor and Vij, 2018). Moreover, Kaur et al. (2021) found that the most important aspect impacting users' perceptions of the usefulness and their need to use food delivery apps is the clear presentation of menu items and alternatives. As a result, the following hypothesis was put forth:

H2: *Various food choices have a positive impact on the perceived usefulness of third-party food delivery service.*

2.3 Perceived Ease of Use, Perceived Usefulness and Behavioral Intention

Perceived ease of use refers to an individual's belief about how little work it will take to utilize a specific system. It refers to how simple it is to order food from bistros or cafes, select what you want, and locate it while using a third-party food delivery service (Ray et al., 2019). A person's perception that utilizing a certain system would improve their performance is sometimes referred to as perceived usefulness (Abdien, 2019; Herrenkind et al., 2019). Based on Davis's (1989) TAM model, consumer behavioural intention is mostly determined by perceived benefits and ease of use. Because people are more likely to utilize a technology if they think it is easy to use, perceived ease of use is thought to be a factor of perceived utility. Extensive prior research indicates that consumers' behavioural intentions towards food delivery services are significantly influenced by their perception of ease of use (Cho et al., 2019; Troise et al., 2020). Additionally, it has been demonstrated that higher usage intentions are associated with ease of use of food delivery apps (Wu & Xiao-Hui, 2017).

Numerous studies have repeatedly demonstrated that perceived usefulness is positively impacted by perceived ease of use. In accordance with various studies (Amin et al., 2014; Abdullah et al., 2019; Jung et al., 2021; Hassan et al., 2024), the perceived ease of use of mobile websites has been found to be a significant predictor of user satisfaction and influences their perceived usefulness. This, in turn, influences consumer acceptance of the applications (Cheung & Vogel, 2013; Hassan et al., 2024) and online purchases by customers (Waris et al., 2022). Customers should thus be more inclined to employ third-party food delivery services if they think they are easy. Through a comprehensive analysis

of prior research, this study proposes the following research hypotheses:

H3: *Perceived ease of use has a positive impact on perceived usefulness of third-party food delivery service.*

H4: *Perceived ease of use has a positive impact on consumers' intention to use third-party food delivery service.*

H5: *Perceived usefulness has a positive impact on consumers' intention to use third-party food delivery service.*

2.4 Habit and Behavioral Intention

Habits are characterized as instinctive tendencies acquired via learning. It may not be conscious and is occasionally influenced by the surroundings in which you are now operating the meal delivery app or by previous experiences (Limayem et al., 2007; Venkatesh et al., 2012). According to earlier studies, habit is the primary cause of behavioral intentions (Venkatesh et al., 2012; Chotigo & Kadono, 2022). Additionally, several research have used the UTAUT2 to investigate users' intentions to keep using food delivery apps, and they have discovered that habit has a beneficial effect in this area (Lee et al., 2019; Palau-Saumell et al., 2019; Alalwan, 2020). Furthermore, people who have made it a habit to use meal delivery apps are more likely to remain with them, according to research by Koiri et al. (2019). Apps users who have made meal delivery apps a routine is more likely to think of them favourably and stick with them (Okumus et al., 2018; Rasli et al., 2020; Yapp & Katataian, 2022; Santos & Patiu, 2023). So, the following hypothesis results from this discussion:

H6: *Habit has a positive impact on consumers' intention to use third-party food delivery service.*

2.5 Trust and Behavioral Intention.

Trust is defined, explained and used in many different contexts, it is the degree to which an individual is prepared to embrace opinions on the competence, goodness, and honesty of a company or its goods (Gefen & Straub, 2004; Chotigo & Kadono, 2022). According to Al-Khayyal et al. (2020), trust in online purchasing refers to confidence in the quality elements. As a mitigating element against perceived risk, trust increases consumer pleasure and buy and repurchase intentions. The inclination of customers to utilize food delivery apps is positively impacted by trust in a considerable way. For companies to create favourable behavioural outcomes, such the desire to reuse food delivery apps, and to boost customer confidence, they must establish and sustain trust (Karahanna & Straub, 2017; Zhao & Bação, 2020; Wijaya, 2024; Sun & Moon, 2024). Thus, we proposed the following hypothesis:

H7: *Trust has a positive impact on consumers' intention to use third-party food delivery service.*

2.6 Technology Anxiety

Personality qualities that directly impact consumers' inclinations to employ new technologies are referred to as technology anxiety (Bhatt, 2021). Technology anxiety can result in diminished confidence, a diminished perception of competence, and issues with present functioning (Tarmizi et al., 2021). Customer behavior, particularly the possibility of utilizing food delivery apps is significantly impacted by technology fear (Tam et al., 2020). Even when consumers see technology as being easy to use and valuable, they may become more cautious due to technology anxiety (Lin & Chang, 2011; Çelik, 2016; Bhatt, 2021). Even if new technologies are

positively perceived, consumers who are more tech-averse are less inclined to embrace them (Xue & Associates, 2012; Cebeci & Associates, 2019). In particular, among senior customers, technology fear is a significant obstacle to the use of meal delivery apps (Song et al., 2021). The next hypotheses were developed in light of the prior conversation:

H8: *Technology anxiety negatively moderates the relationship between the perceived ease of use and the consumer's behavioral intention to use third-party food delivery service.*

H9: *Technology anxiety negatively moderates the relationship between the perceived usefulness and the consumer's behavioral intention to use third-party food delivery service.*

H10: *Technology anxiety negatively moderates the relationship between habit and the consumer's behavioral intention to use third-party food delivery service.*

H11: *Technology anxiety negatively moderates the relationship between trust and*

the consumer's behavioral intention to use third-party food delivery service.

3. Research Methodology

3.1 Research Methods Instrument and Measures

The questions on the construct-based questionnaire included in the present study were deduced from earlier research (Table 1). Perceived ease, perceived usefulness, convenience, variety of food choices, trust, habit, technology anxiety, and behavioural intention are eight constructs that were measured using a Likert scale with five points, with 1 denoting strongly disagree and 5 strongly agree. Three items from Liébana-Cabanillas et al. (2017) were used to measure perceived ease of use; four items from Lee (2009) were used to measure perceived usefulness; two items from Cho et al. (2019) were used to measure convenience; three items from Lee et al. (2019) were used to measure various food choices; and further three items from Venkatesh et al. (2012) were used to measure behavioural intention.

