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Factors Affecting Customers' Intention to Use Online Food Delivery Services: An Empirical Assessment

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ABSTRACT

This paper aims to examine the factors that influence customer's intention to use online food delivery services using the survey. Quantitative research methods, namely survey research, have been used. The study approach included a Google Forms-based online survey of 100 respondents, then analyzed using IBM SPSS Version 26. The data was collected from a fairly wide age range, occupational backgrounds, and income level. The results indicate that perceived convenience has the most statistically significant impact on the dependent variable (intention to use). Price and delivery time also significantly impact customers' intention to use OFD services. Perceived ease to use has little influence on the dependent variable. However, the attitude of the delivery person and the condition of the food delivered did not significantly influence customers' intention to use OFD services.

Keywords: Customers' Intention to Use, Delivery Time, Online Food Delivery Services, Perceived Convenience, Price, Perceived Ease of Use

INTRODUCTION

According to Widjaja and Giovanni (2018), online to offline (O2O) is one of the types of e-commerce that mix the advantages of online and physical commerce. It is currently expanding in the use of online food delivery (OFD) services nowadays. With wireless technology for consumers, intelligent payment methods, and easy access to internet information, online food delivery has recently grown in popularity (Guan, 2020). According to We are Social, as of January 2021, Indonesia has the highest percentage of interested people that use food delivery applications (74.4 percent), followed by Brazil (66.6 percent) and Malaysia (66.5 percent) (Lidwina, 2021).

From a Grab survey, 72 percent of users ordered family food menus in Indonesia. Families with children are the primary users of online meal delivery businesses (Rosana, 2021). There was also 54 percent of consumers looking for new food and restaurants

through the food delivery application. Another survey from Katadata Insight Center (KIC) mentioned that 44 percent of the users were new users after the pandemic outbreak. Ninety percent of them also prefer continuous usage in the future (Rahajeng, 2021). This demonstrates that the epidemic has already enlarged Indonesia's online food delivery sector, and it seems to be expanding over time. Kee et al. (2021) also indicated the potential to enter the food delivery services market during a pandemic.

It has also become common in Malaysia to have food delivered to your home through an online service after being attacked by the Covid-19 pandemic. According to Muhyiddin Yassin, Malaysia's former Prime Minister, the country's economy would be irreparably harmed, with the nation losing an approximate MYR 2.4 billion per day during the Movement Control Order (MCO). Many Malaysians had lost their jobs and were scrambling to find new ones to support their families. As an alternate source of income, 25% of Grab Car Drivers have switched to being riders to assist deliveries (Mustapa, Anuar, & Piah, 2021).

MCO also alters Malaysia's lifestyles, as many are accustomed to staying at home. They are also not permitted to dine out or go outside for recreational purposes. Food delivery will be the greatest option for them to obtain fresh and healthy food promptly. Delivery technologies aided in overcoming the obstacles of Covid-19 and delivering high-quality, safe food to clients at home (Li, Mirosa, & Bremer, 2020). According to research, people demand food for delivery because of convenience (Kimes, 2011). As a result, the usage of food delivery is becoming more common and preferable among Malaysians. A Grad Food spokesperson mentioned that delivery services had boosted by around 30% compared to the prior week before the MCO was enforced. During the MCO, almost 8000 restaurants signed up with the platform to increase their sales (Nathan, 2020).

Technological advancements allow people to purchase food online through food delivery apps using mobile phones. Consumers may select their meals from a variety of selections and track their orders. The application is also appropriate and straightforward for generation Z, millennial, generation Y, and even baby boomers. Different payment options, such as online banking transactions or cash-on-delivery (COD), are also available. They can simply purchase their meals. The feedback section may also allow employers to connect with their customers and enhance their services. Therefore, consumers can easily acquire product information in seconds, and the feedback from other customers also becomes a good source for them to use OFD services (Aryani et al., 2021).

