



DOI: <https://doi.org/10.31933/dijms.v5i3>

Received: 17 February 2024, Revised: 22 February 2024, Publish: 27 February 2024

<https://creativecommons.org/licenses/by/4.0/>

Understanding Customer Intention to Use Online Food Delivery Services In The Post-Pandemic Era In Indonesia

Cliff Adam Sugiharto¹, Himawati Cahyu Lestari², Ishmael Lamisi Kananda³, Muhammad Fadhil Ramadhan⁴, Syifa Salsabila⁵

¹Universitas Prasetiya Mulya, Jakarta, Indonesia, Email: cliffadam96@gmail.com

²Universitas Prasetiya Mulya, Jakarta, Indonesia, Email: 2897.himawati@gmail.com

³Universitas Prasetiya Mulya, Jakarta, Indonesia, Email: ishmaelkananda@gmail.com

⁴Universitas Prasetiya Mulya, Jakarta, Indonesia, Email: muhammadfadhilr@gmail.com

⁵Universitas Prasetiya Mulya, Jakarta, Indonesia, Email: syifsabila@gmail.com

Corresponding author: cliffadam96@gmail.com

Abstract: This study aims to explore the factors influencing consumer attitudes and intentions towards using Online Food Delivery (OFD) services in Indonesia. Integrating the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Planned Behavior (TPB), the research evaluates dimensions such as performance expectancy, effort expectancy, social influence, information quality, price-saving, and time-saving orientation. Through a structured online survey of 275 Indonesian respondents, it was found that social influence, price-saving, and time-saving orientation positively impact OFD perceptions. This study provides novel insights into post-COVID-19 pandemic OFD research in Indonesia, albeit limited to respondents in the Jabodetabek area.

Keyword: Online Food Delivery (OFD) Services, Attitude, Intention to use

INTRODUCTION

The COVID-19 pandemic has resulted in a notable change in the commercial domain, emphasizing the significance of online transactions (Alaimo et al., 2020; Galati et al., 2020; Chang and Meyerhoefer, 2020; Troise et al., 2021). Additionally, there has been a swift and substantial growth in worldwide Internet usage. Based on data from Statista (2023), the global population of Internet users has reached an approximate count of 5.18 billion individuals as of April 2023. This figure accounts for approximately 64.6% of the whole global population. Projections suggest that this figure will continue to experience annual growth in the foreseeable future. The increase in the number of individuals using the Internet has resulted in a plethora of

fresh prospects for online enterprises, particularly in the domains of online retail and electronic commerce (Lim et al., 2016).

The proliferation of Internet usage in contemporary society has facilitated the integration of technology and commerce, effectively accommodating the changing needs of individuals and giving rise to innovative business frameworks, such as the online food delivery industry (Hamid et al., 2022; Bezerra et al., 2013; Machado and Pigatto, 2015). Blow et al. (2019) conducted a qualitative study to explore the sociocultural attitudes of Indonesian clients towards online food delivery. The findings of the study revealed a range of motivations for utilizing these services, including convenience, time efficiency, accessibility, and the opportunity for social contacts.

Furthermore, the study also unveiled that the increase in the prevalence of OFDs in Indonesia is intricately linked to the development of the nation's e-commerce industry. Based on the statistical data presented by the Badan Pusat Statistik in 2019, Indonesia had a notable growth rate of 78% in the domain of electronic commerce, thereby establishing its place as the tenth most substantial market for such expansion on a global level. The observed growth trajectory in Indonesia can be ascribed to multiple factors, including the increasing buying power of Indonesian consumers, improved accessibility to the Internet, and increased technological literacy among the Indonesian populace (Annur, 2020a; Annur, 2020b). The e-commerce industry in Indonesia is seeing substantial expansion, which is anticipated to directly influence the market for online food delivery. The current scenario offers advantageous prospects for the food delivery industry since there is a growing need for such services inside the nation.

The concept of Online Food Delivery Service (OFD) pertains to the efficient transportation of the food items that have been requested by customers via websites or mobile applications. This service facilitates the direct delivery of food and beverages from a diverse range of restaurants to the customers' designated location (Pigatto et al., 2017; Ray et al., 2019). There are two primary classifications of providers within this service. The primary category includes well-established fast food franchises, including McDonald's, Pizza Hut, KFC, and Domino's Pizza. The second category encompasses various restaurant intermediaries such as GoFood, GrabFood, ShopeeFood, and Foodpanda. These intermediaries extend delivery services to a wide range of restaurants, thereby offering a diverse selection (Yeo et al., 2017). Online food ordering applications have been developed with sophisticated functionalities to tackle prevalent challenges such as delays in waiting, traffic congestion, misunderstandings, and delivery setbacks. These apps efficiently optimize various tasks including food selection, order placement, payment processing, preparation for contactless delivery, order tracking, and more. Users can conveniently access these features by simply tapping on their mobile phones (Hirschberg et al., 2016; Kapoor and Vij, 2018).

There has been a striking transition from traditional dine-in experiences to the utilization of online platforms for food ordering, which has become more prevalent throughout the years 2020 and 2021. This movement can be attributed to the implementation of strict lockdown measures, as highlighted by Durai (2020). According to Statista, it is projected that the global Food & OFDs delivery market would reach a valuation of US\$ 16 billion by 2023, exhibiting a Compound Annual Growth Rate (CAGR) of 20.03%. This growth is attributed to the substantial impact of the COVID-19 pandemic. The continuation of this growth trajectory is anticipated, leading to a projected market volume of US\$ 33 billion by the year 2027. Furthermore, it is forecasted that the user penetration rate in the food delivery sector would reach 20.3% by 2023. The observed growing trend can be ascribed to the rising demand and prospective expansion of the food delivery sector (EC Insider, 2018; Statista, 2023)

In the context of the expanding Indonesian market, there exists a notable dearth of knowledge pertaining to customer behavior in the realm of online food purchases. This study contributes to the existing body of knowledge by examining the determinants that impact the utilization of Online Food Delivery Services in Indonesia, a nation undergoing development. It is imperative to comprehend the consumer behavior environment and identify the key determinants of success in the Indonesian market. This study endeavors to contribute to the current corpus of knowledge on the subject by examining consumer preferences and discerning significant success factors within the emerging online food delivery industry.

