Consumer E-Commerce Adoption and Behavior: A Perspective of Technology Acceptance Model (TAM)

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ABSTRACT

Today, most countries facing new virus that called COVID-19 which it gives various impact to many sectors and towards economy itself. One of the industries that get an attention was food and beverage industry that led to a new trend like online food and delivery in China. Due to pandemic, the government enforce physical social distances and movement control to break the chain. As an effect, most business and social activities were curtailed for the time being, and most food and beverage companies were encouraged to shift their business strategies to online food delivery services. This study was prepared to know whether the consumer behavior can influence especially towards online food delivery services. Other than that, to identify whether online food delivery services convenience to use by the consumer. The objectives of this research were to see if there was a connection between the model of independent variables and consumer behavior towards online food delivery services during the pandemic. The hypotheses in this study are focused on perceived ease of use, time savings orientation, convenience motivation, protection, and privacy, all of which can influence customers behavioral intentions, particularly during pandemic crisis. Meanwhile, the sampling method that will be in use in this research was the non-probability sampling technique, which was a simple randomly sampling consumer with 211 respondents who age 18-41and above that contributed to this research. The researcher was used students, employed, self-employed and unemployed to be their respondents. All the questionnaire was distributed via online by using google form. The data was collected by using questionnaire and quantitative data and then this research will use SPSS and Smart PLS to collect and combine the data to get the result.

Keywords: TAM, perceived ease of use, convenience motivation, time saving orientation, security, privacy

I. INTRODUCTION

Online food ordering and delivery can consider as a platform between food and beverages restaurants to the customers. Currently, all over the world facing with the same crisis known as novel coronavirus (COVID-19). The virus has spread very fast that the germs exist in the virus can lead to death and the total cases for people who get infection more than 100 hundred thousand in China since 2020. Due to pandemic crisis, Government imposed new policy known as movement control order MCO, CMCO, RMCO to ensure that social chains can be dissolved to stop the virus from spreading widely, and it gives severely impact for economy growth. In other words, people started to practice with new norms to suit with the current situation such as wearing a mask as compulsory when going outside, must pay attention with the hygiene and keep a physical distancing at least 1 meter with others. There was no exception during implement the policy which it involves all the sectors and business industry. The government gives an order for all sectors to stop its business operation during the MCO which it effects towards the business performance and its profit and loss.

Table 1. Forecasting Revenue Online FOD segment globally

Country	Forecast Revenues in 2021 (in million US$)	Annual Growth Rate (CAGR 2021-2024)	Market's Largest Delivery Segment	Volume of Market's Largest Delivery Segment in 2021 (in million US$)	Leading Platforms
China	56,936	5.9%	Platform-to-Consumer Delivery	41,908	Meituan, Eleme
India	11,666	7.94%	Restaurant-to-Consumer	5,960	Foodpanda, Swigg, Zomato, Uber Eats
Indonesia	2,280	9.8%	Platform-to-Consumer Delivery	1,312	Gojek, Grabfood, Yummy Corp
Thailand	329	11.35%	Restaurant-to-Consumer	247	Grabfood, Foodpanda, Lineman
Malaysia	267	15.39%	Restaurant-to-Consumer	178	Foodpanda, Grabfood, Bungkusit, Lalamove

Source: Statista, 2021

Table 1 shown the forecasting revenue online food ordering and delivery segment by globally. China country shown at higher volume of market's largest delivery segment because of the country have various of resource and advance technology that may influence the delivery online food industry meanwhile China around US$178 million (RM3.7 billion). However, this study focuses more on OFOD annual growth rate in 2021-2024 for China with 15.39% which it estimated to increase which affected by the pandemic crisis. As reported by Statista Market Forecast (2020), Online Food Delivery in China was projected around RM 1.12 billion for its revenue (as cited in MPMA, 2021).

However, to sustain and recover during pandemic, most business was encouraged to change its business strategy and have a proper plan to cater the situation. Although many businesses are affected due to COVID-19, but sub sector for online food ordering and delivery market consider as an opportunity for entrepreneurs to use the service to generate the profit. The growth of OFOD was rapidly and boost to the market during pandemic compare before COVID-19 occurs. Most of the time online food ordering and delivery (OFOD) relevant in the urban area which most consumer frequently come from this area compare with rural area. The industry of food

and beverage become more attractive when the OFOD services get an attention from consumers. The opportunity for OFOD arise due to consumers concern with hygiene and safety and opportunity for new business.

Moreover, technology changes rapidly and there always have various innovation from the developer. Technology was a vital support in the business world to help smooth things over, in addition to providing more effective business strategy planning. Patterns of technological transition, such as technology use, can be seen more clearly where it begins with a network link via GPRS, 2G, and then progresses to 3G. Following that, 4G internet was built, which provided a high-speed network service and was still in use today. Meanwhile, 5G has been launched, which provides twice the connection for internet access, but it was still new, and most 5G users are in urban areas. Along with that, e-commerce platform was introduced to the market which it was convenience for people who want to quick and save their waiting time especially when they decide to adopt OFOD services application.

In addition, if the interface of the application provides with user-friendly, it will attract consumer to use the application. There have some factors that may influence the consumer behaviors such as perceived ease to use, time saving orientation, convenience motivation, privacy, and security. Several factors may have influence consumers behavior towards the OFOD services and vice versa. For example, based on the result from Smart PLS, convenience motivation and security give an impact towards consumers behavior which both results get below 1.96. For convenience motivation, the user may face some difficulties with the application such as, menu browser, interface design, payment method transaction and order cancellation process. The respondent also may uncertainty for the security of the application.