As the online meal delivery market is extremely competitive, industries such as Food Panda, Grab Food, and Lalamove struggle to perform effectively and enhance their services to capture consumers' hearts. The rating at the applications shows the consumer's satisfaction with the online food delivery industry (Kamilah et al., 2020). Customers who are satisfied with a specific delivery service may intend to use it again in

the future or may promote it to others (Anderson & Srinivasan, 2003). In order to enhance the chances of repurchasing their products or services, organizations must give consumer value by engaging consumers in long-term relationships (Mai & Ness, 2006). Greer (2015) also highlighted in their study as the customer's experience is more valuable than self-promotion. Lau and Ng (2019) found that perceived convenience (PC) influences the intention to use online food delivery but perceived ease of use (PEOU) is not. According to Tausif Saad (2021), delivery time, cost, and the condition of the food served all directly influence the success of online meal delivery. Perceived convenience is the primary reason they use OFD services (Yeo, Goh, S. K., & Rezaei, 2017). Based on the gap research above, this paper examines the factors influencing customer intention to use online food delivery services.

LITERATURE REVIEW

Online Food Delivery Service

Online food delivery (OFD) is defined as "the process whereby food that was ordered online is prepared and delivered to the consumer" (Lin, 2020, p. 3). There is a growing demand for online food ordering as people's schedules get busier, and they have less time to dine out or prepare a meal at home (Chen & Hsieh, 2017). Face-to-face interaction is being phased out from online retail purchases in favor of engagement through mobile phone applications and internet-based communication tools such as e-mail, chat, SMS, and company websites (Cai & Jun, 2003). On an OFD service platform, a consumer places an order from various restaurants and pays for the order through its phone apps or website. The restaurant gets this order and prepares the meals. Finally, a delivery driver will pick up the order and bring it to the customer. The app allows customers to track the progress of their orders and communicate with their drivers. OFD services provide a variety of perks to its consumers, featuring no waiting in line, no travel for pick-up and no order miscommunication (Hong, Choi, Choi, & Joung, 2021).

Customer's Intention to Use Online Food Delivery Services

Customers' intention to consume online food delivery services is measured by their desire to order food through mobile applications (Ling, Chai, & Piew, 2010). Some of the online food delivery services companies, such as Grab Food and Food Panda, have made online food ordering more accessible and convenient for customers. Customer demand for OFD services has risen dramatically in recent years, and it is projected to rise consistently. The overall revenue of the worldwide OFD service market is predicted to exceed $107.4 billion in 2019 and approach $182.3 billion by 2024 (Statista, 2020). Furthermore, the OFD market has received increased global attention due to its non-physical food ordering and systematic delivery method, thus it is anticipated to continue drawing new customers (Hong et al., 2021).

Predictors of Customer Intention to Use Online Food Delivery Services

Price

Online food ordering is a rapidly growing industry worldwide, and it is also a relatively new phenomenon in Malaysia. Users are price-conscious when it comes to online meal delivery services. The popularity of online meal delivery services is increasing due to several perks such as delivering food to customers' doorsteps, multiple payment options, appealing discounts, incentives, and cashback offers. Customers may explore around in virtual online stores to discover the greatest offer. Price, product quality, and service quality significantly influence customer satisfaction and customer choice (Andaleeb and Conway, 2006; Morganti, Seidel, Blanquart, Dablanc, & Lenz, 2014; Parasuraman et al., 1994).

H1: Price positively influences customers' intention to use online food delivery services.

The attitude of the Delivery Person

As online ordering becomes more prevalent, the demand for safe and dependable delivery drivers has increased proportionately. The delivery person is responsible for delivering high-quality foods safely, courteously, and timely to the consumers. Before performing the delivery, the delivery person must review and verify invoices and purchase orders for accuracy (Monster, 2021). The delivery person can contact consumers to confirm delivery specifics such as the precise location of the pickup foods, the pickup time, and so forth. It may increase customers' intention to purchase online food delivery services if the delivery person can establish and maintain excellent relationships with customers.

H2: The delivery person’s attitude positively influences customers’ intention to use online food delivery services.