Research on Online Food Delivery (OFD) services has primarily focused on customer behaviors during the COVID-19 pandemic. Hamid, Azhar, and Sujood (2023) investigated consumer tendencies to purchase via e-commerce, using the Theory of Planned Behavior (TPB) and emphasizing trust. Similarly, Karulkar et al. (2021) explored OFD service acceptability, extending the Unified Theory of Acceptance and Use of Technology (UTAUT) with Perceived Control and Hedonic Motivation. However, most studies focus on the pandemic era, with limited examination of post-pandemic trends. Notably, few studies have integrated either TPB or UTAUT into their analysis, indicating a gap in the current research landscape.

The Theory of Planned Behavior (TPB), as emphasized by Bente and van den Putte (2022), is a well-established conceptual framework employed in the study of human behavior. It posits that the immediate antecedent to actions is intention, which is shaped by three fundamental determinants: attitude, subjective norm, and perceived behavioral control. The aforementioned model has been widely employed and thoroughly examined in the context of forecasting Behavioral Intention (BI) (Fielding et al., 2008; Soliman, 2019; Sujood et al., 2021). Moreover, the Unified Theory of Acceptance and Use of Technology (UTAUT) is a theoretical framework utilized to forecast the acceptance of technology. It posits that the inclination to adopt a particular technology is influenced by four fundamental factors: performance expectancy, effort expectancy, social influence, and facilitating conditions. The primary objective of the UTAUT model is to provide a comprehensive understanding of the various elements that impact user intents to engage with an information system, as well as the subsequent usage patterns that emerge as a result. (Venkatesh et al., 2003).

To address the current gaps in research, this study employs an all-encompassing conceptual framework that combines the Theory of Planned Behaviour (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT) models. The primary aim of this research is to examine the inclination of consumers in Indonesia to utilize online food delivery services following the conclusion of the epidemic. The TPB model is employed to offer a full comprehension of the factors that influence customers' perceptions towards online OFDs delivery services. Yeo et al. (2017) emphasize that the criteria encompassed in this study consist of the perceived convenience, value, and safety of the service. The UTAUT model is employed to acquire a more profound comprehension of the determinants that impact customers' perceived behavioral control. Several factors contribute to individuals' adoption of a service, such as the service's availability in their geographic vicinity and their level of proficiency with the associated technology (Lee et al., 2019).

RESEARCH MODEL & HYPOTHESES DEVELOPMENT

Research Methodology

Data collection and measurement items

Google Forms was used to construct an online survey for data collection. The link for the survey was distributed through mailing list broadcast and personal interaction in messaging applications by researchers. from June 17,2023 to August 2, 2023. During this period of time, the Indonesian government had declared COVID-19 an endemic instead of a pandemic. During this time, the number of active cases of COVID-19 was decreasing, from 9,925 on June 17 to 8,245 on August 2. The respondents' nationalities to the survey were all Indonesian.

In this study, a questionnaire with a total of 53 questions that include a filter question and a respondents demographic questions is used. 40 of those items were used to measure the variables with a seven-point Likert scale, where 1 reflects strongly disagree and 7 reflects strongly agree. These items were adapted from previous studies, with five items each to measure subjective norms and perceived behavioral control adapted from Allah Pitchay et al. (2021), five items measuring performance expectancy, four items each measuring effort expectancy, information quality, time-saving orientation, attitude towards OFDs, and intention to use OFDs, three items measuring social influence and price-saving orientation were adapted from Hamid et al., (2022). The sources of each measurement item are enumerated in Table 1, and the items' wording was modified to make them more applicable to the present study. The units of measurement are specified in the appendix.

Table 1: Items used in questionnaire

Construct	No. Items	Source
Subjective Norms	4	Ajzen (1991), Mathieson (1991)
Perceived Behavioral Control	5	Taylor and Todd, 1995)
Performance expectancy	5	Palau-Saumell et al. (2019)
Effort expectancy	4	Palau-Saumell et al. (2019)
Social influence	3	Palau-Saumell et al. (2019)
Information quality	4	Suk Won et al. (2019)
Price-saving orientation	3	Escobar-Rodriguez and Carvajal-Trujillo (2014)
Time-saving orientation	4	Alreck and Settle (2002)
Attitude towards online food delivery services	4	Childers et al. (2001)
Intention to use online food delivery application	4	Suk Won et al. (2019)

Data analysis

The research employed a two-phase strategy to examine the data. Initially, a measurement model was established through confirmatory factor analysis (CFA). This model was subsequently utilized to identify the most fitting structural equation model (SEM) and evaluate the hypotheses. The data were analyzed using SPSS 26. To ensure the clarity and simplicity of the questions, a preliminary test was conducted on 20 responses. Ultimately, 275 responses were gathered, with 3 being excluded due to incomplete data, resulting in a total of 272 valid and employable responses for the study.

Results

1 Demographic Profile

From the data gathered in our research through 272 valid responses, in terms of gender 46.7% were men and 53.3% of respondents are women. In terms of age, most of the respondents are 18-27 years old, 63.2%, and 23.9% are 28-37 years old. On marital status, 66.5% of the respondents are single, and 33.5% are married. For the educational background of our respondents, most of them are undergraduate with bachelor degree (S1) with 66.2%, 18.8% only finished high school, and 9.6% of the respondents are graduate with master degree. In terms of the respondents' status of employment, 42.6% worked in the private sector, 30.5% were university students, 13.2% were entrepreneurs, and 8.1% were housewives. As many as 30.5% of the respondents monthly income is between 5 million rupiah to 10 million rupiah, and 29.8% of the respondents income is under 5 million rupiah. In terms of OFDs service preference, 52.6% of our respondents use Gofood as their primary application of OFD, 36% use Grab Food, and 9.9% of respondents use Shopee Food.