Table (1) Items Measure

Construct	Item Measurement	Source
Perceived Ease of Use	**Third-party food delivery apps**:	Liébana Cabanillas et al. (2017)
PEU1	is easy to use third-party food delivery apps.	
PEU2	are understandable and clear.	
PEU3	requires minimum effort.	
Perceived Usefulness	**I think that using third-party food delivery apps:**	Lee (2009)
PU1	would enable me to buy food more quickly.	
PU2	would make it easier for me to buy food.	
U3	are useful.	
PU4	Overall, are advantageous.	
Convenience	**The third-party food delivery app would:**	Cho et al. (2019)
CON1	allow me to order food at any time.	
CON2	allow me to order food from any place.	
Various Food Choices	The third-party food delivery app:	Cho et al. (2019)
VFC1	offers a variety of restaurant choices.	
VFC2	offers a variety of food choices.	
VFC3	offer food at a wide range of prices.	

Habit		
HT1	The use of third-party food delivery apps has become a habit for me.	Lee et al. (2019)
HT2	I am addicted to using third-party food delivery apps.	
HT3	I must use third-party food delivery apps.	
Trust		
TR1	I trust the third-party food delivery apps.	Lee et al. (2019)
TR2	I felt safe in ordering food through third-party food delivery app.	
TR3	Food information provided by the third-party food delivery app is reliable.	
Technology Anxiety	**Using third-party food delivery apps:**	
TA1	may make me very nervous.	Xue et al. (2012)
TA2	may make me worried.	
TA3	may make me feel uncomfortable.	
TA4	may make me feel uneasy and confused.	
Behavioral Intention		
BI1	I intend to use third-party food delivery apps in the future.	Venkatesh et al. (2012)
BI2	I predict I would use third-party food delivery apps in the future.	
BI3	I plan to use third-party food delivery apps frequently.	

3.2 Sample and Data Collection

Utilizing a quantitative approach, this study looks at the variables influencing customers' behavioral intention to utilize third-party food delivery services and apps through the administration of an online survey. The participants were chosen using convenience sampling. The study sample comprised individuals who utilized third-party meal delivery apps. The survey was first translated into Arabic because it is the official language of the respondents, and then we retranslated it into English for accuracy. After distributing the questionnaire to users, 480 respondents were approached, and 480 valid surveys were ready for the statistical analysis.

Table 2 displays a demographic summary of the respondents. While using third-party meal delivery apps was a prerequisite for participation in our sample, respondents' frequency of making third-party meal delivery orders varied. Gender representation was almost equal for males and females. 54.3% of the sample was in the 20–30 age range. In addition, the majority of participants (81%), were graduates of universities. There was variation among the participants in terms of the approximate monthly income of the person or household.

Table (2) Demographic Variables

		Frequency	%
Gender	Male	195	40.6%
	Female	285	59.4%
Age	Below 20	166	34.6%
	21–30	259	54.0%
	31–40	31	6.5%
	41–50	9	1.9%
	Above 50	15	3.1%
Marital Status	Single	416	86.7%
	Married	61	12.7%
	Other	3	.6%
Family's income monthly	Less than 3,500 LE	153	31.9%
	3,500 – 5,999 LE	125	26.0%
	6,000 – 10,000 LE	120	25.0%

	Over 10,000 LE	82	17.1%	
	Less than high school	10	2.1%	
	High school	51	10.6%	
Educational level	University education	391	81.5%	
	post-graduate education	28	5.8%	
	Several times a week	64	13.3%	
	About once a week	52	10.8%	
Frequency of ordering	About 2–3 times a month	73	15.2%	
	About once a month	69	14.4%	
	About 2–4 times a year	51	10.6%	
	Less than that	171	35.6%	

4. Results

We analyzed the conceptual model using the partial least squares structural equation modeling (PLS-SEM) technique using WarpPLS software. The two stages of analysis performed by the program are the measurement model and the structural model. Hair et al. (2021) recommend using this two-step procedure.

4.1 *Measurement Model*

To determine the underlying structure, the measurement model was used in the first stage to assess the relationships between the elements. We evaluated the constructs' reliability, discriminant validity, and

convergent validity. According to Tables 3 and 4, Cronbach's alpha ($.>.7$) and composite reliability indicate that all constructions have good reliability. Furthermore, every construct's Average Variance Extracted (AVE) fell within the permissible range (AVE $>.5$), indicating suitable convergent validity in this investigation. Each square root of every AVE should be greater than its correlations with other variables in order to test for discriminant validity (Fornell & Larcker, 1981). The results of discriminant validity are shown in Table 4. Additionally, all variables had VIF values of less than 3.3, which is the ideal range, and there was neither multicollinearity nor common method bias (Kock & Lynn, 2012).

Table (3) Convergent Validity

Variables	Items	Composite Reliability	Cronbach's Alpha	AVE	VIF
Perceived ease of use	3	0.905	0.842	0.760	2.275
Perceived Usefulness	4	0.927	0.895	0.761	2.951
Convenience	2	0.926	0.840	0.862	2.651
Various food choices	3	0.944	0.911	0.849	2.879
Habit	4	0.935	0.908	0.783	1.894
Trust	3	0.939	0.902	0.837	2.691
Technology Anxiety	4	0.969	0.958	0.888	1.283
Behavioral Intention	3	0.931	0.888	0.818	2.403

Note. AVE = Average Variance Extracted; VIF = Variance Inflation Factor.

Furthermore, as the heterotrait-monotrait (HTMT) ratio of correlations is regarded as a more reliable technique, it was used to test discriminant validity (Jeon et al., 2019). Each number needs to be at least 0.85 in order to

meet the HTMT requirements. The discriminant values, which stay below the 0.85 criterion, are shown in Table 4. This suggests that discriminant validity is good and

that multi-collinearity between the concept   components is not an issue (Kock, 2020).

Table (4) Discriminant validity and HTMT Ratios of Correlation

	1.	2.	3.	4.	5.	6.	7.	8.
perceived ease of use	(0.872)	0.666	0.563	0.642	0.441	0.630	0.031	0.571
perceived usefulness	0.666	(0.872)	0.693	0.671	0.513	0.647	0.093	0.635
Convenience	0.563	0.693	(0.928)	0.731	0.447	0.576	0.166	0.570
Various food choices	0.642	0.671	0.731	(0.922)	0.390	0.624	0.100	0.605
Habit	0.441	0.513	0.447	0.390	(0.885)	0.557	0.319	0.535
Trust	0.630	0.647	0.576	0.624	0.557	(0.915)	0.052	0.699
Technology anxiety	0.031	0.093	0.166	0.100	0.319	0.052	(0.942)	0.086
Behavioral Intention	0.571	0.635	0.570	0.605	0.535	0.699	0.086	(0.904)

HTMT

	1	2	3	4	5	6	7	8
1								
2	0.766							
3	0.668	0.799						
4	0.733	0.743	0.835					
5	0.505	0.571	0.514	0.430				
6	0.721	0.720	0.662	0.688	0.616			
7	0.041	0.100	0.185	0.108	0.342	0.055		
8	0.659	0.712	0.658	0.671	0.599	0.783	0.094	

Note. Values on the diagonal (bold) are square root of the average variance extracted
Note. HTMT: Heterotrait-Monotrait, Ratios are good if < 0.90, best if < 0.85.