Delivery Time

In the e-commerce market, delivery time is a critical aspect of consumer satisfaction and retention (Kedah, Ismail, Haque, & Ahmed, 2015). Compared to traditional offline buying, Sultan and Uddin (2011) discovered that many consumers believe that internet buying takes less time since they do not have to waste time traveling. Any delivery delay that exceeds the intended delivery time, regardless of road or weather circumstances, reduces customer satisfaction. Due to the short time between making orders and receiving purchased things, delivery has become increasingly important in non-store retail, particularly online shopping (Dholakia & Zhao, 2010). There must be an understanding of all possible routes to guarantee timely delivery (Chandrasekhar, Gupta, & Nanda, 2019).

H3: Delivery time positively influences customers' intention to use online food delivery services.

Food Condition

The condition of food delivered is linked to the online food delivery services. Healthful, fresh, well-presented, and well-cooked are all aspects that influence customer satisfaction and their decision to repurchase (Kedah et al., 2015). The primary hurdle to food e-commerce is delivery. Foods that perish or spoil quickly challenge the person in charge of delivery since they need to be transported safely to consumers' homes (Morganti et al., 2014). Online shoppers' satisfaction is determined by the accuracy of delivering goods to their homes (Hsu, 2008). Food delivery companies who offer extra online food delivery services should remember that reliable delivery is a vital strategy for creating customers' desire to consume online food delivery services.

H4: Delivered food condition positively influences customers' intention to use online food delivery services.

Perceived Ease of Use

According to research conducted by the Interactive Advertising Bureau and Viggle, nearly 70% of clients purchase meals online using a mobile device. Hence, how easy the online food delivery application is, is one of the features that every user is concerned about. First of all, there are several eateries to choose from. Customers can easily access rebates and special offers. Online food delivery applications ensure that customers can make seamless payments through various mediums, including online banking and cash on delivery. Another attractive function of the system is that the users can use the "Schedule Later" feature to postpone the delivery until they are ready to eat. Reordering is simple so that users may order their favorite meals with little effort.

H5: Perceived ease of use positively influences customers' intention to use online food delivery services.

Perceived Convenience

The recent trend to catch up is the online food delivery system. With people's fast-paced lifestyles, there seems to be no time to cook or even dine in a restaurant for a luxury three-course meal, unless it is for a special event such as an anniversary or a birthday. People prefer online food ordering using numerous applications and services available on platforms to multitask and save time and money. One of the primary reasons online ordering has been so successful is that it enables restaurants to offer 24-hour food delivery services. Customers are welcome to indulge in a midnight snack whenever they like. Customers benefit from online food delivery services since they can enjoy their meals without waiting, standing in line, or taking out. The waiting period might be well utilized by completing other duties around the house or at work (Londis of Salem, 2021). Hence, perceived convenience is vital in determining customers' intention to use online food delivery services.

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H6: Perceived convenience positively influences customers' intention to use online food delivery services.

According to the above literature review, a research framework is constructed (see Figure 1) to examine some of the predicted components influencing consumers' intention to use online food delivery service. The study consists of six variables: the independent variables are price (P), The delivery person's attitude (ADP), delivery time (DT), condition of food delivered (CFD), perceived ease of use (PEU), and perceived convenience (PC) while the dependent variable is intention to use (IU).