2 Descriptive Results

To process and analyze the descriptive data, SPSS 26 was used. Standard deviation and mean derived from 272 valid responses are shown in table 2. The results gives the picture of the compositions of each dimensions measured, which are subjective norms (SN), perceived behavioral control (PBC), performance expectancy (PE), social influence (SI), effort expectancy (EE), time-saving orientation (TSO), information quality (IQ), attitude towards OFDs (AT), price-saving orientation (PSO), and intention to use OFDs (INT). According to the previous study, the mean value can be divided into three levels: low, moderate, and high. A mean value lower than 3 is considered low, 3 and 5 is considered moderate, and a mean value more than 5 is considered high (Sekaran and Bougie, 2013). Through our analysis, the highest scoring mean is effort expectancy (6.213) and the lowest mean is subjective norms (3.909). For standard deviation, lowest scoring dimension is effort expectancy (0.951) while highest scoring dimension is subjective norms (1.484).

Table 2: Frequency Table (Profile of Respondent)

Demographic variable	Frequency	Valid percentage
<i>Gender</i>		
Male	127	46.67
Female	145	53.33
<i>Age</i>		
Below 18	172	63.2
18-27	65	23.9
28-37	16	5.9
38-47	9	3.3
48-57	5	1.8
Above 57	5	1.8
Total	272	100

<i>Education</i>		
SMA	51	18.75
D3	15	5.51
S1	180	66.18
S2	26	9.56
Total	272	100
<hr/>		
<i>Occupation</i>		
Student	85	31.25
Employed	127	46.69
Businessperson	36	13.24
Unemployed	24	8.82
Total	272	100.00
<hr/>		
<i>Marital Status</i>		
Single	181	66.54
Married	91	33.46
Total	272	100.00
<hr/>		
<i>Monthly Income</i>		
< Rp. 5,000,000	14	5.15
Rp. 5,000,000 - 10,000,000	26	9.56
Rp. 11,000,000 - 15,000,000	20	7.35
Rp. 16,000,000 - 20,000,000	7	2.57
> Rp. 20,000,000	24	8.82
Total	272	100.00
<hr/>		
<i>Frequency of ordering food and beverage items per week</i>		
1-3	185	68.01
4-6	62	22.79
>7	25	9.19
Total	272	100.00

3 Measurement model

We conducted an analysis of the collected data to assess the degree of alignment between the gathered data and the suggested model, employing the two-phase methodology outlined by Anderson and Gerbing (1988). Using confirmatory factor analysis (CFA), the constructs' reliability and discriminant and convergent validity were evaluated and supported in the first step. In the next step, structural equation modeling (SEM) served to validate the hypotheses proposed in this research, with the objective of elucidating the fundamental causes and effects between the latent variables.

Table 3: Descriptive Statistics

Dimension	Mean	Std. Deviation
SN	3.9099	1.48444
PBC	6.1375	1.0457
PE	5.7316	1.12215
EE	6.2132	0.95108
SI	5.7083	1.06257
IQ	5.5202	1.07837
PSO	4.7267	1.29308
TSO	5.6737	1.06041
AT	5.216	1.11099
INT	5.2803	1.24334

Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity (BTS) were conducted to determine whether the sample size was significant for factor analysis. The KMO test measures the sampling adequacy of the data, while the BTS test tests the hypothesis that the variables are not correlated. Hair et al. (2010) and Tabachnick and Fidell (2007) recommend that the KMO value should be greater than 0.6 and the BTS significance level should be less than 0.05 for factor analysis to be appropriate. In this study, the KMO value range between 0.738 - 0.868 and the BTS significance level is 0.000, both of which meet the recommended criteria.

Table 4: KMO

Dimension	KMO	Bartlett Chi Square	Sig.
SN	0.818	655.795	0.000
PBC	0.876	902.071	0.000
PE	0.868	748.924	0.000
EE	0.870	985.627	0.000
SI	0.738	393.052	0.000
IQ	0.810	803.894	0.000
PSO	0.626	203.571	0.000
TSO	0.807	591.222	0.000
AT	0.796	745.021	0.000
INT	0.829	719.958	0.000

Therefore, the sample data is appropriate for factor analysis. In other words, the KMO test indicates that a significant amount occurs among the variables in the data set, which is necessary for factor analysis. The BTS test also shows that the variables are not independent, which is another requirement for factor analysis. Therefore, the sample data is suitable for factor analysis and can be used to identify underlying factors that explain the variation in the data.

In order to measure the internal consistency of the model, evaluation of the coefficient alpha is done. (Cronbach, 1951) suggested if the value of Cronbach alpha exceeds the value of 0.7, the internal consistency of scale is high (Nunnally, 1978). From processing of the data gathered, all Cronbach Alpha values exceed 0.7, ranging from 0.729 to 0.914 (See Table 5).

Hair et al (2016)., suggested that above 0.70 as minimum score for composite reliability, based on Table 5, the result of this study shows that the acceptable range for the composite reliability is between 0.84 and 0.95. The outcome demonstrates strong internal consistency dependability. AVE was employed to assess convergent validity, where the average values of each concept would be more than 0.5. The results also suggest that this study has strong convergent validity, with an AVE ranging from 0.652 to 0.852, above the minimal threshold of 0.5. Internal reliability ranged from 0.801 to 0.931 for all standardized loadings in FLs, which is greater than the minimal cut-off value of 0.70. Henseler et al. (2015) explained that when evaluating discriminant validity, the correlations between different factors are examined using HTMT correlations. Establishing a solid connection among these constructs, as this indicates a favorable correlation value. The findings indicated a positive relationship between the constructs, with all values below 0.90, as advised by Gold et al. (2001). The outcomes of the discriminant validity assessment, meeting the recommended standards, are displayed in Table 7.

