INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES
HRMARS MANAGEMENT ACADEMIC RESEARCH SOCIETY EXPLORING INTELLECTUAL CAPITAL
www.hrmars.com
ISSN: 2222-6990

Determinants of Consumer's Purchasing Behavior towards Online Food Delivery Services

Zuroni Md Jusoh, Siti Norizazi Wanani Saworo, Nurnazrenatasah Rahiman & Norzalina Zainudin

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v12-i12/16008 DOI:10.6007/IJARBSS/v12-i12/16008

Received: *16* October *2022,* ***Revised:*** *18* November *2022,* ***Accepted:*** *30* November *2022*

Published Online: *21* December 2022

In-Text Citation: (Jusoh et al., 2022)

To Cite this Article: Jusoh, Z. M., Saworo, S. N. W., Rahiman, N., & Zainudin, N. (2022). Determinants of Consumer's Purchasing Behavior towards Online Food Delivery Services. *International Journal of Academic Research in Business and Social Sciences*, *12*(12), 2094 – 2113.

Vol. 12, No. 12, 2022, Pg. 2094 – 2113

http://hrmars.com/index.php/pages/detail/IJARBSS | **JOURNAL HOMEPAGE**

Full Terms & Conditions of access and use can be found at
http://hrmars.com/index.php/pages/detail/publication-ethics

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES
HRMARS MANAGEMENT ACADEMIC RESEARCH SOCIETY EXPLORING INTELLECTUAL CAPITAL
www.hrmars.com
ISSN: 2222-6990

Determinants of Consumer's Purchasing Behavior towards Online Food Delivery Services

Zuroni Md Jusoh[1], Siti Norizazi Wanani Saworo[2], Nurnazrenatasah Rahiman[2] & Norzalina Zainudin[1]

[1]Sustainable Consumption Research Group (SCoRe), [2,3]Department of Resource Management and Consumer Studies, Faculty of Human Ecology, Universiti Putra Malaysia, Malaysia

Corresponding Author's Email: zuroni@upm.edu.my

Abstract

This study aimed to examine the determinants of consumer purchasing behavior towards online food delivery services in Peninsular Malaysia. There were 384 respondents involved in this study from states that are Selangor, Johor, Pulau Pinang, and Terengganu through multi-stage cluster sampling and convenience sampling. The data were collected through a questionnaire. This study uses descriptive analysis and Multiple Linear Regression analysis. Multiple Linear Regression analysis found three significant factors: perceived usefulness, attitude, and behavioral intention. These demonstrate as much as 59.2% of the variance in consumer purchasing behavior towards online food delivery services in Peninsular Malaysia is obtained from the influence of attitude, perceived usefulness, and behavioral intention studied, and the attitude factor is the most influence factor influencing consumer's purchasing behavior towards online food delivery services (β=0.367, $p \leq 0.001$). In conclusion, attitude, perceived usefulness, and behavioral intention are the determinants of consumer purchasing behavior towards online food delivery services. Therefore, in line with the study's findings, governments and stakeholders need to play important roles in increasing perceived usefulness, attitude, and purchasing intention. Further studies can be expanded to other states in Malaysia to form a larger sample size representing the whole of Malaysia for bias avoidance.

Keywords: Attitude, Behavioral Intention, Online Food Delivery, Perceived Usefulness, Purchasing Behavior

Introduction

Today's internet usage is no longer limited to network media, but it is also used as a tool or medium of business for consumers in the global market. Internet usage has grown exponentially over the past few years. It has become a common way of communicating and functioning in trading activities to enable consumers to obtain and receive information on the services and goods offered (Albarq, 2006). The use of modern technology applications, information control, and introduction to modern-day communication, as well as increased use of smartphones, are associated with Industrial Revolution 4.0 (Maziahtusima et al., 2018).

Limited resources, such as energy, are now being overcome by the efficiency and effectiveness of technology use was one of problem-solving to the transition of the agricultural age to industrialization. So, it is reflected in the existence of e-commerce that has dominated most businesses, including providing online food.

With the rapid change in life, consumer confidence in accepting new technologies will directly increase consumers' constantly seeking new ways to reduce their efforts (Salunkhe et al., 2018). Consumers are always looking for alternatives or new ways to reduce their actions in any business, including ordering online food delivery services directly to their location. Food is only a source of energy for survival in the past. However, the change of time has dictated what the individual should eat and has become an integral part of today's routine (Gera et al., 2018). Over time, the shift in consumer needs and desires has enabled the food industry to meet consumer demand, allowing consumers to get their favorite foods through online food delivery services to consumers locations. The service has provided a wealth of important information, including menus, price lists, estimated delivery times, hours of operation, sales, promotions, and more, to make it easier for consumers to easily access and make informed decisions about food choices (Elango et al., 2018).