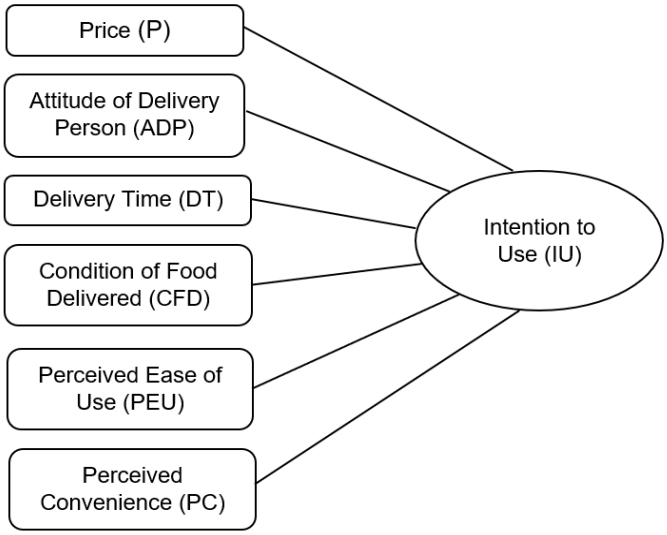

Figure 1. Research Framework

RESEARCH METHOD

In this study, we conducted empirical research, through which we can identify whether the hypothesis made based on the theory is supported or not (Goodwin, 2005). While conducting the study, quantitative and qualitative methods were used to collect and analyze data. The respondents of this study consisted of 100 people who are residents of Malaysia and Indonesia.

The data and information were collected using questionnaires as the primary source. This study also used data from publications and news as the secondary data. A publication such as journals and articles was to obtain definitions or information related to factors influencing customer intention to consume online meal delivery services.

The questionnaire comprised a list of questions to gather the respondents' information (Boynton, 2004). Questionnaires can only be designed based on research objectives to collect research data. In the questionnaires, each respondent was asked a similar

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question. Hence, the researcher made a comparison between one respondent with another respondent. Questionnaires speed up collecting data and ensure the quality of data collected.

The questionnaire consisted of two parts. Part 1 gives the demographics of the respondents, including gender, age, nationality, occupation, income range per month, and online food delivery usage rate using multiple choices. Part 2 is related to the factors affecting customer intention to use online food delivery services: price, attitude of the delivery person, delivery time, condition of food delivery, perceived ease of use, and perceived convenience using a 7-point Likert scale. Part 3 is related to the attitudes of respondents, which is the intention to use, measured by a 7-point Likert scale.

In this study, publications such as journals and articles were used to obtain definitions or information related to keys influencing customers' intention to use online food delivery services.

We used statistical software SPSS to analyze the data collected from the questionnaire. The value of descriptive statistics, such as mean and standard deviation is used to summarize the data collected from respondents. Analysis methods such as t-test, ANOVA, and multiple regression were used to conduct hypothesis testing and identify the relationship between the variables. Cronbach's Alpha is a universal criterion for determining internal consistency. Table 1 indicates the Benchmark of Cronbach's Alpha.

Table 1. Benchmark of Cronbach's Alpha

Cronbach's Alpha	**Implied Reliability**
$\alpha \geq 0.9$	Excellent
$0.9 \geq \alpha \geq 0.8$	Good
$0.80 > \alpha \geq 0.70$	Acceptable
$0.70 > \alpha \geq 0.60$	Questionable
$0.50 > \alpha \geq 0.60$	Poor
$\alpha < 0.5$	Not Acceptable

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RESULTS

Table 2. Summary of Respondent's Demographic (*N=100*)

Respondent's Demographic	Frequency/Percentage
Gender	
Male	22
Female	78
Age	
Below 19 years old	12
19-29 years old	62
30-39 years old	12
40-49 years old	8
50-59 years old	5
Above 60 years old	1
Nationality	
Malaysia	77
Indonesia	23
Occupation	
Student	69
Private Sector	14
Government Sector	7
Self Employed	9
Unemployed	1
Income Range per Month	
0- MYR 2000 (0- IDR 6 816 200)	61
MYR 2,001 – 4,000 (IDR 6 819 608 – 13 632 400)	20
MYR 4,001 – 6,000 (IDR 13 635 808 – 20 448 600)	11

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MYR 6,001 – 8,001 (IDR 20 452 008 – 27 264 800)	5
Above RM 8,000 (IDR 27 264 800)	3
Online Food Delivery Usage Rate	
Almost every day	18
Several times a week	27
Once a week	17
Once or twice a month	25
Not even one	13

Table 2 shows the demographics of the respondents, including gender, age, nationality, occupation, monthly income range, and online food delivery usage rate. A total of 100 individuals responded to the survey. There are 22 males and 78 females among them. The majority come between the ages of 19 and 29 (62%). Straight and equal respondents are those under the age of 19 and those between the ages of 30 and 39 (12%). Eight of the responders are between 40 to 49 years old, five are between 50 and 59, and only one is over 60 years old. The majority of the respondents (77%) are from Malaysia, while 23 are from Indonesia. Out of the 100 participants, 69 are students and one is unemployed. The remaining respondents work in the private sector (14%), the government sector (7%), or are self-employed (9%).