4.2 The Structural Model Assessment: Testing the Hypotheses

The inner model (Figure 2) of the Structural Equation Model, which is the next stage of analysis, displays the p-values and path coefficients (β) for the suggested associations. In the first test, the value and direction of the connection between the latent variables that have been identified are revealed by looking at the path coefficient. It is known that every variable connection in the preceding chart has a positive path coefficient value. Thus, it may be concluded that there is a positive relationship between all variables. The results (B= 0.36, P<0.01) showed that perceived usefulness is significantly influenced by convenience. Additionally, it was determined that various food choices significantly affected perceived usefulness (B= 0.19, P<0.01), and that perceived ease of use significantly affected perceived usefulness (B= 0.34, P<0.01). The R-squares test is a subsequent tool used to evaluate how the independent factors affect the dependent variable. The results showed that perceived ease of use, variety of food choices, and convenience account for 61% of perceived usefulness. H1 to H3 are therefore supported. Additionally, the findings showed that behavioural intention is positively impacted by perceived usefulness (B=0.22, P<0.01), habit (B=0.15, P<0.01), perceived ease of use (B=0.12, P<0.01), and trust (B=0.40, P<0.01). Subsequently, the results of R-squares test showed that perceived use, perceived usefulness, habit, and trust account for 59% of behavioural intention. Consequently, H4 through H7 are supported.
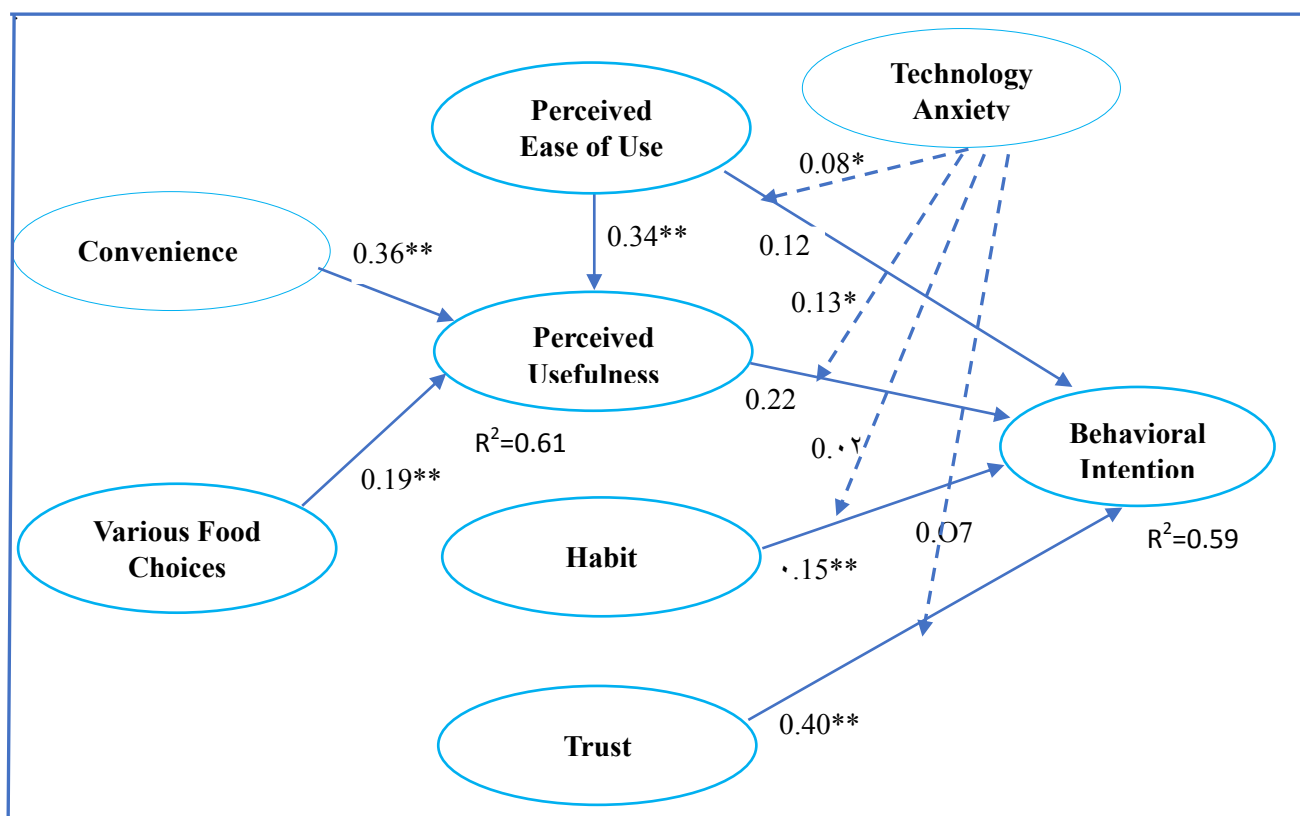
Figure 2: The Structural Equation Model

Furthermore, this study's Hypotheses H8 to H11 state that technology anxiety moderates the relationships between perceived ease of use/ perceived usefulness/ habit/ trust and behavioural intention. We anticipate that based on the degree of technology anxiety, the effects of perceived ease of use, perceived usefulness, habit, and trust would differ on behavioural intention. The results of the moderating effect study showed that technology anxiety decreased the relationship between perceived ease of use and behavioural intention (B= -0.08, P<0.05). The association between perceived usefulness and behavioural intention was also shown to be diminished by technology anxiety, as indicated by the negative beta coefficient of the interaction that we obtained (B=-0.13, P<0.01). As a result, H8 and H9 are accepted. Conversely, the data indicates that the relationship between technology anxiety and habit is not significant (B= -0.02, P=0.31),

suggesting that technology anxiety had no effect on the association between habit and behavioural intention. Therefore, the outcome was inconsistent with hypothesis H10. Similarly, the interaction between technology anxiety and Trust did not provide a significant beta coefficient (B= -0.07, P<=0.31), suggesting that Technology Anxiety had no effect on the relationship between Technology Anxiety and behavioural intention. Therefore, this result did not support hypothesis H11.