However, the food industry has become a very slow sector for e-commerce growth. This problem is due to freshness, product damage, lower margins than other consumer products, and logistical challenges (Shahkila et al., 2016). According to Hong and Wang (2016), the choice of menus in various applications is also limited in that consumers are not interested in making similar food purchases. Furthermore, food delivery is only provided to the area near the restaurant to maintain the freshness of the food directly, which covers the scope of the location delivery. According to Dang et al (2018) the number of consumers who do not trust food information online has increased as they find potentially inaccurate and misleading information. Traditional food purchases enable consumers to evaluate food safety through food processing and aesthetic value subjectively. Instead, online food services can only make decisions based on the display of advertising and reviews from other customers. This decision is due to its virtual nature. Dang et al (2018) also found that consumers were misunderstood by advertising information on the internet, which could not be verified by the relevant authorities and raised concerns about food safety and foodborne illnesses. In addition, there is still a lack of understanding of consumer behavior in online food shopping in the growing market (Tausif, 2020).

Researchers have previously identified several factors influencing consumers' purchasing behavior towards online food delivery services. However, decisions are inconsistent, easy to change, and vary from time to time or country to country. Therefore, the study determines consumer purchasing behavior towards online food delivery services. See Figure 1 to illustrate the conceptual framework.

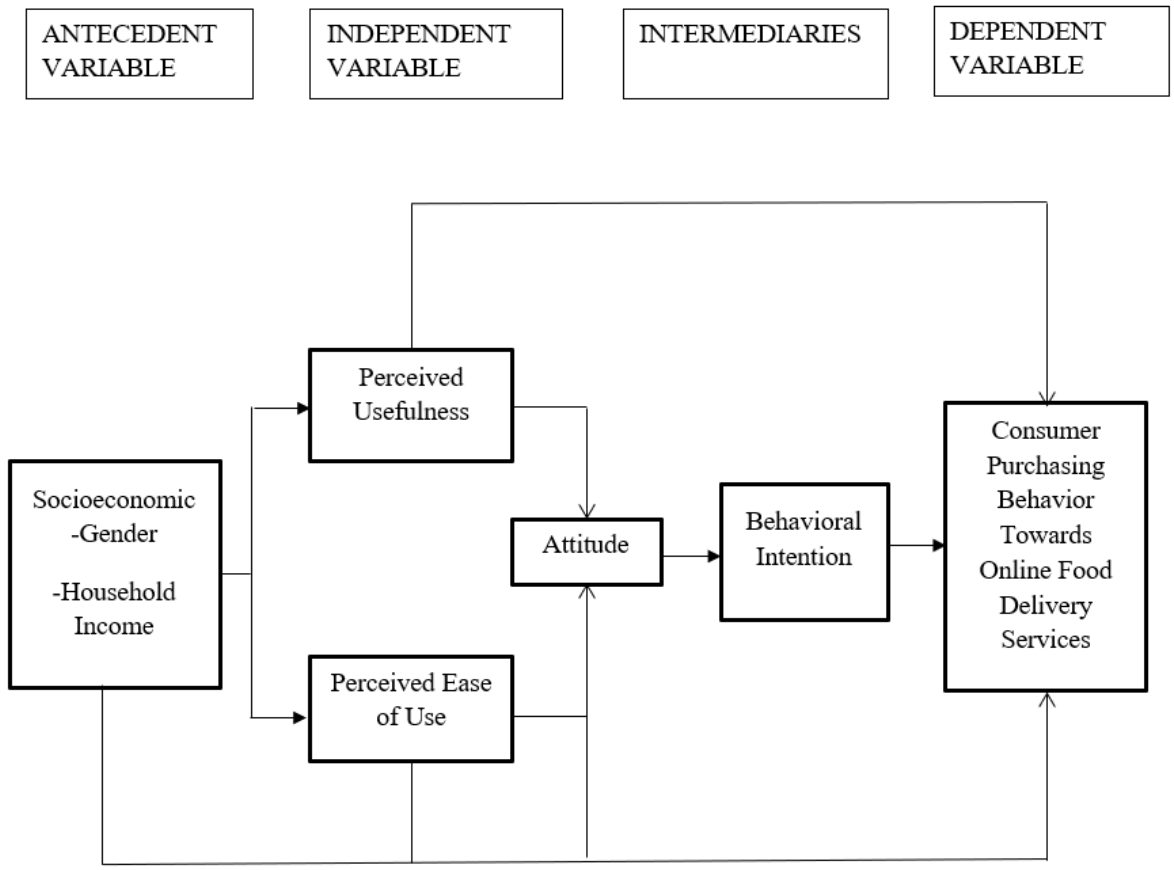

Figure 1: Conceptual Framework

Literature Review

Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) was developed by Feishbein and Ajzen (1975). This theory was connected with beliefs, attitudes, intentions, and behaviors. TRA recognizes the effects of cognitive components, such as attitudes, social norms, and intention on behavior (Guo et al., 2007). The purpose of TRA is to examine the relationship between attitude and behavior regarding two major concepts: 'principle of compatibility' and 'behavioral intention'. TRA has been applied in many studies to explore human behavior in the discipline of socio psychology. Attitude is a set of principles about a certain object or an act that may describe the intention to transmit the act (Schwartz, 1992).