In marketer's perspective, study for consumer behavior was significant to identify about the consumer's feeling and thinking with the products or services. Meanwhile, consumer behavior also related with buyer's characteristic and buyer's decision process when they made the purchases (Khursiah, 2012). Through consumer behavior, it will help to predict on how the consumer willing to spend their money and time towards the products or services. Consumer behavior can relate with the psychology factors like motivation, belief, or perception which all these can influence their behavior. According to Rani (2014) stated consumers' behavior can influence with the various factors such as shopping habit, interest or specified brand that can result with the change of their purchase decision. In other words, consumers behavior will constantly change which it depends on the consumer preferences, cultural, social, preferences and physiological. Usually, a product or service will continue to grow if consumers feel an ongoing benefit with its use.

The area of interest for this study will relate between consumer behavior towards OFOD services. Online food ordering and delivery can be described as specifically was design for food and beverages industry which a user can place the order through online application or websites and their order will directly send to the restaurants based on their option. The process of ordering totally doing by the system and there no involve with the human during the ordering and transaction process. The belief towards the system will lead to the perceived ease of use (PEOU) which the users put the trust with the device that the application will free from defaults. The

consumption of OFOD services will help consumers in time saving orientation especially waiting time, and it will lead to the convenience motivator. The users can easily check the status of their order and estimated time also provide to make the application more convenience to use. In terms of security and privacy most of the respondents show with positive feedback based on the survey for this study which most of them put their trust with the application and the research used probability sampling method. When the concept of trust and belief towards the OFOD services exists, it will be much easier to gain consumers intention with the services. The gaps from previous research were focused more on the behavior intention and perception. Meanwhile, for the significance of the technology there do not get much attention from the researcher.

The issue in this study will be focusing on the smartphone's user who may not be familiar with the OFOD services and the application interface. Some application will run smoothly when there was no interruption with the bandwidth but if the application was constantly experiencing technical problems and the use of a relatively complex interface causes users to lose interest in using it. Some users may decline to use other applications if they are satisfied with the one, they are currently using. The Statista Market Forecast website provided business data platform that easily for other business or researcher to gather the information from the websites. The age can be an issue in this study such as people who age 41 and above may not be familiar with the OFOD services and have difficulty to place the order.

Other than that, this study was related on how to encourage people to fully utilize with the OFOD services and provide opportunities for entrepreneurs to diversify and change business strategies to be more efficient. As an academic perspective, our research will look on both side which from consumers point of view and business perspective to make the scope wider and more interesting. The purpose of this study was (a) to investigate the factors that can influence customers behavior towards OFOD, (b) to examine whether the adoption of OFOD was necessary and convenience to use especially during pandemic, (c) to investigate the relationship of the model which independent variables (perceived ease of use, convenience motivation, time saving orientation, privacy, and security) with consumer behavior towards online food delivery services during the pandemic.

Along with this study, it focused on the following research question as a translation for the problem statement that change into the valuable information for study such as (a) what was the effect of perceived ease of use on the consumer behavioral intention of online food delivery services; (b) what was the benefit of time saving orientation on the consumer behavioral intention of online food delivery services; (c) how can convenience motivation can lead to the consumer behavioral intention of online food delivery services; (d)what was the impact of privacy on the consumer behavior intention of online food delivery services; (e) what was the relationship between security on the consumer behavioral intention of online food delivery services?

The research objectives for this study will help our research become clearer and achieve the expectation in providing this research. The research objectives of the study were including the following (a) to determine the relationship between perceived ease of use and behavioral intention; secondly, (b) to determine the relationship between time saving orientation and behavioral intention; thirdly, (c) to determine the relationship between

convenience motivation and behavioral intention; (d) to determine the relationship between privacy and behavioral intention; lastly, (e) to determine the relationship between security and behavioral intention.

The significance of this study was to provide the information about the importance of consumers behavior and with this study, it can be used as references and guidelines for its business. Moreover, this study was not only providing the information about consumer behavior, but it can identify if there have any error with the services based on respondent's feedback. Generally, this research will give advantages to the restaurants to improve and provide the best quality of service that led to the customers satisfaction and when the satisfaction was increase it will lead to the customer's loyalty. The result from this study determines which independent variable have significant to behavior intention. Based on the respondent's feedback, it will contribute to the efficiencies of the OFOD services and have better customer's data collection.

The OFOD services can be classified as a trend and proactive strategy for business providers which it becomes a window for them to start and sustain in the market especially during pandemic. The importance of the study was about how the OFOD services able to ensure there have security with the application and maintain the privacy of the user's personal information. Some consumers may have uncertainty towards the application because they might scare to share their data with a third party. Through this research, it was convenience for the business providers to have greater reach while involve with OFOD services.

Furthermore, when Covid-19 occurs, many people was encouraged to stay and work from home to prevent from the virus to spread widely. Due to condition, OFOD services market was rocketing unexpectedly and become a phenomenon for e-commerce industry. The significance of this study starts from identify the problem statement, then reviewing literature that used Technology Acceptance Model (TAM) which it related with the one of independent variables (perceived ease of used) that has been used. Its prior continue with methodology that include sample population, distribute questionnaire, data collection and analysis procedure. It will lead to the findings and discussion of the result which it makes it more clear and understand about the research. The end of the research will have implication and suggestion for future research directions to make the study become more genuine research in the future.