Focused graphs (Figures 3:6) are shown to help illustrate the nature of the moderating effects. The moderating effects of technology anxiety on the relationship between perceived ease of use/percieved usefulness and behavioral intention are confirmed (Figures 3 and 4). The low technology anxiety graph's line slopes higher from left to right, showing a substantial positive association between behavioral intention for low technology anxiety and perceived usefulness or ease of

use. The graph's low technology anxiety line is steeper than its high technology anxiety line, indicating that low technology anxiety strengthens the association between behavioral intention and perceived utility and ease of use, supporting hypotheses H8 and H9. Conversely, as seen in figures 5 and 6, technological anxiety does not alter the association between Habit/Trust and behavioural intention. The graph's line for both low and high technology anxiety slopes higher from left to right, suggesting that technology anxiety has no discernible effect on the association between habit/trust and behavioural intention.
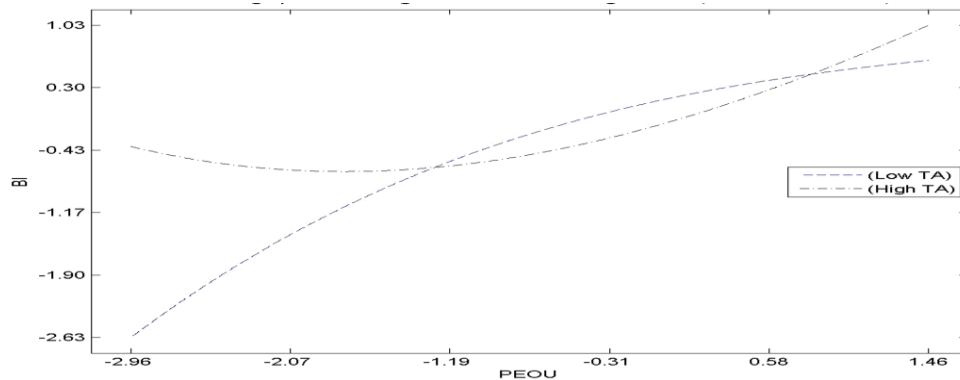
Figure 3: Technology anxiety's influence on the relationship between ease of use and behavioral intention
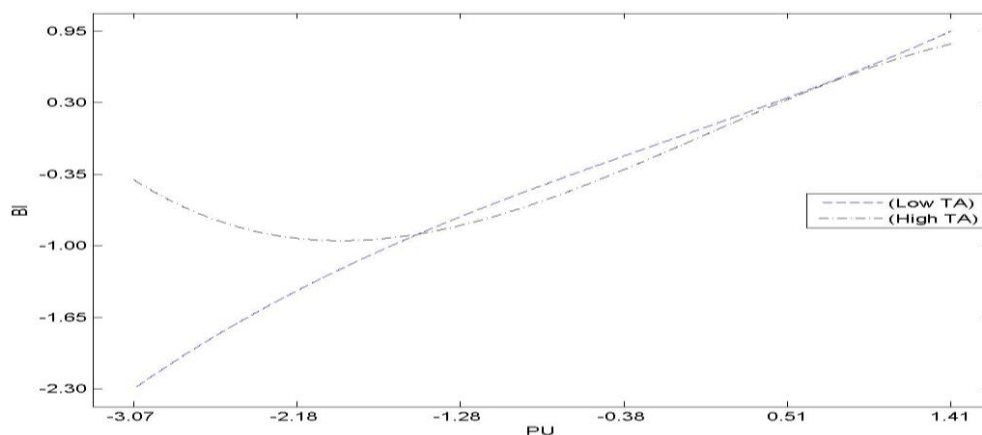

Figure 4: Technology anxiety's influence on the relationship between usefulness and behavioral intention
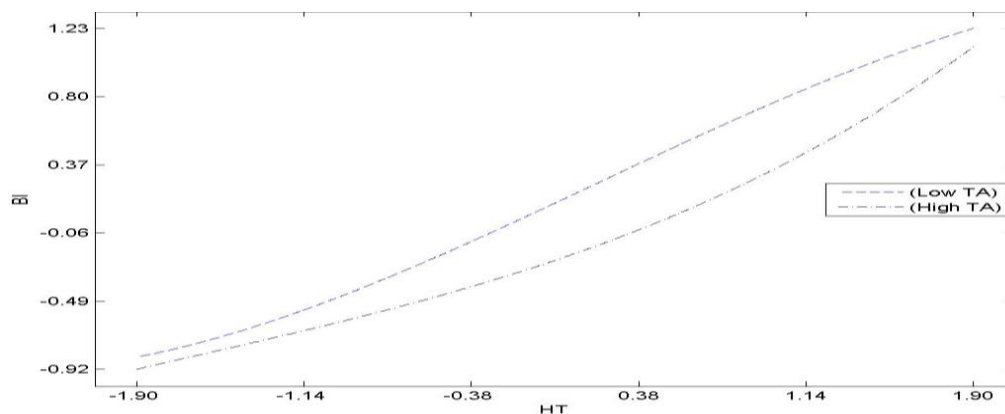

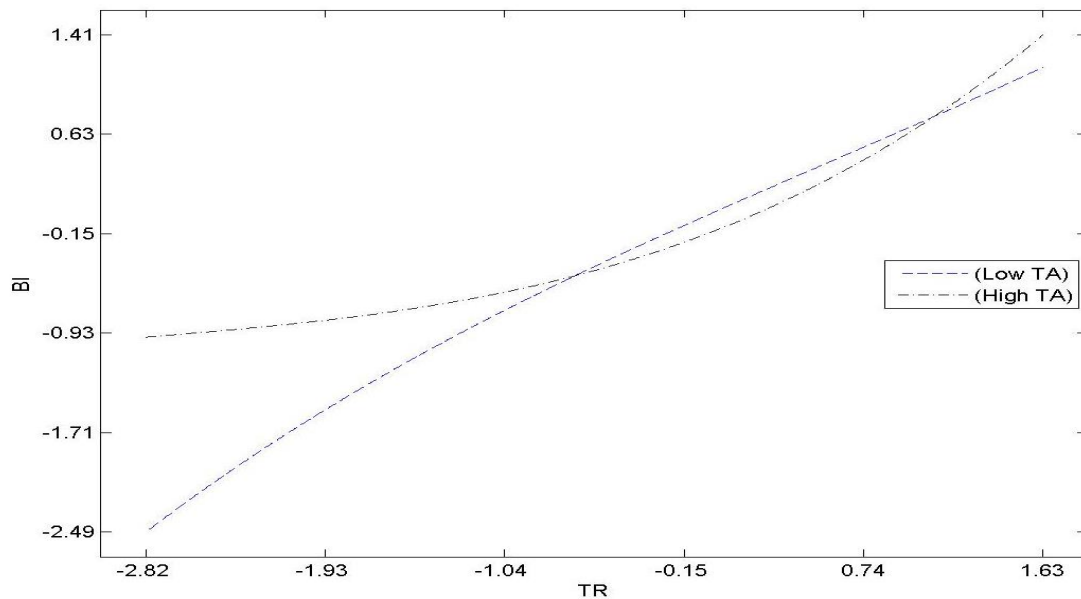Figure 5: Technology anxiety's influence on the relationship between habit and behavioral intention