Technology of Acceptance Model (TAM)

The TAM model developed by Davis and Venkatesh is the most widely used framework for predicting the use of information technology (Fornell and Larcker, 1981). The basic aspects of TAM comprise two important dimensions in which the perceived ease of use and the perceived usefulness relate to information systems or technologies. TAM model is an extension of theory reasoned action (TRA) which explains that if the consumer decides to act then the consumer will act independently without constraints (Fishbein, 1979). Perceived ease of use and perceived usefulness rather in TAM are considered to play an essential role in shaping attitudes toward utilizing a particular technology (Davis and Bagozzi, 1989). The differences between TRA and TAM is the mediator role of attitude. Attitude fully mediates the effect of beliefs on behavioral intention in TRA, so, the causal relations between the perceived ease of use and perceived usefulness are not assum ed. TRA posits that a person's

attitude toward a behavior is directly proportional to the sum of the beliefs about the behavior (Ajzen,1991; Fishbein, 1963).

Online Food Delivery Services

The online food delivery service industry can be defined as connecting end-consumer and restaurants or food chains, namely food ordered online for direct use. The online food delivery services segment consists of two categories: restaurant-to-consumer delivery and platform-to-consumer delivery. Restaurant-to-consumer delivery is a segment including a restaurant's delivery run directly by a restaurant. In contrast, platform-to-customer delivery is a market segment focused on the delivery service that handles the delivery itself (Yeo et al., 2017). As in the Malaysian market, restaurant-to-customer platforms, especially fast-food restaurants and other food chains like Dominos, McDonald's, and Pizza Hut, were among the early market movers. Items that can send to consumers include drinks, food, and desserts in boxes or bags. The second category consists of several intermediaries for food ordering companies that provide delivery services for various restaurants through applications such as Food Panda, Uber Eat, etc (Blumtritt, 2018).

Gender

Gender is an essential demographic category to determine the differences in purchasing behavior (Monsuwe et al., 2004). Men spend more on food and drink than women (Ong et al., 2008). However, women make more purchases of health products (Radam et al., 2010). Men are responsible for socio-economic tasks regarding food needs and spending patterns, while women are involved in making decisions regarding the provision of food for their families (Chen et al., 2010). The findings of previous study found that women (84.9%) made higher purchasing of online food delivery than men (75.6%) (Dang et al., 2018).

Household Income

Households who were purchased online food delivery services have an average family size of three (39.0%) and incomes between RM 6,000 (USD1299) to RM 8,999 (USD1948) per month (32.3%) (Dang et al., 2018). High-income consumers have a higher exposure to these advances than low-income consumers following their luxurious lifestyle and the perception that mobile food ordering is so effective that it leads to purchases of online food delivery services (Anastasiei and Dospinescu, 2019). On the other hand, low and middle-income consumers make online purchases more likely to find cheaper goods and services than traditional ones. Ryan and Desi (2017) stated that increasing numbers of women working outside the home significantly affect online food purchasing patterns. Therefore, not only are dual-income families, but they also have a more significant monthly income to spend on online food delivery services.

Perceived Usefulness Towards Consumer Purchasing Behavior Through Online Food Delivery Services

This perceived usefulness implies that technological innovation will enhance work performance (Alalwan et al., 2014). According to Leong (2016), technological advances in many industries have changed the business model to grow. For example, the online food delivery system is believed to lead the growing restaurant business from time to time and help restaurants facilitate their primary interaction (Das, 2017). Van der Heijden (2003) also examined perceived usefulness's effect on consumer purchasing. According to Chen (2002),

consumers felt that the convenience of using a virtual shop (a sense of help) positively impacted their use of the virtual shop. Recent studies by Elango et al (2018) also point out a strong relationship between consumer perceptions and purchasing towards online food delivery services.

Jun et al (2022) found that perceived usefulness is the most influential factor affecting customers' purchasing towards online food delivery service. This result confirms previous studies on adopting new technologies and services in online shopping (Ingham, 2015). Moreover, these results are consistent with prior research (Hong et al., 2021), showing that customers are more likely to use the online food delivery service if they perceive it as applicable.

Perceived Ease of Use Towards Consumer Purchasing Behavior Through Online Food Delivery Services

According to Sethu and Saini (2016], online food delivery service purchases help students manage their time better. It also found that food availability was available at any time and ease of access to the internet was the main reason for using the service. Van der Heijden (2003) emphasized that the impression of direct use affects consumers' purchasing towards online purchases. Chen et al (2020) suggested that consumers perceived ease of use of virtual shops positively influenced their purchasing towards purchasing these services. According to Kimes (2011), the study found that the easy-to-use perceptions associated with online food delivery services are essential for both consumers and non-consumers. Moon and Kim (2001) show that more accessible information technology systems are less threatening to individuals. The mobile application's advantageous screen ensures easy access to the application (Liu et al., 2017).