II. Literature Review

Based on Figure 1 in this research was design about the Technology Acceptance Model (TAM) describes how a person received and used a new technology and its different aspects. Even though several models have been proposed in the field of Information Systems to characterize the relationship, it was the model that has received widespread acclaim and used. Perceived Utility refers to how much the consumer thinks the technology can aid in improving performance or productivity. Perceived Ease of Use refers to how happy the consumer with the technology's features. The user's attitude toward using technology was determined by these two factors. The Perceived Utility would also affect the behavioral purpose to use, according to the model. The mindset influences the actions, which influences real acceptance.
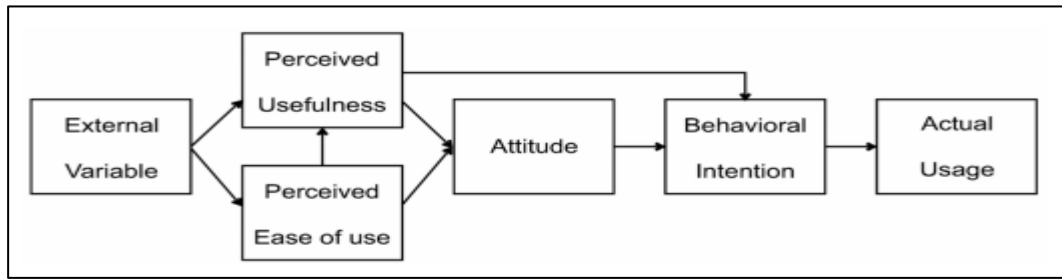
Figure 1. Technology Acceptance Model Theory by Davis (1989)

Source: Park & Park, 2020

Thus, TAM has been criticized for a variety of reasons, but it is a valuable general construct that was consistent with a good deal of research into the factors that affect older adults' ability to use modern technologies. This theory does not mention much about the technology, but it was focusing more with perception which on how the theory will help and identify consumer perception. Usually, perception will change and depends on situation, experience and maybe gender. In this study, the TAM discussed how to adopt an online food distribution system from the customer's perspective. During the research, the most common of which is confidence, which has a direct relationship with ease of use and usefulness.

Most of the time, a new piece of technology was presented to mankind. Technology absolutely can make life easier for a human. But not all the humans can be adapting quickly with the changes. So how do people adapt with this new technology? What variable affect it the most? Our research mentions five variables that affect behavioral intention. We have perceived ease of use, time saving, convenience motivator, security, and privacy. Our research was focused with smartphones user who may not be familiar with online food delivery services.

Especially during pandemic and online delivery services was really booming, and it considers the opportunity for the business to sustain during pandemic. For our research, we also ask our close friends and family to randomly question on how they feel when ordering something through its smartphone, and it will contribute as a viewpoint for this study. Some of them said before a pandemic occurs, they prefer to cook or walk into the restaurant. Due to current condition, using online food delivery services was the best option. Moreover, the current application has a lot of improvement to suit with the user adoption. This is how TAM theory can help our research that led to the acceptance or rejecting of the technology. We believe that ease of use, time savings, convenience motivator, protection, and privacy are all factors that can influence customer behavior in China when it comes to online food ordering and delivery.

Behavioral intention was the preference of the consumer to buy the product or service. In other words, the customer will do the evaluation of an item or product first before intended to make a purchase. There have various factors influence the consumer's goal when selecting a product, and the final decision was based on the consumer's goal when dealing with large external factors (Keller, 2001) as cited in (Chai & Yat, 2019). Behavioral intention was an action that exhibited by customers through the product assessment process (Schiffman, L. G. & Kanuk, L. L., 2007) as cited in (Chai & Yat, 2019). According to Carthy (2002), buying purpose may also be

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defined as a consumer desire or motivation to buy a specific brand after evaluation before deciding to make the purchase based on their expectations, attitudes, and brand perceptions.

According to (Yeo, 2017), the intention of the customer to buy the product or services can be predicted by their behavior and attitude. The study also said about the adoption of the product and technology based on the behavior of the individual action. If one individual has a positive attitude, they will surely adapt quickly to the technology or the product itself. Past research also mentioned that the experience of the customer will lead to the behavioral intention of the product or services (Olorunniwo, 2006). When an individual has a great experience with the technology, their attitude will be positive as well. When this happens, they are most likely to adopt and adapt with online food delivery. Thus, this can lead them to repeat the purchases in the future. According to (Katawetawaraks, C. & Wang, C. L., 2011); (Collier, 2013) a customer that does not like to interact with others will have high factors to use online food deliveries. It was because they can avoid interacting directly to other people and online delivery to satisfy their needs. This can also be from a person who have negative experience with the staff before when ordering food.

Perceived ease of use gives out the definition of something that was easy to use and understand, and easy to figure out the function, also how it operates. (Rogers, 1962) as cited in (Chai & Yat, 2019). It also means that the technology has no issue and easy to be use by people. According to Davis (Davis, 1989) the respondent consider ease of used when they are using technology that require less effort than how it supposed to. This variable can affect the most of behavioral intention of the customer to make a purchase from one organization. Perceived ease of use also means how the people use the technology and can easily gain benefits from it. Thus, having this kind of factors can make the technology more acceptable by the customers. Things that easy to use can be beneficial of the company of the products.

According to (Cho, Y. C. & Sagynov, E., 2015) with the technology and the internet, perceived ease of use can give positive impact to the behavioral intention. Past research stated that perceived ease of use can affect a lot of the purchase intention of the customers (Chen, Y. H. & Barnes, S., 2007). To give more encouragement to people that new to the technology which they have not been used before, it was beneficial if the company develop the application or system that can be use without so much effort. By using online learning also can give positive feedback to behavioral intention (Chiu, C. M. & Wang, E. T. G., 2008). The difficulties and how easy the technology can be used was depends on the users. Different users will have different experience which could affect the perceived ease of use. Besides, (Ramayah, T. & Ignatius, J., 2005), stated that customers do not want to make online purchases because of several factors. Download speed can affect the experience of the customer. An awful website user interface also can give negative experience to the customers. This means the perceived ease of use is important in the technology which will give the best experience and benefit to the users or the customers to order the food online. (Venkatesh, V. & Davis, F.D., 2000) added that perceived ease of use can give positive outcome to the technology that they use and can lead to positive behavioral intention.