Figure 6: Technology anxiety's influence on the relationship between trust and behavioral intention

5. Discussion

Findings supported by numerous other studies (Waris et al., 2022; Silva et al., 2022; Zaheer, 2024) indicate that consumers are more likely to use third-party food delivery service apps that they believe add value and enhance their experience. These findings are consistent with the technology acceptance model (TAM), which has been applied extensively in this context and refers to perceived usefulness and ease of use as critical components in determining consumers' acceptance and to predict their behavioral intention in the food delivery apps domain. According to the results, perceived usefulness—which in turn affects customers' behaviour intention—was positively impacted by perceived ease of use. This finding aligns with those of Bhatiasevi and Yoopetch (2015), who established that perceived usefulness positively influences usage intention, and that ease of use might predict usefulness.

The results demonstrate how users' perceptions of the third-party food delivery service apps' usefulness are significantly impacted by the convenience and variety of food they offer. This study discovered that one of the main reasons people use food delivery apps is convenience by allowing users to get meals whenever they want and with little effort. Additionally, Yeo et al. (2017), Ray et al. (2019), Waris et al. (2022), and Silva et al. (2022) concur that the convenience of food delivery apps is attributed to elements like speed, adaptability, ease of payment, and ease of use, which allow users to place requests and get their meals at their preferred time and location, improve the user experience. Furthermore, a wider variety of foods may be offered by the third-party food delivery service apps, which will facilitate users in finding a meal that meets their food needs and personal tastes (Madinga et al., 2023; Willie et al., 2024). Users' perception of the food delivery app's utility is increased as it offers a single shop where they can get a range of meals without having to go to different restaurants or prepare meals themselves (Buettner et al., 2023).

Additionally, it was shown that a significant element influencing users' inclination to use meal delivery apps is their habits and level of confidence in these services. The importance of habit was acknowledged by other researchers who noted that when users get

into the habit of utilizing a specific program, they are more inclined to stick with it rather than actively considering alternatives every time. Because habit lowers the cognitive load needed to plan, the food delivery apps are used by default (Lee et al., 2019; Zhao & Bacao, 2020; Teng et al., 2023). As well, the findings of additional studies support the notion that users must have trust in the food delivery apps to carry out their orders precisely, promptly, and with the anticipated level of quality. The adoption of these apps may be significantly hampered by a lack of trust as users may be reluctant to give personal and financial information to a service, they are unfamiliar with (Balakrishnan & Dwivedi; Waris et al., 2022). Developing trust via dependable service, openness, and security features is crucial to encouraging sustained app adoption (Waris et al., 2022).

Nevertheless, since the findings of this study demonstrate that consumer characteristics—such as technological anxiety—have a moderating effect in negatively influencing the associations between perceived usefulness or ease of use and behavioural intention, it is important to take these effects into account. This is consistent with earlier findings that show worry over new technology might prevent people from adopting and using it as much. In other words, customers experiencing high levels of technology anxiety may refrain from using specific technologies or services, such food delivery apps, because they are worried about issues related to security, dependability, or user-friendliness (Yang & Forney, 2013; Khoa & Huynh, 2022; Yuan et al., 2022; Khoa & Huynh, 2023).

6. Conclusion and Implications

The purpose of this study was to investigate the variables influencing customers' behavioral intention to utilize third-party food

delivery services. Based on the prior findings and analysis, the research offers several useful insights for restaurant owners and developers of third-party delivery apps. First, since third-party food delivery service provides restaurants access to a larger consumer base than they could have through conventional methods, these restaurants should think about these benefits as potential clients may find them by perusing the delivery apps marketplaces. Our results target whether restaurants that are currently inclined in using third-party food delivery services or not, the implications should be considered by them. Both of them can search about third-party food delivery service developers who satisfy the consumer' needs.

Second, to give customers a complete experience that saves their time and effort and meets their expectations, third-party food delivery service developers need to raise the quality of service they offer, which is mainly measured by both perceived ease of use and perceived usefulness. On the part of the apps' developers, they also need to make it easier for users to place meal orders through outside delivery services by offering a wider selection of food options and earning their confidence from the prior experiences. Moreover, apps' developers should push customers to integrate the meal delivery apps into their daily or weekly schedules, such placing lunch or dinner orders at the same time every day. Thus, the apps become the recommended option every day. This contributes to the app becoming the default option. By providing loyalty programs, points, or other incentives for regular use, businesses may encourage customers to develop the habit of ordering meals from third-party delivery services. Apps operators should also consider how customers' individual characteristics, such as their technology fear, may affect their inclination to

use a third-party food delivery service when placing an order. Operators are responsible for making the apps simple to use, having easy-to-follow instructions, and only requires a few steps to make an order. This can lessen stress and increase enjoyment of the event. Operators must also put strong security measures in place to safeguard the money and personal information of their customers. This may lessen worries about privacy and data security.

7. Limitation and Future Research

The current study concentrated on the views of customers about the third-party food delivery services and their apps; nonetheless, it is crucial to carry out more deep research in the future on the viewpoints of restaurants, including their experiences, difficulties, and thoughts regarding third-party food delivery services. Future study should take into account the effects of other elements, including as sustainability, environmental concern, innovation, and disruption. Future studies should also focus on the ways that digital technologies are being used in third-party food delivery operations, such as artificial intelligence-driven ordering platform and real-time tracking, to help this industry develop and advance and eventually help businesses and consumers alike.

References

–   Abdien, M. K. (2019). An assessment of dinescape and customers' behavioral intentions in fast food restaurants. *Journal of tourism research*, *23*, 57-69.