Attitude towards Consumer Purchasing Behavior Through Online Food Delivery Services

Attitude refers to the extent to which individuals have a positive or negative appraisal of their behavior (Schiffman and Kanuk, 2015). Alagoz and Hekimoglu (2012) found that consumers have a positive attitude if they believe in the quality of customer service quality and online retailer reliability. They also found that attitudes towards online food delivery services vary by convenience, as does the use of online food ordering processes. Attitude also differs from innovations in information technology, reliance on retailers, and various external influences. Yeo (2017) found as consumer drivers continue to generate intentions, the perceived usefulness has been found to influence the association between trust and intention, just as attitude is related between trust and intention. Attitude factor was also frequently found to influence behavior in local studies towards taking action and doing something (Zuroni et al., 2020; Jusoh et al. 2018).

Consumer's Behavioral Intention Towards Consumer Purchasing Behavior Through Online Food Delivery Services

According to Durianto and Liana (2004), behavioral intentions can be defined as a consumer's plan to buy a particular product and how many units of product items are needed for a given period. Purchasing intention is a motivating factor that captures how difficult it is for a user to attempt a particular behavior (Chen, 2002). It is also defined as the consumer who uses technology (Harsono and Suryana, 2014). Blumtritt (2018) found the perception of online shopping and the intention to shop online was not only influenced by the presence of an

attitude born of convenience and usability. But influenced also by exogenous elements such as consumer nature, condition factors, product characteristics, experience in online food delivery services, and online shopping confidence. Former studies have shown facilitating conditions influence consumer intention (Reyes-Mercado, 2018; Zhou et al., 2020).

Consumer's Purchasing Behavior Towards Online Food Delivery Services

Purchasing online means individuals intend to buy products online (Chen, 2002). It also refers to processes involving the exchange of time, individual effort, and money through the online medium (Wu, 2013). Positive consumer perception of technology evoked a purchase intention in which there is a positive relationship between attitude and purchasing intention (Wagner et al., 2016). The convenience of technology through fast and easy-to-use website optimization has increased consumer satisfaction and has resulted in the experience of being confident in making a purchase (Griffith et al., 2001). Purchasing behaviors were often associated with individual experiences when purchasing through online food delivery services because from their experiences, they will make another purchasing if they are satisfied with the product and services (Dang et al., 2018). Buying online food delivery is as easy as it can be for many people, especially the younger generation, because of the technology-exposed lifestyle (Kulviwat et al., 2014; Surya et al., 2021).

Methodology

The study involved a quantitative approach by providing questionnaire forms to consumers in shopping malls, especially those who purchased food delivery services online in Peninsular Malaysia. Researchers have used multi-level cluster sampling techniques based on the hierarchical structure of natural groups in populations. This multi-stage cluster sampling technique is a probability sampling technique where sampling is performed in several stages to reduce sample size. Each state in Peninsular Malaysia has been divided into four zones, namely Northern Zone (Perlis, Kedah, and Penang), Central Zone (Selangor, Perak, and Wilayah Persekutuan including Putrajaya and Kuala Lumpur), Southern Zone (Negeri Sembilan, Melaka, and Johor), and the Eastern Zone (Pahang, Terengganu, and Kelantan).

Based on the distribution of these zones, urban areas were randomly selected involving Selangor (Shah Alam), Pulau Pinang (Penang), Terengganu (Kuala Terengganu), and Johor Bahru (Johor). Urban areas are often filled with rapid development, busy work, traffic congestion, widespread Internet networks, and many others resulting in high and more reliable online purchasing power. The researcher also used convenience sampling in this study. Shopping centers that gather large numbers of people make collecting data easy and quick. According to Krejcie and Morgan (1970), the sample standard for a population of more than 1 000 000 is 384. Therefore, the study selected 384 respondents taking 96 individuals from each state chosen to represent their respective zones.

There are six sections in the questionnaire. Part A covers the respondents' socio-economic background, such as gender, age, ethnicity, education, employment sector, and monthly household income. Part B is the perceived usefulness of online food delivery services. Part C also includes the perceived ease of purchasing online food delivery services. Next, in part D, the respondents' attitudes were the result of the stated perception of what they feel is that they choose to buy food delivery services online in part E. Finally, section F is about consumer behavior towards online food delivery services. All parts except Part A use a 5-point Likert

scale to measure variables in which respondents require scale change ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

According to Hair et al (2009), Cronbach's Alpha value, accepted and agreed upon by many researchers, is 0.7; however, the alpha value of 0.6 is still acceptable and used in this study. The analysis results found that the alpha coefficient for each variable studied exceeds 0.6, which indicates that this variable has a high-reliability value. Data were analyzed using IBM SPSS Statistics using descriptive and inferential data analysis methods. Normality of the data distributions for each determinant of consumers' purchasing behavior towards online food delivery services were also assessed and confirmed before parametric test such as multiple linear regression was conducted.