Time saving orientation also play a big role that can affect customer behavioral intention when they operate the system themselves (Meuter, M. L., 2003) People do a lot of stuff every day, this required them to save a lot of time which this will affect the behavioral intention of the customers (Bashir, 2015), (Settle, R. B. & P. L. Alreck, 1991). (Bashir, 2015) also state that when a person does a lot of activities, they will intend to choose the product or services that can save their time. From time to time, people are getting busier, and this leads them to save time. This includes the crucial needs in human life, which the meal. When eating in a restaurant, they will wait a lot. Waiting for the queue and waiting for the orders to be completed can consume a lot of time (Yeo, 2017).

According to (Yeo, 2017) people hate to wait for food in the restaurant because it is time-consuming. They want food to be delivered as fast as possible, so they can do other activities while waiting for their food. (Khalil, 2014) as cited in (Chai & Yat, 2019) confirmed that saving time can have a major contribution to the behavioral intention of customers. (Sultan, M. U. & Uddin, M., 2011) as cited in (Chai & Yat, 2019), mention that online shopping was convenient because it can save time and the customers does not have to go outside just to buy the food. While waiting, they can do other things that they intend to do. They also stated that online shoppers can save time a lot than the physical shoppers out there who go out and waste their time waiting, while the online shoppers can do other things while waiting. According to (Settle, R. B. & P. L. Alreck, 1991) as cited in (Chai & Yat, 2019), physical shopping was far more time-consuming than the online shoppers. Physical shoppers need to get themselves ready to go out, stuck in traffic and will wait for a queue and order to arrive. While online shoppers do not have to do all that things, and they just wait for their food to be delivered in front of their doorsteps. (Alreck, 2009) added that most of the customers hope that they can save a lot of time, so they can do other things while waiting.

Rapid urbanization has created a situation in which city dwellers have limited time to prepare their own meals or even eat in restaurants, especially during the weekdays. As a result, they prefer to eat more fast food or postpone meals altogether (Botchway et al., 2015). Many restaurants have begun to develop new business models during this pandemic by providing consumers with online food delivery services to meet their needs and increase sales. However, according to studies, comfort seen as a persistent obstacle that affects potential intentions (Seiders et al., 2005). This means that before the device can inspire future intentions, it must first reach a certain degree of convenience.

According to Seiders et al. (2005), convenience motivation was described in the context of online food delivery services as the perceived time, value, and effort needed to make use of the system. Motivation was also critical because it influences consumers' attitudes and willingness to buy. Customers would be motivated to use the system indefinitely until the degree of convenience reaches their expectations. However, some restaurants have also started to provide online services, which have proven to be extremely profitable. The demand for online food delivery services was strong and rising. If an online service has gained traction, its popularity will quickly spread. Time and effort will frequently be taken into attention by a convenience-oriented consumer (Zhou et al., 2007). They would rather shop at home to save time, avoid busy markets, and complete transactions at their leisure. As

a result, when they use the online purchase method, their position was irrelevant during the buying process (Chen & Hung, 2015).

Corresponding to Belanger et al. (2002), privacy was described as the ability to access, copy, use, and destroy one's own personal information. Contact details (e.g., email address, phone number) and personal details are the most common types of personal information obtained by the application (i.e., Username). Moreover, consumers are becoming more concerned about how and where their personal information was used during online transactions because of several high-profile news stories about data breaches by well-known businesses (Flavian and Guinaliu, 2006). Many consumers avoid making online purchases for a variety of reasons, including privacy concerns, non-delivery, credit card fraud, and post-purchase service, among others. Many websites have adopted policies that allow consumers to check, inspect, and certify privacy policies for online purchases to ease people's minds about privacy concerns (Ranganathan and Ganapathy, 2002).

As a result, several studies have emphasized the importance of protection for all online food delivery providers (Sathye, 1999; Liao and Cheung, 2002; Poon, 2008). Generally, online purchasing behaviour was also positively linked to privacy (Miyazaki & Fernandez, 2000). The authors have discovered that most respondents believe that trustworthiness was critical when shopping online. Most of the consumers in the European Union have avoided made any payment via online transactions due to a lack of confidence in companies managing personal information and security (Flavián & Guinalu, 2016). In addition, transactional protection, website properties, search functionality, and personal variables are all important factors in the formation of trust, according to Yoon (2002).

According to Kalakota and Winston (1997), security was a concern that has resulted in potential incidents involving payment security and data storage through online transactions. They discovered that online shoppers' primary concern has shifted to security. In general, online buying activity was correlated with increased security (Miyazaki & Fernandez, 2000). The greater the degree of consumer trust in online shopping, the greater the degree of security provided to consumers (Bashir et al. 2015). As stated, Belanger et al. (2002), over 70% of customers declined to provide details or make purchases online due to security concerns. The reported explanation that they are concerned about the lack of privacy protection for their personal data. Consumers will feel safer if companies have a verification system on their website (Belanger et al. 2002). Furthermore, it was the ability of customers to admit helplessness in an online purchase because of their optimistic expectations for potential online store behavior (Kimery and McCard, 2002).

Perceived ease of use, time saving orientation, convenience motivation, privacy and security was studied to get the outcome of these variable, which it was behavioral intention. We would like to test how every each of these variables affect the behavioral intention. According to the variable reviews above, the research will be used to find out which variables will have huge impact to influence customer behavior towards online food delivery in China during this pandemic Covid-19 crisis.