The Fornell-Larcker criterion is a method for assessing discriminant validity, which is a statistical measure of how distinct two constructs are from each other (Fornell & Larcker, 1981). The criterion states that the square root of the average variance extracted (AVE) for a construct must be greater than the correlation between that construct and any other construct. From Table 7, the square roots of AVE are written diagonally in italics ranging from 0.808-0.923, showing that the condition is met, meaning the constructs are considered to be discriminant. In other words, the Fornell-Larcker criterion ensures that each construct measures a unique concept and is not simply a reflection of other constructs. This is important for ensuring that the results of a study are valid and reliable. In conclusion, the measurement model has demonstrated satisfactory reliability and validity. Hence, the model is suitable for testing the proposed hypotheses.

Table 5: Measurement Model

Constructs	Items	Factor Loadings	Cronbach Alpha	AVE	CR
<i>Subjective Norms</i>	SN1	0.84	0.895	0.743	0.920
	SN2	0.849			
	SN3	0.885			
	SN4	0.872			
<i>Perceived Behavioral Control</i>	PBC1	0.805	0.902	0.732	0.932

	PBC2	0.806			
	PBC3	0.845			
	PBC4	0.907			
	PBC5	0.908			
<i>Performance Expectancy</i>	PE1	0.804	0.889	0.697	0.920
	PE2	0.888			
	PE3	0.813			
	PE4	0.866			
	PE5	0.801			
<i>Effort Expectancy</i>	EE1	0.918	0.942	0.852	0.958
	EE2	0.917			
	EE3	0.926			
	EE4	0.931			
<i>Social Influence</i>	SI1	0.880	0.868	0.791	0.919
	SI2	0.893			
	SI3	0.895			
<i>Information Quality</i>	IQ1	0.882	0.914	0.809	0.944
	IQ2	0.922			
	IQ3	0.896			
	IQ4	0.898			
<i>Price-Saving Orientation</i>	PSO1	0.857	0.729	0.652	0.848
	PSO2	0.685			
	PSO3	0.868			
<i>Time-Saving Orientation</i>	TSO1	0.845	0.88	0.737	0.918
	TSO2	0.900			
	TSO3	0.859			
	TSO4	0.828			
<i>Attitude</i>	AT1	0.87	0.905	0.780	0.934
	AT2	0.894			
	AT3	0.867			
	AT4	0.901			

<i>Intention</i>	INT1	0.902	0.904	0.781	0.935
	INT2	0.866			
	INT3	0.915			
	INT4	0.851			

Table 6: Result of Collinearity

Dependant Variable	Independent Variable	VIF
Attitude	Performance Expectancy	2.895
	Effort Expectancy	2.336
	Social Influence	2.212
	Information Quality	2.458
	Price-Saving Orientation	1.395
	Time-Saving Orientation	3.237
Intention	Subjective Norms	1.049
	Perceived Behavioral Control	1.164
	Attitude	1.206

Table 7:

Discriminant Validity (HTMT)

	SN	PBC	PE	EE	SI	IQ	PSO	TSO	AT	INT
SN	0.862									
PBC	0.108	0.855								
PE	0.292**	0.568**	0.835							
EE	0.052	0.754**	0.649**	0.923						
SI	0.173**	0.502**	0.558**	0.624**	0.889					
IQ	0.161**	0.469**	0.639**	0.627**	0.685**	0.900				
PSO	0.165**	0.240**	0.427**	0.278**	0.390**	0.389**	0.808			
TSO	0.212**	0.536**	0.778**	0.663**	0.582**	0.648**	0.494**	0.858		
AT	0.215**	0.374**	0.608**	0.472**	0.548**	0.566**	0.586**	0.679**	0.883	
INT	0.295**	0.356**	0.610**	0.431**	0.481**	0.499**	0.506**	0.619**	0.725**	0.884