Results and Discussion

Respondents' Socio-economic Background

The respondents' socio-economic background consisted of individual background information, namely gender, age, ethnicity, education level, employment status, and monthly household income. Three hundred eighty-four respondents were selected, and 96 represented each urban state, such as Johor Bahru, Shah Alam, Georgetown, and Kuala Terengganu. The involvement of female respondents (59.6%) was more significant than males (40.4%). As for the age category, 21 to 30 years old, the earliest adults recorded the highest (74.5%). In addition, about half of the respondents had Bachelor's Degree (51.8%), and for the employment status, most of the respondents were students (40.2%). Nearly half of the respondents belonged to the category of the total monthly income of B40 households (52.1%). Table 1 shows the results of respondents' socio-economic background.

Table 1
Respondents' Socio-economic Background

Variable	Socio-economic	Frequency	Percent (%)
Gender	Male	155	40.4
	Female	229	59.6
Age	20 years and below	60	15.6
	21 years – 30 years	286	74.5
	31 years – 40 years	34	8.9
	41 years – 50 years	2	0.5
	51 years and above	2	0.5
Education Level	UPSR	1	0.3
	PMR/PT3	4	1.0
	SPM/MCE	26	6.8
	STPM/Diploma/Certificate	125	32.6
	Matriculation	199	51.8
	Bachelor's Degree	28	7.3
	Masters/PhD	1	0.3
Employment Status			

		Public Sector	47		
		Private Sector	143	12.2	
		Self-Employed	29	37.2	
		Non-Working	6	7.6	
		Student	154	1.6	
		Housewife	3	40.1	0.5
Household (Monthly)	**Income**	Others	2	0.4	
		B40 [≤ MYR 3860 (*USD835.9)]	200	52.1	
		M40 [MYR 3860 – MYR 8319 (USD835.9 -USD1801.4)]	165	43.0	
		T40 [≥ MYR 8319 (USD1801.4)]	19	4.9	
		*MYR1 = USD0.22 (in year 2022)			

Perceived Usefulness

The mean scores for perceived usefulness are displayed in Table 2. Higher score towards 5 represents better perceived usefulness while lower score towards 1 represents poorer perceived usefulness. Among all the aspects of perceived usefulness, using online food delivery service allows me to save time (mean = 4.11) had the highest mean score. These results show that purchasing online food delivery services can reduce their time consumption. Next, the second highest mean score (4.08) was observed for the statement where online food delivery service is advantageous or good.

In addition, the lowest mean score was observed for the statement on purchasing food through online food delivery service is cheaper (mean = 3.11) which means that there are still those who consider buying food through online delivery services much cheaper than expected. Another argument that got the second lowest mean score (mean = 3.57) was observed for the statement on purchasing food through online food delivery services will increase their usability. Therefore, it can conclude that respondents think that buying online food delivery services allows them to increase their ability and high spirits.

Table 2
Perceived Usefulness Mean Score

No.	Statement	Mean Score (1 to 5)
1.	Using online food delivery services would enable me to accomplish shopping more quickly than using traditional approaches.	3.91
2.	Online food delivery services would enhance my effectiveness in shopping or information seeking.	3.83
3.	I would find online food delivery services helpful.	4.06
4.	Online food delivery services are advantageous or good.	**4.08**
5.	Online food delivery services provide helpful content.	3.80
6.	Online food delivery provides sufficient content.	3.63
7.	Online food delivery services make it easy to find the content required.	3.78
8.	Using online food delivery services enables me to save time.	**4.11**
9.	I think purchasing food through online food delivery services would increase my productivity.	3.83
10.	I think purchasing food through online food delivery services would increase my usability.	**3.57**
11.	I think purchasing food through online food delivery services is cheaper.	**3.17**

Perceived Ease of Use

The mean scores for perceived ease of use are displayed in Table 3. Higher score towards 5 represents better perceived ease of use while lower score towards 1 represents poorer perceived ease of use. Among all the aspects of perceived ease of use, they found online

shopping and online transactions on online food delivery services through web pages are accessible (mean = 4.10) had the highest mean score, which means that they consider the purchase of this online food delivery service is not difficult and complicated for them to spend as well as do any transactions. Followed by the second highest mean score (mean = 4.04) was the observed statement that online food delivery services are easy to use. It can be concluded that they think this purchase is not difficult to use.

Next, for the lowest mean score (mean = 2.87) was the observed statement that there is difficult to understand how to use online food delivery services. The second lowest mean score (mean = 3.83) was observed for the statement on using online food delivery services would improve the speed, which means that they are capable and able to increase their speed in accessing the purchase of online food delivery services.