Technology Acceptance Model (TAM) was used in this research. This theory was the most suitable in the research to determine the impact and effect of the variables on the behavioral intention. This because of the food online ordering related to the technology nowadays used by the consumers. In this research, we will test the consumers in China who used the food online delivery platform in their daily life. From all the variables that has been identified, the hypothesis is developed to study further on the research. From the past research, most of the independent variable give positive impact to the dependent variable, which is behavioral intention. The hypothesis also has been identified from the variables review and there may some variable will have different or not significant with behavioral intention. The hypothesis will be explained more detailed in research methodology below.

III. RESEARCH METHODOLOGY

This study used quantitative method for data collection process in which the researcher distributed the questionnaires that are specially formulated with the question that related to the research topic and distributed to related respondents. The series of the questions related to the variables in this research. The aim of this questionnaire was to find out the online food delivery service was effective during new normal in China.
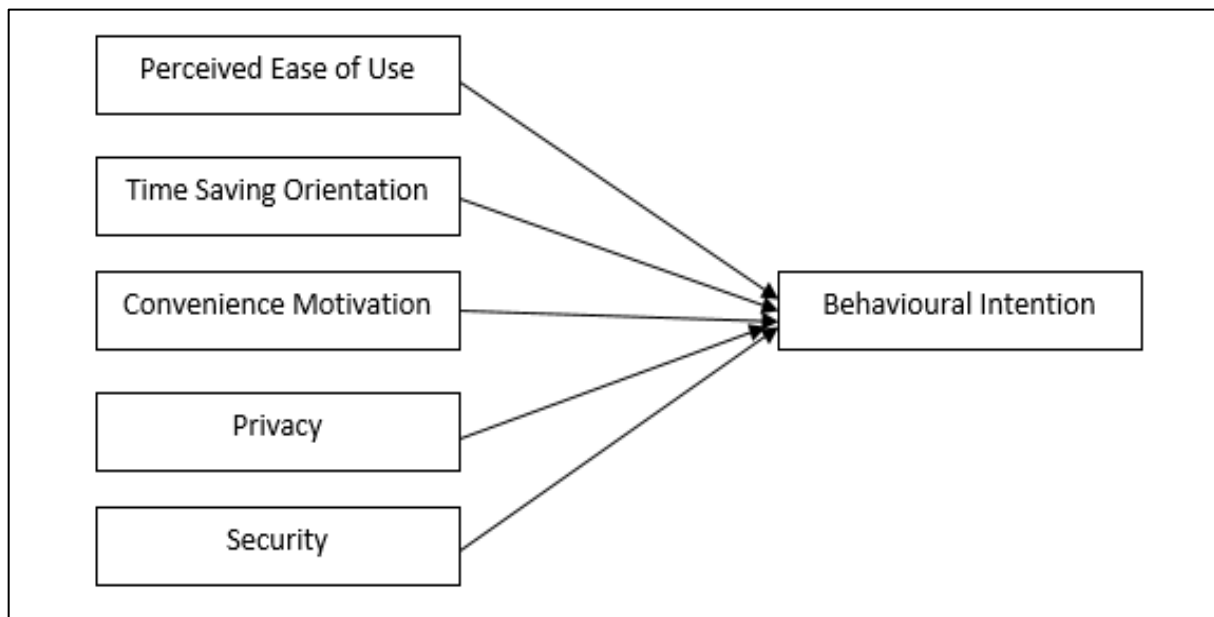

Figure 2. Research Framework

Source: Lau & Ng, 2019

The researcher used people to be the population in this research that located in urban areas in China. For the sample of this research, the researcher was used students, employed, self-employed and unemployed to be their respondents. There have 211 respondents that contributed to this research. For this research, the researcher used a non-probability sampling method. This study was determining a sample size from a general population.

Convenience sampling was chosen, and respondent were selected to depend on the convenient accessibility of the researcher. Data was collected from the Chinan people that had experienced using the food online delivery

application. Therefore, the researcher had distributed the questionnaire to 211 respondents to collect sufficient valid result among the respondents. The researcher used questionnaire through Google Forms to be the technique of data collection. The questionnaire was distributed to respondents by using Google Forms because the Google Forms easy and convenience to respondents to answer the questions.

The questionnaire was used in the Likert scale which is had five scale such as 1 represents to strongly disagree, 2 represents to disagree, 3 represents to neutral, 4 represents to agree and 5 represents to strongly agree. The questionnaire consists of three sections which is the first section was section A that consists of demographic background question about age, gender, working status, marital status, and food delivery application. The second section which the section B was about the dependent variable is behavioral intention. The third section was section C. The question was about the independent variable such as perceived ease of use, time saving orientation, convenience motivation, privacy, and security. The questions in this questionnaire were simple and easy to respondent's answer.

Table 2. Variable and Measurements

Variables	Items	Sources	Cronbach's Alpha
Behavioral Intention	BI1	**Lau & Ng, 2019**	**0.868**
	BI2		
	BI3		
	BI4		
	BI5		
Perceived ease of used	PEOU1	**Lau & Ng, 2019**	**0.871**
	PEOU2		
	PEOU3		
	PEOU4		
	PEOU5		
Time saving orientation	TSO1	**Yeo et al., 2017**	**0.884**
	TSO2		
	TSO3		
	TSO4		
	TSO5		
Convenience motivation	CM1	**Yeo et al., 2017**	**0.840**
	CM2		
	CM3		

	CM4		
	CM5		
Privacy	P1	**Yeo et al., 2017**	**0.918**
	P2		
	P3		
	P4		
	P5		
Security	S1	**Yeo et al., 2017**	**0.850**
	S2		
	S3		
	S4		
	S5		

The result of this questionnaire would be used to examine the most significant factor that will influence the behavioral intention towards online food delivery service. The Statistical Package for Social Sciences (SPSS) software were used to evaluated and analyzes the data that had collected from the questionnaire. The Smart PLS software was used to access the relationship among the independent variable and dependent variable in this research. The statistical analysis was used to test hypothesis and regression analysis to observe the relationship between the perceived ease of use, time saving orientation, convenience motivation, privacy, security with behavioral intention towards online food delivery service.