We also look at the monthly income ranges of the 100 respondents. Since the majority of the respondents are students, 61 of them received a monthly income of MYR 0 to 2,000 (0 to IDR 6,816,200). Twenty respondents have monthly wages ranging from MYR 2,001 to MYR 4,000 (IDR 6,819,608 to 13,632,400). Every month, 11 respondents are paid between MYR 4,001 to 6,000 (IDR 13,635,808 to 20,448,600). Among the remaining eight respondents, five of them earned MYR 6001 to 8001 (IDR 20,452,008 to 27,264,800), while there earned more than RM 8000 (IDR 27,264,800). Furthermore, the survey reveals that 62 of the 100 respondents use online food delivery weekly. It is used by 18 of them daily, 27 of them several times per week, and 17 of them once per week. 25 of the respondents use the online food delivery service once or twice a month, while 13 of them do not use it at all.

Table 3. Descriptive statistics, Cronbach's Alpha coefficients, and Zero-order correlations of variables

Variable	1	2	3	4	5	6	7
Price	**.881**						

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The attitude of the Delivery Person	.153	**.865**					
Delivery Time	.279**	.418**	**.521**				
Condition of Food Delivered	.099	.565**	.575**	**.697**			
Perceived Ease to Use	.308**	.527**	.627**	.565**	**.854**		
Perceived Convenience	.317**	.346**	.546**	.371**	.739**	**.843**	
Dependent variable: Intention to use	.417**	.221*	.565**	.280**	.670**	.812	**.822**
Number of items	4	3	2	3	4	3	3
M	5.1000	6.1233	6.0700	6.1467	6.0575	5.9900	6.0733
SD	1.20970	.89850	.90459	.75704	.84750	.95282	.92791

Note: N=100, *p < 0.05, **p < 0.01, Diagonal entries in bold indicate Cronbach's Alpha

M=Mean, SD= Standard Deviation

Table 3 indicates the descriptive statistics, scale characteristics, and interrelationships among the factors. "Cronbach's alpha coefficient is the most widely used index to estimate the internal consistency of reliability of a scale containing multiple items" (Sun et al., 2007, p.71). Most of the variables which are price (α=.881), The delivery person's attitude (α=.865), perceived ease to use (α=.854), perceived convenience (α=.843) and intention to use (α=.822) are in the range of 0.8 to 0.9. This means that there are strong relationships between the items in each variable. Values ranging from 0.7 to 0.8 are considered good (Bland & Altman, 1997). The variable condition of food delivered (α=.697) also has a good relationship between the variable items as it is also close to the 0.7. However, the delivery time (α=.521) has a poor relationship among the variable items as it is far away from 0.7. Not only that, the correlation coefficient is in the range of 0.153 to 0.812. This indicates that the correlation coefficient for all the relationships is positively related. This demonstrates that as one of the variables increases, the other variable grows as well.

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Table 4. Summary of Multiple Regression Analysis

Model	Standardized Coefficients	
	Beta	**Sig.**
Price	.145*	.014
Attitude of Delivery Person	-.132	.058
Delivery Time	.190*	.014
Condition of Food Delivered	-.096	.210
Perceived Ease to Use	.178	.068
Perceived Convenience	.613***	.000
R^2	.728	
F value	41.528	
Durbin-Watson Statistic	1.845	