Table 3
Perceived Ease of Use Mean Score

No.	Statement	Mean Score (1 to 5)
1.	I found online shopping and online transactions on online food delivery services through web pages are accessible.	**4.10**
2.	I would find interaction through online food delivery services via web pages clear and understandable.	3.88
3.	I would find it easy to become skillful at navigating through online food delivery services via web pages.	4.01
4.	Using online food delivery services would improve the speed at which I could conduct myself.	**3.83**
5.	Online food delivery services would make it easier for me to conduct transactions.	3.97
6.	I am comfortable with my ability to use online food delivery services.	4.02
7.	Learning to operate online food delivery services is easy for me.	3.92
8.	I find online food delivery services easy to use.	**4.04**
9.	I can never forget how to log in and use online food delivery services.	3.88
10.	Using online food delivery services does not require a lot of mental effort.	3.89
11.	It is difficult to understand how to use online food delivery services.	**2.87**

Attitude

The mean scores for attitude are displayed in Table 4. Higher score towards 5 represents better attiude while lower score towards 1 represents poorer attitude. Among all the aspects of attitude, they found purchasing food through online food delivery services is wise (mean =

4.11) had the highest mean score. Purchasing food through online is a skill or the other alternatives to get the necessities and needs of satisfaction. Next, the second highest mean score (mean = 4.09) was observed the statement that purchasing food through online food delivery service is sensible, which means the purchasing through online food delivery services can be met due to its particular nature.

Meanwhile, the lowest mean score (mean = 3.68) was observed the statement that purchasing food through online food delivery service is rewarding, which means they strive for benefits, goodness, gifts, or compilation benefits to make purchases of online food delivery services. The second lowest mean (mean =3.86) was observed the statement that using websites and applications to buy online food delivery services rather than from a physical store is a good idea. In conclusion, they are more likely to buy online food delivery services rather than struggle to go to physical stores.

Table 4
Attitude Mean Score

No.	Statement	Mean Score (1 to 5)
1.	Purchasing food through online food delivery services is wise.	**4.11**
2.	Purchasing food through online food delivery services is good.	3.99
3.	Purchasing food through online food delivery services is sensible.	**4.09**
4.	Purchasing food through online food delivery services is rewarding.	**3.68**
5.	Using websites to buy food through online food delivery services is appealing.	4.00
6.	I like the idea of buying food through online websites and application.	4.01
7.	Using websites and application to buy online food delivery services rather than physical stores is a good idea.	**3.86**
8.	I have fun purchasing food through online food delivery services.	3.87
9.	I think that purchasing food through online food delivery services is enjoyable.	3.95
10.	Using online food delivery services is pleasant.	4.00
11.	I feel favorable toward online food delivery services.	3.91

Consumer's Behavioral Intention

The mean scores for attitude are displayed in Table 5. Higher score towards 5 represents better consumer's behavioral intention while lower score towards 1 represents poorer consumer's behavioral intention. Among all the aspects of consumer's behavioral intention, if they given the chance to purchase online food delivery services by mobile phone (mean = 4.04) had the highest mean score, which means that they tend to have the intention to buy

using a mobile phone if there are opportunities or things that help them. The following observed statement that they would recommend online food delivery service to their friends (mean = 4.00) had the second highest mean score. This means that they tend to recommend and invite their friends once to use and purchase online food delivery services.

Next, the lowest mean score (mean = 3.74) was observed the statement that they always try to use online food delivery service in as many cases /occasions as possible, which means that some of them have the intention to try often to use online food delivery services regardless of their time. It also explains that respondents are not afraid to try something new. The second lowest mean (mean =3.91) was observed the statement that they always try to use the online food delivery service to purchase food whenever it has features to help them perform it. This means that some of them do not intend to try to purchase regularly even though this service supports them to do so.

Table 5
Consumer's Behavioral Intention Mean Score

No.	Statement	Mean Score (1 to 5)
1.	I plan to use online food delivery value-added services in the future.	3.96
2.	I will try to use online food delivery value-added services if necessary.	3.97
3.	I always try to use online food delivery services to purchase food whenever it has features to help me perform it.	**3.91**
4.	I always try to use the online food delivery service in as many cases/occasions as possibles.	**3.74**
5.	I plan to use the online food delivery service in the future.	3.97
6.	I am willing to spend more time than I had planned on purchasing online food delivery services	3.97
7.	I am willing to spend more money than planned to purchase online food delivery services.	3.98
8.	I would recommend online food delivery services to my friends.	**4.00**
9.	Given a chance, I intend to purchase online food delivery services by mobile phone.	**4.04**
10.	I believe my interest in online food delivery services will increase in the future	3.99

Consumer's Purchasing Behavior

The mean scores for attitude are displayed in Table 6. Higher score towards 5 represents better consumer's purchasing behavior while lower score towards 1 represents poorer consumer's purchasing behavior. Among all the aspects of consumer's purchasing behavior, they expect their purchasing towards online food delivery services to continue in the future and would purchase food through online food delivery service using a mobile phone (mean = 4.14) had the highest mean score, which means they will continue making purchases next time without hindrance and will use a mobile device (mobile phone) to make a purchase in future.

Next, the lowest mean score (mean = 3.71) was observed the statement that in general, they would purchase towards online food delivery services rather than going to the physical store. Although this statement has the lowest mean score, some of them are more likely to make this purchasing through online rather than going to the physical store. They do not have to leave their place but just waiting for their food to arrive. The second lowest mean (mean = 3.77) was observed the statement that they will buy food through online food delivery service without hesitation, which means they remained confident and did not worry about continuing the investment.