IV. Finding and Discussion

The total of respondents that research collected were 211 respondents that located at urban area in China. Table 3 shown that the respondents' profile result. In this table, most of the respondents were female with 60.7% while male respondents were 39.3%. Most of the respondents were between the age of 19-25 years old which recorded at 59.7%. In terms of working status, students were the most respondents with 49.8% followed by employed respondent with 37.4%, then self-employed with 9.0% and unemployed with 3.8%. For marital status, single respondents were the most respondent that recorded in this study with 75.4%.

This study utilizes for measurement model analysis by using convergent validity to examine each item whether its valid or invalid and Cronbach's Alpha. It considers as a basic test that help this study to determine validities for each item by running this test using Smart PLS version 3.3.3. Convergent validity was a key prerequisite that uses PLS-SEM as a tool in the evaluation of the validity of each indicator (Cheah et al., 2018). By analyze for each item, it will help to discriminate items that belong to the factor loading if the score less than 0.5. However, the score for factor loading for each item more than 0.5 which adequately representing based on Table 3. The convergent validity analysis based on Table 3 was included the loadings, average variance extracted

(AVE), composite reliability and Dijkstra-Henseler's rho (Rho A). The average variance extracted (AVE) from the Table 3 show for each factor loading more than 0.5, meanwhile for composite reliability the range of score was between 0.885 – 0.937 that present as consistency for each item which it was more than 0.7. The Rho A and Cronbach's Alpha for this study also give the result that exceed more than 0.7 which it will consider as reliable. All the indicator item was re-analyzed and all the factor loading exceed 0.5 which it was unnecessary to eliminate the factor loading for each item.

Table 3. Measurement model

	Items	Loadings	AVE	Composite Reliability	Rho A	Cronbach's Alpha
Behavioral Intentions (BI)	BI1	0.687	0.658	0.905	0.875	0.868
	BI2	0.848				
	BI3	0.791				
	BI4	0.848				
	BI5	0.868				
Perceived Ease of Use (PEOU)	PEOU1	0.855	0.661	0.907	0.872	0.871
	PEOU2	0.760				
	PEOU3	0.867				
	PEOU4	0.821				
	PEOU5	0.756				
Time Saving Orientation (TSO)	TSO1	0.833	0.684	0.915	0.886	0.884
	TSO2	0.826				
	TSO3	0.848				
	TSO4	0.854				
	TSO5	0.770				
Convenience Motivation (CM)	CM1	0.791	0.606	0.885	0.840	0.837
	CM2	0.702				
	CM3	0.808				
	CM4	0.830				
	CM5	0.755				
Privacy (PRI)	PRI1	0.895	0.749	0.937	0.918	0.916
	PRI2	0.873				
	PRI3	0.899				

	PRI4	0.802				
	PRI5	0.855				
Security (SEC)	SEC1	0.789	0.626	0.893	0.856	0.850
	SEC2	0.757				
	SEC3	0.855				
	SEC4	0.783				
	SEC5	0.768				

Before proceeded to next step, there have some interpretation for the term or method that has been used for this study to analyze and comparison definition from previous research to make it more clear with the test. The value of Cronbach's Alpha used to measure for each item that has been included in the survey purposely to know whether the item was reliable or in other words, through Cronbach 's Alpha, it will help to identify the degree of latent variable (Hair et al., 2016). Latent variables know as variables that difficult to comprehend and recognize directly. In contrast, the latent variables have ability to influence or give an impact towards the research. Typically, Cronbach Alpha's will help the researcher to know the way respondents think about each item and how much the test will link to the items, whereby forming all the data in one group.

Meanwhile, Rho_A was recommended to exceed 0.5 to contemplate as trustworthy. According to Hair et al. (2019) the composite reliability can define as a group of indicators that measure a variable that have composites reliability if the reliability exceeds 0.7, and it can calculate by using formula or Smart PLS (as cited in Hair et al.,2020). Average Variance Extracted (AVE) have a role to measures the degree of alterations captured by formulate compared to the amount of measurement miscalculation which 0.5 regard as adequate. The interpretation for Variance Inflated Factor (VIF) according to Salmerón et al. (2018) VIF is motivated by a mathematical perspective focused on the regressors' correlation.

The outer loading in PLS Algorithm play the important role because it linked with the indicators to determine whether are reflective or formative while outer loading interpret as factor loading for each item which more than >0.5 was acceptable based on past study. Meanwhile, the model fit was measure by using R square from latent variable which its same interpretation with the regression as well as Q square used in this study to measure how good and impressive the observed values that have been generated by the model and the determinations in the perimeter. Q square test know as predictive relevance and R square was endogenous variables in the equation model which R square evaluated for the dependent variable.

A variance inflated factor (VIF) provides a measure of multicollinearity among the independent variables in a multiple regression model. Multicollinearity exists whenever an independent variable was highly correlated with one or more of the other independent variables in a multiple regression equation. Multicollinearity was a

problem because it undermines the statistical significance of an independent variable. Table 4 demonstrated that the VIF values of constructs with all value less than 5.0.

Table 4. Checking of Collinearity Issues

Construct	VIF
Perceived Ease of Use (PEOU)	3.091
Time Saving Orientation (TSO)	3.148
Convenience Motivation (CM)	4.376
Privacy (P)	3.624
Security (S)	3.352

A. PLS structural equation modeling

Figure 3 shows the partial least square structure of the modeling before the data was run by Smart PLS known as bootstrapping to get the ending result.