–   Abdullah, D., Kamal, S. B. M., Azmi, A., Lahap, J., Bahari, K. A., Din, N., & Pinang, C. P. (2019). Perceived website interactivity, perceived usefulness and online hotel booking intention: a structural model. *Malaysian Journal of Consumer and Family Economics*, *21*(1), 45-57.

–   Abed, S. S. (2023). Factors influencing consumers continued use of food delivery apps in the post-pandemic era: insights from Saudi Arabia. *British Food Journal*. https://doi.org/10.1108/bfj-12-2022-1141

–   Ahmed, Y. A., Moustafa, L. M., & Abdien, M. K. (2023). Information Technology in Hotels to Improve Employee Performance: The Moderating Role of Employee Empowerment. *Journal of Tourism, Hotels and Heritage*, *7*(2), 19-34.

–   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. https://doi.org/10.1016/j.ijinfomgt.2019.04.008

–   Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society*, *55*, 100–110. https://doi.org/10.1016/j.techsoc.2018.06.007

–   Al-Khayyal, A., Alshurideh, T., Al Kurdi, B., & Aburayya, A. (2020). The impact of electronic service quality dimensions on customers' e- shopping and E-Loyalty via the impact of e-satisfaction and E-Trust: A Qualitative approach. *International Journal of Innovation, Creativity and Change*, *14*(9), 257-281.

–   Amin, M., Rezaei, S., & Abolghasemi, M. (2014). User satisfaction with mobile websites: the impact of perceived usefulness (PU), perceived ease of use (PEOU) and trust. *Nankai Business Review International*, *5*(3), 258-274.

–   Arora, M., Gupta, J., & Mittal, A. (2023). Adoption of food delivery apps during a crisis: exploring an extended technology adoption model. *Global Knowledge, Memory and Communication*. https://doi.org/10.1108/gkmc-01-2023-0005

–   Azizul, M., Hossain, M. I., & Hossain, M. M. (2019). Factors Influencing Reuse Intention of Mobile Food Delivery Apps: An Empirical

Study. *International Journal of Business and Management*, 14(7), 116-128.

– Balakrishnan, J., & Dwivedi, Y. K. (2021). Role of cognitive absorption in building user trust and experience. *Psychology & Marketing*, *38*(4), 643–668. https://doi.org/10.1002/mar.21462

– Bhatiasevi, V., & Yoopetch, C. (2015). The determinants of intention to use electronic booking among young users in Thailand. *Journal of Hospitality and Tourism Management*, *23*, 1–11. https://doi.org/10.1016/j.jhtm.2014.12.004

– Bhatt, K. (2021). Adoption of online streaming services: moderating role of personality traits. *International Journal of Retail & Distribution Management*, *50*(4), 437–457. https://doi.org/10.1108/ijrdm-08-2020-0310

– Bresciani, S. (2017). Open, networked and dynamic innovation in the food and beverage industry. *British Food Journal*, *119*(11), 2290–2293. https://doi.org/10.1108/bfj-08-2017-0458

– Buettner, S. A., Pasch, K. E., & Poulos, N. S. (2023). Factors associated with food delivery app use among young adults. *Journal of Community Health*, *48*(5), 840-846.

– Cebeci, U., Ince, O., & Türkcan, H. (2019). understanding the intention to use netflix: an extended technology acceptance model approach. *International Review of Management and Marketing*, *9*(6), 152–157. https://doi.org/10.32479/irmm.8771

– Çelik, H. (2016). Customer online shopping anxiety within the Unified Theory of Acceptance and Use Technology (UTAUT) framework. *Asia Pacific Journal of Marketing and Logistics*, *28*(2). https://doi.org/10.1108/apjml-05-2015-0077

– Chan, H., Cheung, T., Choi, T., & Sheu, J. (2023). Sustainable successes in third-party food delivery operations in the digital platform era. *Annals of Operations Research*, 1-37. https://doi.org/10.1007/s10479-023-05266-w

– Chang, C.-C., Yan, C.-F., & Tsen, J.-S. (2012). Perceived convenience in an extended technology acceptance model: mobile technology and English learning for college students. *Australasian Journal of Educational Technology*, *28*(5), 809–826.

– Chen, M., Hu, M., & Wang, J. (2019). Food delivery service and restaurant: friend or foe? *Social Science Research Network*. https://doi.org/10.2139/ssrn.3469971

– Chen, H., Liang, C., Liao, S., & Kuo, H. (2020). Consumer Attitudes and Purchase Intentions toward Food Delivery Platform Services. *Sustainability*, *12*(23), 10177. https://doi.org/10.3390/su122310177

– Cheung, R., & Vogel, D. (2013). Predicting user acceptance of collaborative technologies: An extension of the technology acceptance model for e-learning. *Computers & Education*, *63*, 160–175. https://doi.org/10.1016/j.compedu.2012.12.003

– Cho, M., Bonn, M. A., & Li, J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, *77*, 108–116. https://doi.org/10.1016/j.ijhm.2018.06.019

– Cho, N., & Park, S. (2001). Development of electronic commerce user-consumer satisfaction index (ECUSI) for Internet shopping. *Industrial Management and Data Systems*, *101*(8), 400–406. https://doi.org/10.1108/eum0000000006170

– Choe, J. Y., & Kim, S. (2018). Effects of tourists' local food consumption value on attitude, food destination image, and behavioral intention. *International Journal of Hospitality Management*, *71*, 1–10. https://doi.org/10.1016/j.ijhm.2017.11.007

– Chotigo, J., & Kadono, Y. (2021). Comparative analysis of key factors encouraging food delivery app adoption before and during the COVID-19 pandemic in Thailand. *Sustainability*, *13*(8), 4088. https://doi.org/10.3390/su13084088

– Chotigo, J., & Kadono, Y. (2022). Are there any key factors that encourage food delivery applications use during the COVID-19 pandemic in Thailand and the role of HRM?

Human Systems Management, *41*(2), 177–198. https://doi.org/10.3233/hsm-201140

– Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

– Deepika., R, & Joe Arun C. (2021). The impact of fear of Covid on online food delivery. *Academy of Marketing Studies Journal*, *25*(5), 1–12.

– Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

– Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. *Omega*, *32*(6), 407–424. https://doi.org/10.1016/j.omega.2004.01.006

– Goh, M. L., Ho, S. T., & Ng, Z. E. (2021). Customer Satisfaction towards Mobile Food Delivery Apps during Covid-19 Pandemic in Malaysia. *Journal of Management and Marketing Review*, 6(3), 191-201.

– Griesbach, K., Reich, A., Elliott-Negri, L., & Milkman, R. (2019). Algorithmic control in platform food delivery work. *Socius*, *5*. https://doi.org/10.1177/2378023119870041

– Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook* (p. 197). Springer Nature.