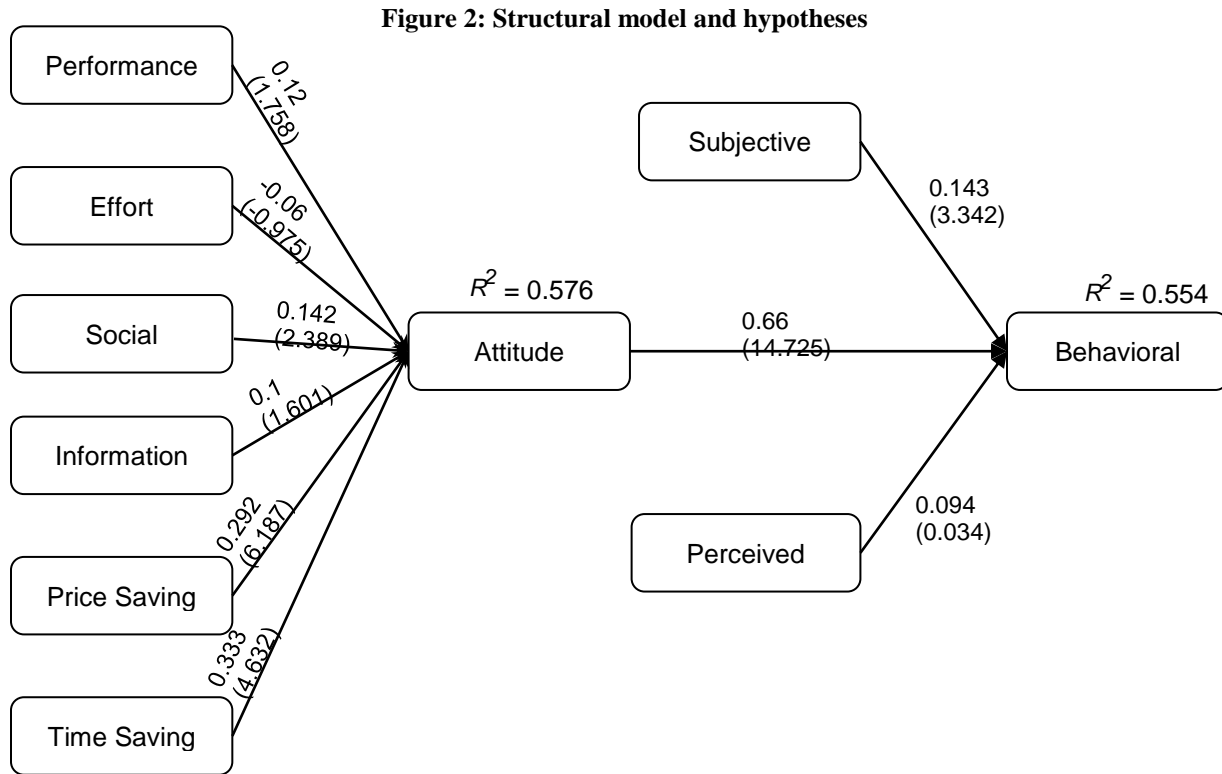


Table 8: Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Sig (P-Value)	Decision	R ²
H1	PE -> Attitude	0.12	0.067	1.758	0.08	NS	0.576
H2	EE -> Attitude	-0.06	0.071	-0.975	0.33	NS	
H3	SI -> Attitude	0.142	0.062	2.389	0.018	S	
H4	IQ -> Attitude	0.1	0.065	1.601	0.111	NS	
H5	PSO -> Attitude	0.292	0.041	6.187	0.000	S	
H6	TSO -> Attitude	0.333	0.075	4.632	0.000	S	
H7	SN -> Intention	0.143	0.035	3.432	0.001	S	0.554
H8	PBC -> Intention	0.094	0.052	2.127	0.034	S	
H9	AT -> Intention	0.66	0.05	14.725	0.000	S	

4 Structural Model

1. Lateral Collinearity Assessment

In accordance with Hair et al. (2016), to be acceptable, VIF has to be valued at 5 or less. If it is more than five, it may indicate that the independent variable in the model is correlated, which makes matching the model and interpreting the findings difficult. As it shows in Table 6, in this study all the independent variables are less than 5, indicating that lateral multicollinearity is not a cause for worry.

2. Path Analysis

The standard regression coefficient, also known as the route coefficient, is utilized to analyze the direct effect of an independent variable on a dependent variable. Moreover, the value of the coefficient indicates the impact it will convey. The better the outcome, the stronger the relationship. Simultaneously, Path coefficient methods were used to investigate the connection and the direction for the study's hypotheses. A full collinear is described by Anderson and Gerbing (1988) as having a correlation coefficient of 1. The hypotheses examined were confirmed after the model's validity was determined. The R^2 value will be used to determine the coefficient and significance level for a beta (Hair et al., 2011). In this study, the value of R^2 for the intention to use an OFDs is 0.554, which means 55.4% of the variance of intention can be explained by subjective norms, attitude and perceived behavior control. Meanwhile, the value of attitude's R^2 is 0.576, which means 57.6% of the variance of attitude can be explained by performance expectancy, effort expectancy, social influence, information quality, price-saving orientation and time-saving orientation. From processing this data, the results indicate social influence ($\beta=0.142$, $t\text{-value}=2.389$, $p<0.05$), price-saving orientation ($\beta=0.292$, $t\text{-value}=6.187$, $p<0.001$), and time-saving orientation ($\beta=0.333$, $t\text{-value}=4.632$, $p<0.001$) positively influence the attitude, but performance expectancy ($\beta=0.12$, $t\text{-value}=1.758$), effort expectancy ($\beta=-0.06$ $t\text{-value}=-0.975$) and information quality ($\beta=0.1$, $t\text{-value}=1.601$) are not positively related to attitude. Subjective norm ($\beta=0.143$, $t\text{-value}=3.432$, $p<0.05$), perceived behavioral control ($\beta=0.094$, $t\text{-value}=2.127$, $p<0.05$) and attitude influence ($\beta=0.66$, $t\text{-value}=14.725$, $p<0.001$) positively towards behavioral intention. Therefore, all results are shown in Table 8.

DISCUSSION & CONCLUSION

The purpose of this study is to look into the various factors that could impact consumers' intentions and behavior when using Online Food Delivery services (OFDs). Service in the post-pandemic era in Indonesia by applying the TPB and UTAUT model. The escalating prevalence of online food ordering services in Indonesia can be attributed to the substantial proliferation of cost-effective mobile devices such as smartphones and tablets within the domestic market, coupled with convenient access to high-speed Internet and broadband infrastructures. Moreover, the advent of the COVID-19 pandemic prompted a significant surge in the e-commerce sector, evidenced by escalated sales via online platforms, as individuals adhered to social distancing protocols and embraced remote purchasing practices from the safety of their residences. In addition to pandemic-induced trends, the utilization of e-commerce platforms for food and beverage transactions addresses diverse personal and societal imperatives of consumers, aligning with evolving lifestyle preferences and broader societal shifts. (Cho et al., 2019).

The Theory of Planned Behaviour (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT) have been extensively investigated in numerous prior studies. However, there has been limited research conducted on the period following the pandemic, and there is a lack of integration with the Theory of Planned Behaviour (TPB) and the Unified

Theory of Acceptance and Use of Technology (UTAUT) in order to identify behavioral intents. The study sought to determine the relationship between attitude and behavioral intention in the post-pandemic era within the context of Indonesia, based on the available knowledge in the field.