Figure 3 shows the dependent variables (BI) and independent variables (PEOU; CM; TSO; PRI; SEC) as well as the keyword for each item was attached in the Figure 3. The Smart PLS helpful specifically to discover the latent variables by run the data, and it will come out with the result that easily for researcher to interpret all the data in a proper writing report.

To get the results to determine whether our hypothesis accepted or not, we run the bootstrap test to figure out the t-value for the variables. From the Re-Specified model, we figured out that all the variables have the score more than 0.5. Then, from the factor loading, we run the bootstrapping test to find out each of the variable's pathway which will give the results either the independent variables are significant or not significant to the dependent variable. Based on the Figure 3, three of the independent variables have the t-value more than 1.96 which means these variables are significant to the dependent variable. The other two variables have t-value less than 1.96 which was not significant to the dependent variable. From the results of the bootstrapping, perceived ease of use (PEOU), time saving orientation (TSO) and privacy (PRI) was significant as the dependent variables. The other variables which the convenient motivator (CM), and security (SEC) were not significant to the dependent variable.

By referring to our early hypothesis and from the results of the hypothesis testing, we can conclude that:

H1: was not accepted because, perceived ease of use was significant to the behavioral intention.

Our early hypothesis stated that PEOU was not significant to the BI. From the results that we got from bootstrapping, the t-value for PEOU was 7.863 which more than 1.96. This means PEOU was significant to the BI. Thus, our early hypothesis was not accepted.

H2: was not accepted because time saving orientation was significant to the behavioral intention.

For the H2, early hypothesis stated that TSO was not significant to the BI. After we run the bootstrapping, we find out that TSO have significant relationship to the BI. T-value for TSO was 2.774 which means the t-value was more than 1.96. Thus, our early hypothesis was not accepted.

H3: was accepted because the convenience motivator was not significant to the behavioral intention.

For the H3, our early hypothesis stated that CM was not significant to the BI. From the results that we got from bootstrapping; the t-value for CM was 0.783 which below than 1.96. This means, CM was clearly not significant to the BI because the t-value was below than 1.96. Thus, our early hypothesis was accepted.

H4: was not accepted because privacy was significant to the behavioral intention.

Our early hypothesis stated that Privacy was not significant to the BI. From the results that we got from bootstrapping; the t-value for Privacy was 2.617 which the value greater than 1.96. This means, Privacy does have the significant relationship to the BI because the t-value was larger than 1.96. Thus, our early hypothesis was not accepted.

H5: was accepted because Security was not significant to the behavioral intention.

Our early hypothesis stated that Security was not significant to the BI. From the bootstrapping results, the t-value that we got for Security was 1.152, which means the t-value for security was less than 1.96. Due of t-value less than 1.96, Security was not significant to the BI. Thus, our early hypothesis was accepted.

This research was prepared to identify the connection of behavior intention specifically with factors that has been stated like perceived ease of use, time saving, convenience motivation, privacy, and security toward online food delivery in China. According to (Viktor, 2021) food delivery was a courier service in which food was delivered to customers on demand through supermarkets, restaurants, or 3rd-party applications interface. Orders are now placed by mobile applications, blogs, or over the internet. Based on our research, 211 total respondents, most customer prefer to choose online food ordering and delivery as a platform between food and beverages restaurants to the customer. For example, most customer in China choose Food panda and Grabfood as their main delivery choice because there are many dining options compared to other applications. Based on 211 total respondents, we can conclude that H3 and H5 preferences of online food ordering and delivery was positively accepted but not significant relationship to the behavioral intention. The t-value for PEOU was larger than 1.96, indicating that these variables have a large impact on behavioral intention. Thus, H3 was convenience motivator and H5 was security accepted positive but not significant with behavioral intention. The reason each hypothesis was not significant because the t-value for security was less than 1.96.
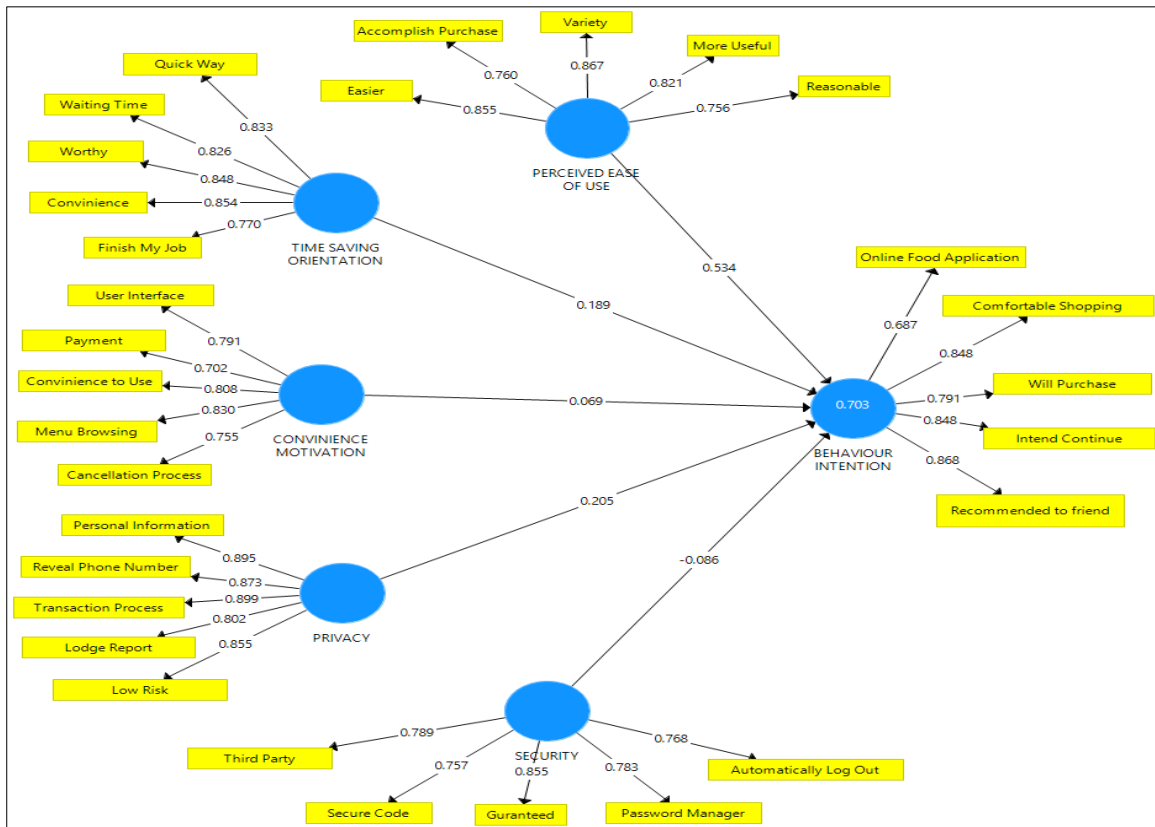
Figure 3. The PLS structural equation modeling