Dependent Variable: Intention to Use

Note: *p < 0.05, **p < 0.01, ***p < 0.001

Table 4 provides the standardized coefficients beta and p-value for the factors influencing customers' intention to use online food delivery services. Among the six independent variables, perceived convenience has the most statistically significant impact on the dependent variable (intention to use), with the highest coefficients beta (0.613), and its p-value is less than 0.001. Following that, price and delivery time significantly impact customers' intention to use OFD services with coefficients beta 0.145 and 0.190, respectively, and their p-values are less than 0.05. However, we found that perceived ease of use has only a minor influence (17.8%) on the dependent variable. Hence, H1, H3 and H6 were proven. In contrast, the attitude of the delivery person and the condition of the food delivered did not significantly influence customers' intention to use OFD services. Therefore, these results indicate that H2 and H4 are not supported. The value of R2 was 0.728, indicating that approximately 72.8% of the variations in intention to use are explained by the price, delivery time, perceived ease of use, and perceived convenience. Thus, the remaining 27.2% is explained by other predictor variables. F value also gives information about the *X* variables explaining a significant amount of the variation in *Y* (Siegel, 2017). In the result, F value (41.524) means that all variables simultaneously affect the intention to use.

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DISCUSSION

Table 5. Hypothesis Testing Result

Hypothesis	Result
H1: Price positively influences customers' intention to use online food delivery services.	Proved
H2: The delivery person's attitude positively influences customers' intention to use online food delivery services.	Unsupported
H3: Delivery time positively influences customers' intention to use online food delivery services.	Proved
H4: Condition of food delivered positively influences customers' intention to use online food delivery services.	Unsupported
H5: Perceived ease of use positively influences customers' intention to use online food delivery services.	Proved
H6: Perceived convenience positively influences customers' intention to use online food delivery services.	Proved

Hypothesis 1 assumes the price positively influences customers' intention to use online food delivery services was supported. The results show that price significantly affects customers' intention to use online food delivery services, with a coefficient beta of 0.145 and its p-value (.014) less than 0.05. Hence, there is a significant link between price and intention to use OFD services. Customers emphasize costs before paying, as the price is one of the pieces of information that customers consider when making a purchase. Customers' willingness to pay and their impressions of OFD services can be influenced by the price, including food, tax and delivery charges. Customer intention to use OFD services can be assessed by how much money they can save by using it (Prasetyo et al., 2021). The more money they can save or the lower price they need to pay, they intend to use OFD services. By contrast, people are disinclined to use OFD services if the price is too high.

From the result, consumers will understand that the driver is only the intermediary who passes the food from the restaurant. Tulett (2019) also stated that food delivery drivers have a perilous job. With the risky and unsafe working conditions (Tsarenko, Strizhakova, & Otnes, 2019), consumers also tend to humanize workers and feel compassion for them (Belanche, Casaló, Flavián, & Alfredo, 2021). Therefore, customers are still willing to use online food if the delivery person is unfriendly or the food is overturned. Therefore, H2 and H4 were rejected.

Hypothesis 3 demonstrates that the delivery time positively influences customers' intention to use online food delivery. Many of the customers were irritated by the delivery delay, and the consumer would not consider repurchasing since they do not deliver products on time. The delay in delivery resulted in negative outcomes to the intention to use. The late arrival will change both the freshness and the flavor of the dish. Some of them will also be unable to have lunch due to missing the break time. The β=0.190 shows that delivery time significantly affects customers' intention to use OFD services. Therefore, punctuality in delivery is essential in using OFD services.

Hypothesis 5 investigates perceived ease of use that positively influences customers' intention to use online food delivery services was supported. According to Davis's TAM theory, customers' attitudes toward technology are influenced by perceived ease of use (Davis, 1989). Based on the results, perceived ease of use has only a slight influence, approximately 17.8%, on customers' intention to adopt OFD services. OFD applications that provide step-by-step guidance on implementing electronic ordering may entice customers to execute OFD services because they are already familiar with them. Therefore, customers will be more likely to continue utilizing OFD services if they find them as simple as they had hoped. We might conclude that perceived ease of use played a role in motivating customers to adopt OFD services.