This study's findings reveal a favorable correlation between attitude towards OFDs and factors such as social influence, price-saving orientation, and time-saving orientation. This implies that individuals are inclined to exhibit a favorable disposition towards OFDs when they perceive social approval from their acquaintances and relatives, perceive potential cost savings, and perceive potential time savings. Nevertheless, the variables of performance expectancy, effort expectancy, and information quality did not exhibit a significant correlation with the attitude regarding OFDs.

Furthermore, the research revealed that subjective norms, perceived behavior control, and attitude had positive correlations with the intention to utilize OFDs in the post-COVID-19 era. This finding indicates that individuals are more inclined to express an intention to utilize an internet-based food delivery platform when they perceive social approval from their acquaintances and relatives, possess self-efficacy in utilizing the service, and have a favorable attitude towards it. Moreover, similar findings were offered by other scholars. (Mainardes et al., 2020; Troise et al., 2020; Grandon et al., 2011)

Implications

Theoretical implications

Based on the theoretical frameworks of UTAUT (Unified Theory of Acceptance and Use of Technology) and TPB (Theory of Planned Behaviour), the present study examined a range of variables that influence the utilization of OFDs in the context of Indonesia. Consequently, through an analysis of the influence of performance expectations, effort expectations, social influence, information quality, price-saving orientation, and time-saving orientation on attitudes towards OFDs, as well as the impact of subjective norms and perceived behavioral control to the intention to use OFDs, the findings of this research provide a valuable addition to the expanding literature body concerning OFDs. This study contributes to the current amount of research on the behavioral intention to engage in e-commerce for the purpose of ordering food and drink products. To the best of our knowledge, there is currently no existing study that has specifically investigated the influence of trust on behavioral intention in the context of buying food and drink goods through OFDs platforms after the outbreak of the COVID-19 pandemic, particularly within the Indonesian setting. The present study addresses this gap by offering an established conceptual framework that can be used as a valuable resource for future scholars and researchers. The study may also be used to conduct a comparative analysis on the factors that influence both attitude and intention to utilize OFDs prior to, during, and post the outbreak of the COVID-19 pandemic.

Additionally, the study looked into what criteria persuade consumers in many nations, including Indonesia, to use OFD services. Different researchers may use the elements used for this analysis to perform further research in different contexts, such as online shopping, hospitality and travel, food services, and ride hailing businesses.

Since Indonesia is currently going through a significant phase of digitization, more people are expected to use OFDs. In order to explore Indonesia's OFD application area, the current study is one of the pioneering efforts. As a result, the amount of knowledge created by this study gives future researchers a new framework on which to investigate the variables that influence between attitude and OFDs

Practical implications

The present study contributes to the existing body of knowledge and enhances the skill set of those engaged in the shared economy, as well as those who run restaurants and companies that provide OFD services. The findings of this study also assist those parties in developing a more comprehensive grasp of the idea and various functions of employing food delivery services and food delivery applications. The results of this study should help food delivery service providers and restaurant owners understand that social influence, a focus on cost- and time-savings, subjective norms, perceived behavioral control, and attitudes towards using OFDs are key factors in the success of OFD services and applications.

From these results, companies in this industry have to focus on these variables to maintain and increase greater acceptance and adoption after COVID-19 ended. The result of this study could also be useful in other industries such as start-up businesses, political movements, and government authorities giving services to the community. Furthermore, the study's conclusions may be important for advertisers and marketers who seek to broaden their consumer base. Finally, our research will offer competitive guidance to foreign enterprises, particularly those seeking to grow their OFDs operations in developing countries.

Limitation & future directions

The current study possesses certain limitations that may provide valuable insights for guiding future research initiatives. This study was carried out in Indonesia, a country that faces technological obstacles and internet access limitations, resulting in limited e-commerce accessibility for certain areas. Therefore, It is necessary to acknowledge that the outcomes of this study may possess limited capacity to be generalized to other countries and could exhibit variations based upon the level of development within each respective country. Potential future research initiatives may involve conducting studies in other nations to examine the applicability of the concept within an e-commerce context.

The factors that contributed were identified using the Theory of Planned Behaviour (TPB) model and the Unified Theory of Acceptance and Use of Technology (UTAUT). Future research could include additional variables and measure the interaction between TPB, UTAUT, and the theory of perceived risk. Further concepts, such as the technology acceptance model (TAM), theory of perceived risk (Bauer's, 1967), and elaboration-likelihood model (Petty & Wagner, 1999), may be used as well to support e-commerce enterprises develop innovative strategies.

The data utilized in this study was obtained from a sample of 272 participants, as a result of the time limitations imposed on this research. Following researchers have the potential of gathering data from a more expansive number of samples, which may produce different outcomes. The research also revealed that performance expectancy, effort expectancy, and information quality were not shown to have a significant impact on individuals' attitudes towards using OFDs. This finding may not be generalizable to other countries, and future studies could investigate the impact of cultural differences on outcomes.

An important limitation of the study was the difficulty in attracting OFD users outside Jabodetabek area to participate in the survey. 88.6% of the respondents were living in Jabodetabek area, making this study not too representative to other areas in Indonesia. Future studies could use other data collection methods that further represent the overall Indonesia area.

This study has a number of limitations that could help future e-commerce research. Further studies could be conducted in other nations, incorporate additional variables, and

implement larger sample sizes. They might also integrate additional theories and employ alternative data collection methods. Future studies could aid e-commerce companies in developing new strategies and enhancing the consumer experience by addressing these limitations.