– Haldar, A., Qamaruddin, U., Raut, R. D., Kamble, S. S., Kharat, M. G., & Kamble, S. S. (2017). 3PL evaluation and selection using integrated analytical modeling. *Journal of Modelling in Management*, *12*(2), 224–242. https://doi.org/10.1108/jm2-04-2015-0016

– Han, J., & Ji, H. (2021). Acceptance of and satisfaction with online educational classes through the technology acceptance model (TAM): the COVID-19 situation in Korea. *Asia Pacific Education Review*, *23*(3), 403–415. https://doi.org/10.1007/s12564-021-09716-7.

– Hassan, H. G., Nassar, M., & Abdien, M. K. (2024). The influence of optimism and innovativeness on customers' perceptions of technological readiness in five-star hotels. *Pharos International Journal of Tourism and Hospitality*, *3*(1), 70-80.

– Herrenkind, B., Brendel, A., Nastjuk, I., Greve, M., & Kolbe, L. M. (2019). Investigating end-user acceptance of autonomous electric buses to accelerate diffusion. *Transportation Research Part D: Transport and Environment*, *74*, 255–276. https://doi.org/10.1016/j.trd.2019.08.003

– Huang, S., & Siao, H. (2023). Factors Affecting the Implementation of Online Food Delivery and Its Impact on Restaurant Performance during the COVID-19 Pandemic. *Sustainability*, *15*(16), 12147. https://doi.org/10.3390/su151612147

– Ilham, R. (2018). Improve quality of e-loyalty in online food delivery services: A case of Indonesia - Hayam Wuruk Perbanas Institutional Repository. *Journal of Theoretical and Applied Information Technology*, *96*(15), 4760–4769. http://eprints.perbanas.ac.id/id/eprint/3640

– Jeon, H. M., Ali, F., & Lee, S. W. (2019). Determinants of consumers' intentions to use smartphones apps for flight ticket bookings. *The Service Industries Journal*, *39*(5-6), 385-402.

– Jung, J., Park, E., Moon, J., & Lee, W. S. (2021). Exploration of sharing accommodation platform Airbnb using an extended Technology acceptance model. *Sustainability*, *13*(3), 1185. https://doi.org/10.3390/su13031185

– Kapoor, P., & Vij, S. (2018). Factors Influencing the Intention to Use Online Food Ordering Services. *Journal of Foodservice Management*, 31(2), 1-14.

– Karahanna, E., & Straub, D. W. (2017). Trust, technology and behavioral intention. *Taylor & Francis Online*, 28(3), 177-180.

– Kaur, S., Singh, S., & Singh, J. (2021). Factors Influencing the Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 34(2), 1-14.

− Khoa, B. T., & Huynh, T. T. (2022). How do customer anxiety levels impact relationship marketing in electronic commerce?. *Cogent Business & Management*, 9(1), 2136928.

− Khoa, B. T., & Huynh, T. T. (2023). How does anxiety affect the relationship between the customer and the omnichannel systems?. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(1), 130-149.

− Kock, N., & Lynn, G. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for information Systems*, 13(7).

− Kock, N. (2020). Full latent growth and its use in PLS-SEM: Testing moderating relationships. *Data Analysis Perspectives Journal*, 1(1), 1-5.

− Koiri et al. (2019). Factors Influencing the Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 32(2), 1-14.

− Lazim, C. S. L. M., Ismail, N. D. B., & Tazilah, M. D. A. K. (2021). Application of technology acceptance model (TAM) towards online learning during covid-19 pandemic: Accounting students' perspective. *Int. J. Bus. Econ. Law*, 24(1), 13-20.

− Lee, S. W., Sung, H. J., & Jeon, H. (2019). Determinants of Continuous Intention on Food Delivery Apps: Extending UTAUT2 with Information Quality. *Sustainability*, 11(11), 3141. https://doi.org/10.3390/su11113141

− Lee, W. S., Myungkeun, S., Moon, J., & Tang, R. (2022). Application of the technology acceptance model to food delivery apps. *British Food Journal*, 125(1), 49–64. https://doi.org/10.1108/bfj-05-2021-0574

− Leong, M. Y., Kwan, J. H., & Lai, M. (2021). Technology readiness and UTAUT2 in e-wallet adoption in a developing country. *F1000Research*, 10, 863. https://doi.org/10.12688/f1000research.72853.1

− Li, Z., & Wang, G. (2020). The role of On-Demand delivery platforms in restaurants. *Social Science Research Network*. https://doi.org/10.2139/ssrn.3813891

− Liébana-Cabanillas, F., Marinković, V., & Kalinić, Z. (2017). A SEM-neural network approach for predicting antecedents of m-commerce acceptance. *International Journal of Information Management*, 37(2), 14-24.

− Limayem, M., Hirt, S. G., & Cheung, C. M. K. (2007). How habit limits the predictive power of intention: the case of information Systems continuance. *Management Information Systems Quarterly*, 31(4), 705. https://doi.org/10.2307/25148817

− Lin, J., & Chang, H. (2011). The role of technology readiness in self-service technology acceptance. *Managing Service Quality*, 21(4), 424–444. https://doi.org/10.1108/09604521111146289

− Madinga, N. W., Blanckensee, J., Longhurst, L., & Bundwini, N. (2023). The new normal: the adoption of food delivery apps. *European Journal of Management Studies*, 28(3), 175-192.

− McCain, S. C., Lolli, J. C., Liu, E., & Lin, L. (2021). An analysis of a third-party food delivery app during the COVID-19 pandemic. *British Food Journal*, 124(10), 3032–3052. https://doi.org/10.1108/bfj-03-2021-0332

− Natasia, S. R., Wiranti, Y. T., & Parastika, A. (2022). Acceptance analysis of NUADU as e-learning platform using the Technology Acceptance Model (TAM) approach. *Procedia Computer Science*, 197, 512–520. https://doi.org/10.1016/j.procs.2021.12.168

− Niu, B., Li, Q., Mu, Z., Chen, L., & Ji, P. (2021). Platform logistics or self-logistics? Restaurants' cooperation with online food-delivery platform considering profitability and sustainability. *International Journal of Production Economics*, 234, 108064. https://doi.org/10.1016/j.ijpe.2021.108064

− Okumus et al. (2018). The Impact of Habit on the Continuous Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 31(2), 1-14

− Özoğlu, B., & Büyükkeklik, A. (2017). An analysis of third-party logistics' performance and customer loyalty. *International Journal of Marketing Studies*, 9(6), 55. https://doi.org/10.5539/ijms.v9n6p55

–   Palau-Saumell, R., Forgas-Coll, S., García, J. S., & Robres, E. (2019). User acceptance of mobile apps for restaurants: an expanded and extended UTAUT-2. *Sustainability*, *11*(4), 1210. https://doi.org/10.3390/su11041210

–   Piroth, P., Ritter, M. S., & Rueger-Muck, E. (2020). Online grocery shopping adoption: do personality traits matter? *British Food Journal*, *122*(3), 957–975. https://doi.org/10.1108/bfj-08-2019-0631

–   Prabowo, G. T., & Nugroho, A. (2019, March). Factors that influence the attitude and behavioral intention of Indonesian users toward online food delivery service by the Go-Food application. In *12th International Conference on Business and Management Research (ICBMR 2018)* (pp. 204-210). Atlantis Press.