Hypothesis 6 examines that perceived convenience positively influences customers' intention to use online food delivery services was proved. The results show that perceived convenience has the most statistically significant impact on customers' intention to use online food delivery services. Customers had considered the convenience of using the food delivery application as a factor in their decision to use OFD services. Customers may experience inconvenience preparing food on their own and limited cooking space. Furthermore, they may prefer to order food through OFD to avoid dealing with potential obstacles such as parking, walking distance, and restaurant capacity. They can enjoy the power of convenience by just waiting for the food to be delivered to their doorstep (Lau, & ng, 2019). As such, perceived convenience was a factor that convinced customers to adopt OFD services. Figure 2 shows the summary of the hypothesized model.

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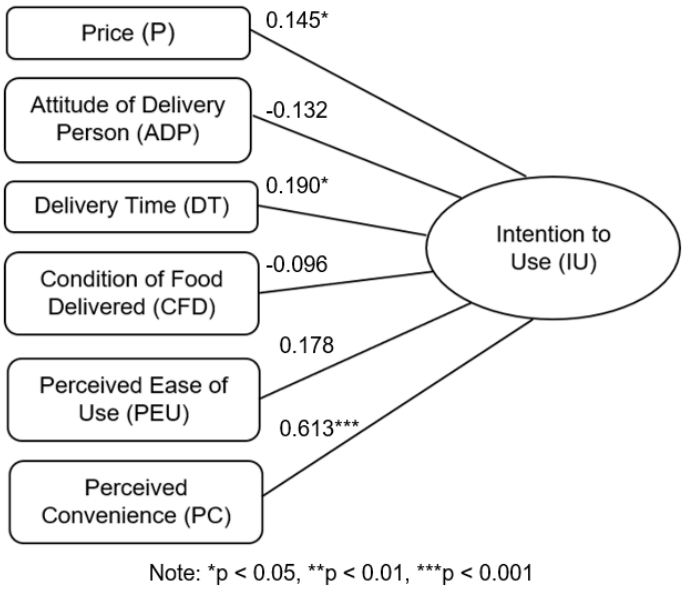

Figure 2. Hypothesized Model

CONCLUSION

During the worldwide COVID-19 epidemic in 2020, the advantages of online food delivery (OFD) were obvious, as it offered customers ready-to-eat meals while allowing food producers to continue operations. Customers will enjoy better service as internet ordering and meal delivery grow. Customers may order any cuisine they like online and have it delivered to their preferred location. Firms will also encounter more competition. Online meal delivery businesses and restaurants must be more creative in terms of the services and goods they offer. While technological advancements have improved food ordering and delivery, they have also leveled the playing field for companies.

After running the test, we found that hypothesis 3 (Delivery person attitude positively influences customers' intention to use online food delivery services) and hypothesis 4 (Delivered food condition positively influences customers' intention to use online food delivery services) are rejected. However, there are still customers who emphasize these two issues, which might affect the online food delivery service usage. Hence, the findings of this study suggest that online food delivery companies should improve the training provided to delivery persons so that they can demonstrate positive attitudes toward customers and attempt to resolve problems that may arise during the delivery process, such as food spillage and food delivery taking an excessive amount of time making the food cold.

The test result shows four elements that will influence the consumers' intention to use

the online food delivery services: the price offered, delivery time, perceived ease of use and perceived convenience. Since the market size gets bigger as more millennial, generation Z, and older generations embrace the online food delivery bandwagon. The OFD companies have to recognize the changes and evolve to the market. They must determine what modifications they can make to increase customer satisfaction. They can implement improvements such as providing a more fair price or more vouchers to customers, compensating customers who experience limited delivery times, and simplifying the online food delivery application so that users notice a significant improvement.

The food industry's future lies in food delivery apps. Food and beverage (F&B) e-commerce users worldwide are predicted to continue to expand in the future. This is good news for restaurant owners as by running virtual kitchens, underdogs in this market can effectively compete with seasoned enterprises. The online food delivery industry will be an exciting space to explore in the future, with more innovations and growth anticipated.

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DECLARATION OF CONFLICTING INTERESTS

The authors have declared no potential conflicts of interest concerning the study, authorship, and/or publication of this article.

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