REFERENCES

- Ajzen, I. (1991, December). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2002), “Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior”, *Journal of Applied Social Psychology*, Vol. 32 No. 4, pp. 665-683.
- Ajzen, I. and Madden, T.J. (1986), “Prediction of goal-directed behavior: attitudes, intentions, and perceived behavioral control”, *Journal of Experimental Social Psychology*, Vol. 22 No. 5, pp. 453-474.
- Alaimo, L.S., Fiore, M. and Galati, A. (2020), “How the covid-19 pandemic is changing online food shopping human behavior in Italy”, *Sustainability*, Vol. 12 No. 22, p. 9594, doi: 10.3390/su12229594.
- Alalwan, A.A., Dwivedi, Y.K., Rana, N.P. and Algharabat, R. (2018), “Examining factors influencing Jordanian customers’ intentions and adoption of internet banking: extending UTAUT2 with risk”, *Journal of Retailing and Consumer Services*, Vol. 40, pp. 125-138.
- Ali, I., Rehman, K.U., Yilmaz, A.K., Nazir, S. and Ali, J.F. (2010), “Effects of corporate social responsibility on consumer retention in the cellular industry of Pakistan”, *African Journal of Business Management*, Vol. 4 No. 4, pp. 475-485.
- Allah Pitchay, A., Ganesan, Y., Zulkifli, N. S., & Khaliq, A. (2021, July 20). Determinants of customers’ intention to use online food delivery application through smartphone in Malaysia. *British Food Journal*, 124(3), 732–753. <https://doi.org/10.1108/bfj-01-2021-0075>
- Chang, H.-H. and Meyerhoefer, C. (2020), “COVID-19 and the Demand for Online Food Shopping Services: Empirical Evidence from Taiwan”, NBER Working Papers 27427, National Bureau of Economic Research.
- Chen, C. C., Leon, S., & Nakayama, M. (2018). Converting music streaming free users to paid subscribers: social influence or hedonic performance. *International Journal of Electronic Business*, 14(2), 128. <https://doi.org/10.1504/ijeb.2018.094870>
- Chiu, C., Wang, E. T. G., Fang, Y., & Huang, H. (2012). Understanding customers’ repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85–114. <https://doi.org/10.1111/j.1365-2575.2012.00407>.
- Escobar-Rodriguez, T. and Carvajal-Trujillo, E. (2014), “Online purchasing tickets for low cost carriers: an application of the unified theory of acceptance and use of technology (UTAUT) model”, *Tourism Management*, Vol. 43, pp. 70-88.
- Fanoberova, A. and Kuczkowska, H. (2016), “Effects of source credibility and information quality on attitudes and purchase intentions of apparel products”, Master’s thesis, Umeå School of Business and Economics, available at: <https://umu.diva-portal.org/smash/get/diva2:946730/FULLTEXT01.pdf>.
- Fishbein, M. and Ajzen, I. (1975), “Belief, attitude, intention, and behavior: an introduction to theory and research”, *Philosophy and Rhetoric*, Vol. 10 No. 2, pp. 177-188.
- Fiske, S.T. and Taylor, S.E. (1991) *Social Cognition*. 2nd Edition, McGraw-Hill, New York. -
References - Scientific Research Publishing. (n.d.).

- [https://www.scirp.org/\(S\(i43dyn45teexjx455qlt3d2q\)\)/reference/ReferencesPapers.aspx?ReferenceID=2168657](https://www.scirp.org/(S(i43dyn45teexjx455qlt3d2q))/reference/ReferencesPapers.aspx?ReferenceID=2168657)
- Freeze, R.D., Alshare, K.A., Lane, P.L. and Wen, H.J. (2019), “IS success model in e-learning context based on students’ perceptions”, *Journal of Information Systems Education*, Vol. 21 No. 2, p. 4.
- Galati, A., Crescimanno, M., Vrontis, D. and Siggia, D. (2020), “Contribution to the sustainability challenges of the food-delivery sector: finding from the Deliveroo Italy case study”, *Sustainability*, Vol. 12 No. 17, p. 7045, doi: 10.3390/su12177045.
- Gao, X., Shi, X., Guo, H. and Liu, Y. (2020), “To buy or not buy food online: the impact of the COVID-19 epidemic on the adoption of e-commerce in China”, *PloS One*, Vol. 15 No. 8, pp. 1-14.
- Ghasemaghaei, M. and Hassanein, K. (2019), “Dynamic model of online information quality perceptions and impacts: a literature review”, *Behaviour and Information Technology*, Vol. 38 No. 3, pp. 302-317.
- Gopi, M., & Ramayah, T. (2007). Applicability of theory of planned behavior in predicting intention to trade online. *International Journal of Emerging Markets*, 2(4), 348–360. <https://doi.org/10.1108/17468800710824509>
- Hair, J.F. Jr, Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed., Sage, Thousand Oaks.
- Hamid, S., Azhar, M., & Sujood, N. (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. <https://doi.org/10.1108/bfj-03-2021-0338>
- Hansen, T., Jensen, J.M. and Solgaard, H.S. (2004), “Predicting online grocery buying intention: a comparison of the theory of reasoned action and the theory of planned behavior”, *International Journal of Information Management*, Vol. 24 No. 6, pp. 539-550.
- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), “A new criterion for assessing discriminant validity in variance-based structural equation modeling”, *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135.
- 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. <https://doi.org/10.1016/j.ijhm.2019.03.002>
- Internet and social media users in the world 2023 | Statista. (2023, May 22). Statista. <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- Jensen, J. M. (2011). Shopping orientation and online travel shopping: The role of travel experience. *International Journal of Tourism Research*, 14(1), 56–70. <https://doi.org/10.1002/jtr.835>
- Jung, K., Cho, Y.C. and Lee, S. (2014), “Online shoppers’ response to price comparison sites”, *Journal of Business Research*, Vol. 67 No. 10, pp. 2079-2087.
- Karulkar, Yashodhan & Pahuja, Japmman & Uppal, Balvinder Singh & Sayed, Sarim. (2021). Examining UTAUT model to explore consumer adoption in Online Food Delivery (OFD) services. *Pramana*.
- Khechine, H., Lakhal, S., Pascot, D. and Bytha, A. (2014), “UTAUT model for blended learning: the role of gender and age in the intention to use webinars”, *Interdisciplinary Journal of E-Skills and Lifelong Learning*, Vol. 10, pp. 033-052, doi: 10.28945/1994.