V. CONCLUSION & RECOMMENDATION

The intention of this research to explore more on factors that can give any impact customers behaviors towards OFOD and investigate the whether the adoption of OFOD was necessary and convenience to use especially during Covid-19. Most business providers are still going through a recovery phase and looking for more effective alternatives to reduce the degree of losses incurred in their business. Among the markets that get attention was online food ordering and delivery where this service boosts dramatically, especially during a pandemic.

The traditional brick and mortar have almost completely changed to OFOD services to stop the virus from spreading in more densely populated areas. There have five variables that has been used for this study which perceived ease of use, time saving orientation, convenience motivation, privacy, and security that can help to answer all the research question and objective of research. Based on the result three variables have significant impact towards the OFOD which perceived ease of use (PEOU); time saving orientation (TSO); and privacy (PRI). Meanwhile, convenience motivation (CM) run by using Smart PLS get (0.783) less than 1.96 and security (SEC) (1.152) which it was not significant towards OFOD however, these two variables only give small impact towards OFOD services.

Through this study, it will help to answer the research question for the effect of perceived ease of use which its direct give positive impact on the consumer behavior intention and FoodPanda application became the main choice based on the survey conducted on respondents on consumer behavior intention to use OFOD services. Time saving orientation mostly give benefit to the consumers. However, based on the survey from respondents with convenience motivation which the end results come out that consumers feel the accessibility for the OFOD services cannot fully encourage them to fully utilize the services. In terms of privacy the result led to positive impact on consumer behavioral intention. The relationship between security was not significant on the consumers behavioral intention and it need some improvement for future research.

In addition, to support this study to become more genuine which according to new research Ramli et al., (2021) online food ordering and delivery services positively give an impact towards behavioral intention and the factors that have significant for consumers to adopt the services such as perceived convenience, perceived customers control and excitement to use the technology. Another research finding that can assist this study which research from Rae et al., (2021) stated that time saving is one of the factors that influence consumers intention and add on with purchase experience factor that can shape consumers behaviors to fully adopt with the online food delivery services as well as it will lead to another broaden scope intention such as customers satisfaction. At the same time, it clearly will create customers loyalty which by providing online food delivery services, consumers will become like a "zombie" with the technology itself.

This study was recommended to any association that related with this industry which it will help the association become clearer and understand the consumers behaviors towards the adoption of the OFOD services. Other than that, this research can propose to any business providers who involve in food and beverages industry to broaden the scope of marketing research. In other words, the business provider may have interest to change its strategic of marketing from brick and mortar to OFOD services, however some of them may lack of knowledge and feel uncertainty to change from traditional way to the OFOD services the latest technology. Moreover, business providers also need to consider the level of risk of OFOD services if they decide to use this application as an example in terms of privacy and security is at a safe level for customers. If, this study is offered to the business providers, it can reduce their level of uncertainty. Lastly, the research was relevant to recommend to the Government or public sectors which it helps them to measure the degree of success if implement OFOD services in their business.

Customer feedback is essential to every business, especially online food ordering and delivery. It helps to improve the restaurants performance and customer experiences. How to improve quality of services in urban areas is first must train to motivate the employees. Investing in training that teaches all employees at all levels will teach the employees that they are responsible for delivering quality service, regardless of their position within the organization.

Second, take criticism seriously. It will lead the company to become better one especially in customers services We will learn to anticipate their needs if we take their suggestions seriously. One of the most important

ways to increase services quality is to give consumers what they want before they even realize they want it. Thus, a tablet ordering system can improve customer is the speed and efficiency of the employees making the food because time is also important in online food delivery. Some of them who live in urban areas might order online food delivery because they are busy working or did not have time to catch up on their lunch.

While executing a research project or work, there may have some constraint occurs. In this research, we only use quantitative research which means the qualitative research have not been done by us. The qualitative research might give a different outcome. Other than that, the number of samples is not too large. The number of samples that we got is 211 samples which is mostly come from west China especially for people in Kuala Lumpur and Selangor. The samples also come mostly from the students which is 49.8% out of 211 samples. If we got more of the sample from another group which have different working status results and data collected will be different because they have the most purchasing power than the student.

We identified some improvement can be done after doing the research. For further research, the number of samples can be widened not to only specific group of people. The research also can be done for east China because the purchasing behavior is a different from people in west China based on several geological and psychological factors. The group of people who have different working status other than students also need to be widened. It is because they already have the income that are more stable than the students which make them have more purchasing power which can give different results.

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