Table 6
Consumer's Purchasing Behavior Mean Score

No.	Statement	Mean Score (1 to 5)
1.	I expect my purchasing of online food delivery services will continue in the future.	**4.14**
2.	I would consider purchasing online food delivery services in the short term.	3.90
3.	I would consider purchasing online food delivery services in the long term.	4.02
4.	I would return to online food delivery services that I have purchased from	3.97
5.	I plan to purchase from new online food delivery services.	3.90
6.	I would purchase online food delivery services rather than going to physical stores.	**3.71**
7.	I would purchase food through online food delivery services using mobile phones.	**4.14**
8.	I will buy food through the most recommended online food delivery services.	4.06
9.	I will buy food through online food delivery services that are easily accessible.	4.13
10.	I will buy food through online food delivery services without hesitation.	**3.77**
11.	I am concerned about the meal taste and food safety, so that I could repurchase online food delivery services.	4.01
12.	The variety of meals, payment convenience, and nutrition make me repurchase online food delivery services.	4.11
13.	The speed of food delivery services makes me repurchase online food delivery services.	4.12

Multiple Linear Regression

As displayed in Table 7, potential factors namely gender, household income, perceived usefulness, perceived ease of use, attitude, and consumer's behavioral intention influencing consumer's purchasing behavior towards online food delivery services were regressed and significant factors were revealed. Before interpreting the results further, the fitness of the model was assessed and resulted in a valid (F =93.706 ***; p = 0.001) and fit model with an R square of 0.599. Adjusted R^2 = 0.592 indicates that the independent variables can only explain as much as 59.2 percent of the consumer's purchasing behavior towards online food delivery services. Another 40.8% can only be explained by other independent variables. Thus, the other independent variables can be analysed for the next research.

Perceived usefulness, attitude, and consumer's behavioral intention which were found to be significant in the multiple regression output to consumer's purchasing behavior towards online food delivery services. These indicate that perceived usefulness (β = 0.222; p = 0.000),

attitude (β = 0.367 and p = 0.000) and household consumer's behavioral intention (β = 0.220; p = 0.000) are important factors in influencing consumer's purchasing behavior towards online food delivery services. Therefore, it can be concluded that the attitude variable having the strongest influence. A previous study by Zuroni et al. (2021) also found that the attitude variable was the strongest factor influencing consumer's purchasing behavior towards online food delivery services.

Table 7
Multiple Linear Regression Analysis of Consumer's Purchasing Behavior towards Online Food Delivery Services

Model	B	Beta, β	t	Sig.
(Constant)	8.824		4.027	0.000
Gender	0.847	-0.053	-1.618	0.106
Household Income	0.489	0.037	1.111	0.267
Perceived Usefulness	0.248	0.222	4.775	0.000***
Perceived Ease of Use	0.104	0.083	1.724	0.086
Attitude	0.426	0.367	7.219	0.000***
Behavioral intention	0.273	0.220	4.443	0.000***

*****Significant at p≤0.001 R = 0.774 *Adjusted* R^2 = 0.592**

F= 93.706 R^2 = 0.599

Conclusion and Suggestion

In conclusion, the regression results revealed perceived usefulness, attitude, and behavioral intention influence consumer's purchasing behavior towards online food delivery services. It showed that the attitude variables recorded the highest beta value and strongest influence consumer's purchasing behavior towards online food delivery services. The results of this study can benefit entrepreneurs involved as intermediaries in food applications and large restaurant companies with private food order delivery services. Relevant parties can take steps to maintain performance and improve service methods to sustain relationships established with previous consumers. With a positive and robust attitude toward information technology, prominent individuals will grow positive and have strong intentions towards purchasing online food delivery services.

Attitude also applies its various innovations to information technology, trust in retailers, and externalities. First, the Theory of Reasoned Action (TRA) and Technology Acceptance Model (TAM) are applied in this study as indicators of consumer's purchasing behavior towards online food delivery services. This study contributes to the current literature and provided empirical evidence that the TRA and TAM model worked in online food delivery

services. Next, the perceived usefulness felt by consumers should be considered as a necessary action for the relevant parties by offering a service application that is pleasant, useful, and has information or instructions that help the consumers to do so. Finally, using quality service applications, fast and not confusing will attract more consumers to order food.

For future studies, it is recommended that an additional variable should be included to gain a better understanding of consumers' behavior in the context of an online food delivery services. In addition, the service provider should describe the application as a service that is easy to use and compatible with the consumer following the lifestyle changes, needs, values, and past experiences so that the delivery application service is always accepted. Lastly, further studies can be expanded to other states in Malaysia to form a larger sample size representing the whole of Malaysia for bias avoidance.

References

Tausif, A. S. (2020). Factors affecting online food delivery service in Bangladesh: an empirical study. *British Food Journal*, 123(2), 535-550. DOI:10.1108/BFJ-05-2020-0449.