- Lee, E. Y., Lee, S. B., & Jeon, Y. J. J. (2017). Factors influencing the behavioral intention to use food delivery apps. *Social Behavior and Personality*, 45(9), 1461–1473. <https://doi.org/10.2224/sbp.6185>
- Mathieson, K. (1991), “Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior”, *Information Systems Research*, Vol. 2 No. 3, pp. 173-191.
- Okumus, B., Ali, F., Bilgihan, A. and Ozturk, A.B. (2018), “Psychological factors influencing customers’ acceptance of smartphone diet apps when ordering food at restaurants”, *International Journal of Hospitality Management*, Vol. 72, pp. 67-77.
- Oliveira, T., Faria, M., Thomas, M.A. and Popovic, A. (2014), “Extending the understanding of mobile banking adoption: when UTAUT meets TTF and ITM”, *International Journal of Information Management*, Vol. 34 No. 5, pp. 689-703.
- Palau-Saumell, R., Matute, J., Derqui, B. and Meyer, J.-H. (2021), “The impact of the perceived risk of COVID-19 on consumers’ attitude and behavior toward locally produced food”, *British Food Journal*, Vol. 123 No. 13, pp. 281-301.
- Piroth, P., Ritter, M.S. and Rueger-Muck, E. (2020), “Online grocery shopping adoption: do personality traits matter?”, *British Food Journal*, Vol. 122 No. 3, pp. 957-975.
- Pitchay, A. A., Ganesan, Y., Zulkifli, N. S., & Khaliq, A. (2021). Determinants of customers’ intention to use online food delivery application through smartphone in Malaysia. *British Food Journal*, 124(3), 732–753. <https://doi.org/10.1108/bfj-01-2021-0075>
- Poon, W. C., & Tung, S. E. H. (2022). The rise of online food delivery culture during the COVID-19 pandemic: an analysis of intention and its associated risk. *European Journal of Management and Business Economics*. <https://doi.org/10.1108/ejmbe-04-2021-0128>
- Pozzebon, M. (2003). Future of information systems. In Elsevier eBooks (pp. 391–401). <https://doi.org/10.1016/b0-12-227240-4/00075-7>
- Ray, A., Dhir, A., Bala, P.K. and Kaur, P. (2019), “Why do people use food delivery apps (FDA)? A uses and gratification theory perspective”, *Journal of Retailing and Consumer Services*, Vol. 51, pp. 221-230.
- Rese, A., Schreiber, S. and Baier, D. (2014), “Technology acceptance modeling of augmented reality at the point of sale: can surveys be replaced by an analysis of online reviews?”, *Journal of Retailing and Consumer Services*, Vol. 21 No. 5, pp. 869-876.
- Saad, A. T. (2020). Factors affecting online food delivery service in Bangladesh: an empirical study. *British Food Journal*, 123(2), 535–550. <https://doi.org/10.1108/bfj-05-2020-0449>
- Shaikh, A.A., Glavee-Geo, R. and Karjaluto, H. (2018), “How relevant are risk perceptions, effort, and performance expectancy in mobile banking adoption?”, *International Journal of E-Business Research (IJEBR)*, Vol. 14 No. 14(2), pp. 39-60.
- Statista. (2023). Mobile internet usage worldwide | Statista Market forecast. <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- Statista. (2023). Online Food Delivery - Indonesia | Statista Market forecast. <https://www.statista.com/outlook/dmo/online-food-delivery/indonesia>
- Swaid, S.I. and Wigand, R.T. (2009), “Measuring the quality of e-service: scale development and initial validation”, *Journal of Electronic Commerce Research*, Vol. 10 No. 1, pp. 13-28.
- Tolstoy, D., Nordman, E. R., Hånell, S. M., & Özbek, N. (2021). The development of international e-commerce in retail smes: An effectuation perspective. *Journal of World Business*, 56(3), 101165. <https://doi.org/10.1016/j.jwb.2020.101165>

- Troise, C., O’Driscoll, A., Tani, M. and Prisco, A. (2021), “Online food delivery services and behavioural intention – a test of an integrated TAM and TPB framework”, *British Food Journal*, Vol. 123 No. 2, pp. 664-683, doi: 10.1108/BFJ-05-2020-0418.
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003), “User acceptance of information technology: toward a unified view”, *MIS Quarterly*, pp. 425-478.
- Venkatesh, V. (2012, February 9). Consumer Acceptance and use of Information technology: Extending the unified theory of acceptance and use of technology. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2002388
- Widayat, W. and Arifin, Z. (2020), “Attitude and behavior on daily food purchasing decisions in the time of COVID-19: a case study of Indonesia consumers”, *Jurnal Inovasi Ekonomi*, Vol. 5 No. 2, pp. 37-44.
- Wu, S. (2003). The relationship between consumer characteristics and attitude toward online shopping. *Marketing Intelligence & Planning*, 21(1), 37–44. <https://doi.org/10.1108/02634500310458135>
- Yeo, V.C.S., Goh, S.K. and Rezaei, S. (2017), “Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services”, *Journal of Retailing and Consumer Services*, Vol. 35 December, pp. 150-162, doi: 10.1016/j.jretconser.2016.12.013.
- Yusoff, M.H., Amayreh, K.T., Ismail, R.C., Hatamleh, A., Karim, R., Mohamed, R.R. and El-Ebiary, Y.A.B. (2021), “Food and beverage in Covid-19, shopee in online shop Brooklyn. Store”, *Annals of the Romanian Society for Cell Biology*, Vol. 25 No. 4, pp. 7746-7753.
- Zhou, J., Rau, P. P., & Salvendy, G. (2013). Older adults’ use of smart phones: an investigation of the factors influencing the acceptance of new functions. *Behaviour & Information Technology*, 33(6), 552–560. <https://doi.org/10.1080/0144929x.2013.780637>