–   Ramos, K. (2022). Factors influencing customers' continuance usage intention of food delivery apps during COVID-19 quarantine in Mexico. *British Food Journal*, *124*(3), 833–852. https://doi.org/10.1108/bfj-01-2021-0020

–   Rasli et al. (2020). The Impact of Habit on the Continuous Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 33(2), 1-14.

–   Raut, R. D., Gardas, B. B., Narwane, V. S., & Narkhede, B. E. (2019). Improvement in the food losses in fruits and vegetable supply chain - a perspective of cold third-party logistics approach. *Operations Research Perspectives*, *6*, 100117. https://doi.org/10.1016/j.orp.2019.100117

–   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. https://doi.org/10.1016/j.jretconser.2019.05.025

–   Rivera, M. (2019). Online Delivery Provider (ODP) services: Who is getting what from food deliveries? *International Journal of Hospitality Management*, *80*, A1–A2. https://doi.org/10.1016/j.ijhm.2019.05.008

–   Santos & Patiu (2023). The Role of Habit in the Continuous Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 36(2), 1-14.

–   See-Kwong, G., Soo-Ryue, N., Shiun-Yi, W., & Lily, C. (2017). Outsourcing to online food delivery Services: Perspective of F&B business owners. *Journal of Internet Banking and Commerce*, *22*(2).

–   Silva, G. M., Dias, Á., & Rodrigues, M. S. (2022). Continuity of use of food delivery apps: an integrated approach to the health belief model and the technology readiness and acceptance model. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), 114.

–   Sin, K. Y., Lo, M., & Mohamad, A. A. (2021). The Determinants and Barriers of outsourcing Third-Party Online delivery: Perspectives of F&B entrepreneurs in Malaysia. *Journal of Asian Finance, Economics and Business*, *8*(5), 979–986. https://doi.org/10.13106/jafeb.2021.vol8.no5.0979

–   Song et al. (2021). An integrated approach to the purchase decision making process of food-delivery apps: Focusing on the TAM and AIDA models. *International Journal of Hospitality* Management, 95, 102943.

–   Sun, K. A., & Moon, J. (2024). The Relationship between Food Healthiness, Trust, and the Intention to Reuse Food Delivery Apps: The Moderating Role of Eco-Friendly Packaging. *Foods*, *13*(6), 890.

–   Tam et al. (2020): Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. Information Systems Frontiers, 22(1), 243–257.

–   Teng, Y. M., Wu, K. S., Wang, W. C., & Chen, L. W. (2023). What factors drive consumers' desire to continue using food delivery apps (FDA) in Taiwan after the COVID-19 pandemic?. *Journal of Hospitality and Tourism Technology*, 14(5), 878-892.

–   Tarmazi, S. A. A., Ismail, W. R. W., Azmin, N. A. S. N., & Bakar, A. R. A. (2021). Consumer Purchase Intention toward Online Food

Delivery Service: The Implication for Future Research. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, *6*(9), 347-354.

– Troise, C., O'Driscoll, A., Tani, M., & Prisco, A. (2020). Online food delivery services and behavioral intention – a test of an integrated TAM and TPB framework. *British Food Journal*, *123*(2), 664–683. https://doi.org/10.1108/bfj-05-2020-0418

– Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer Acceptance and use of Information technology: Extending the unified theory of acceptance and use of technology. *Management Information Systems Quarterly*, *36*(1), 157. https://doi.org/10.2307/41410412

– Waris, I., Ali, R., Nayyar, A., Baz, M., Liu, R., & Hameed, I. (2022). An Empirical evaluation of customers' adoption of drone food delivery services: an Extended Technology acceptance model. *Sustainability*, *14*(5), 2922. https://doi.org/10.3390/su14052922

– Willie, M. M., Maqbool, M., & Qadir, A. (2024). From click to calories: Navigating the impact of food delivery apps on obesity. *Open Health*, 5(1), 20230022.

– Wu, B., & Xiao-Hui, C. (2017). Continuance intention to use MOOCs: Integrating the technology acceptance model (TAM) and task technology fit (TTF) model. *Computers in Human Behavior*, *67*, 221–232. https://doi.org/10.1016/j.chb.2016.10.028

– Xue, L., Yen, C. C., Chang, L., Chan, H. C., Tai, B. C., Tan, S. B., ... & Choolani, M. (2012). An exploratory study of ageing women's perception on access to health informatics via a mobile phone-based

intervention. *International journal of medical informatics*, *81*(9), 637-648.

– Yang, K., & Forney, J. C. (2013). The moderating role of consumer technology anxiety in mobile shopping adoption: Differential effects of facilitating conditions and social influences. *Journal of Electronic Commerce Research*, *14*(4), 334.

– Yapp & Kataraian (2022). The Impact of Habit on the Continuous Usage Intention of Food Delivery Apps. *Journal of Foodservice Management*, 35(2), 1-14.

– 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. https://doi.org/10.1016/j.jretconser.2016.12.013

– Yuan, C., Zhang, C., & Wang, S. (2022). Social anxiety as a moderator in consumer willingness to accept AI assistants based on utilitarian and hedonic values. *Journal of Retailing and Consumer Services*, *65*, 102878.

– Zaheer, M.A. et al. (2024). Enticing attributes of consumers' purchase intention to use online food delivery applications (OFDAs) in a developing country. *Journal of Electronic Business & Digital Economics*. DOI 10.1108/JEBDE-10-2023-0025.

– Zhao, Y., & Bação, F. (2020). What factors determining customer continuingly using food delivery apps during 2019 novel coronavirus pandemic period? *International Journal of Hospitality Management*, *91*, 102683. https://doi.org/10.1016/j.ijhm.2020.102683