Ajzen, I. (1991). The theory of planned behavior. *Organ. Behav. Hum. Decis. Processes*, 50, 179–211.

Albarq, A. N. (2006). Intention to shop online among university students in Jordan. University Utara Malaysia.

Alagoz, S. M., & Hekimoglu, H. (2012). A study on TAM: Analysis of customer attitudes in online food ordering system. *Procedia Social and Behavioral Science*. 62,1138-1143.

Alalwan, A., Dwivedi, Y., & Williams, M. (2014). Examining Factors Affecting Customer Intention and Adoption of Internet Banking in Jordan. UK Academy for Information Systems Conference Proceedings 2014. Paper 3.

Anastasiei, B., & Dospinescu, N. (2019). Electronic word-of-mouth for online retailers: Predictors of volume and valence. *Sustainability*, 11, 814.

Blumtritt, C. (2018). eServices Report 2018 - Online Food Delivery, Hamburg.

Chen, L. D., Gillenson, M. L., & Sherell, D. L. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information of Management*, (8), 705-719.

Chen, Y. H., Hsu, I. C., & Lin, C. C. (2010). Website attributes that increase consumer purchase intention: A conjoint analysis. *Journal of Business Research,* 63, 1007–1014.

Chen, H. S., Liang, C. H., Liao, S. Y., & Kuo, H. Y. (2020). Consumer attitudes and purchase intentions toward food delivery platform services. *Sustainability,* 12, 1-18.

Dang, A. K., Tran, B. X., Nguyen, C. T., Le, H. T., Do, H. T., & Nguyen, H. D. (2018). Consumer preference and attitude regarding online food products in Hanoi, Vietnam. *International Journal of Environment Research and Public Health, 15*(5), 981.

Das, J. (2017). Consumer perception towards online food ordering and delivery services: An empirical study. *Journal of Management, 5*(5), 155-163.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Manag. Sci.*, *35,* 982–1003.

Durianto, D. C., & Liana, A. (2004). Analysis of the effectiveness of softener and fresh television advertising in Jakarta and surrounding areas using the Customer Decision Model. *Journal of Corporate Economics, 1*(2), 40-54.

Elango, D., Dowpiset, K., & Chantawaranurak, J. (2018). A Study on Factors Impacting Consumers' Intention to Use On-demand Food Delivery Applications in Bangkok, Thailand.

Fishbein, M. (1963). An investigation of the relationships between beliefs about an object and the attitude toward that object. *Hum. Relat*., 16, 233–239.

Fishbein, M. (1979). A Theory of Reasoned Action: Some Applications and Implications. University of Nebraska Press, 27*,* 65-116.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.*, 18, 39–50.

Gera, M., Nawander, N., Tharwani, N., & Bhatia, P. (2018). Operations research in food delivery. *International Journal of Advance Research and Development,* 3(10), 73-78.

Griffith, D. A., Krampf, R. F., & Palmer, J. W. (2001). The role of interface in electronic commerce: Consumer involvement with print versus online catalogs. *International Journal of Electronic Commerce, 5*(4), 135-53.

Guo, Q., Johnson, C. A., Unger, J. B., Lee, L., Xie, B., & Chou, C. P. (2007). Utility of the theory of reasoned action and theory of planned behavior for predicting Chinese adolescent smoking. *Addiction Behavior*, 32(5), 066-1081.

Hair, J. J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). Multivariate Data Analysis with Readings (7th ed.). Englewood Cliffs, New Jersey: Prentice Hall.

Harsono, L. D., & Suryana, L. A. (2014). Factor Affecting the User Behavior of Social Media Using UTAUT2 Model. In Proceedings of the First Asia-Pacific Conference on Global Business Economics, Finance and Social Sciences, Singapore.

Henseler, J., Hubona, G. S., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Ind. Manag. Data Syst.,* 116, 2–20.

Hong, C., Choi, H., Choi, E., & Joung, H. (2021). Factors affecting customer intention to use online food delivery services before and during the COVID-19 pandemic. *J. Hosp. Tour. Manag.* 48, 509–518.

Hong, L., Li, Y., & Wang, S. (2016). Improvement of online food delivery service based on consumers' negative comments. *Canadian Social Science,* 12(5), 84–88.

Ingham, J., Cadieux, J., & Berrada, A. M. (2015). e-Shopping acceptance: A qualitative and meta-analytic review. *Inf. Manag.* 52, 44–60.

Jun, K., Yoon, B., Lee, S., Lee, & D. S. (2022). Factors Influencing Customer Decisions to Use Online Food Delivery Service during the COVID-19 Pandemic. *Foods,* 11, 64. https://doi.org/10.3390/foods11010064

Jusoh, Z. M., Arif, A. M. M., Osman, S., Salleh, R. M., & Kadir, N. A. A. (2018). Factors that influence the behavior of household solid waste management towards zero waste. *Malaysian Journal of Consumer and Family Economics*, 21, 136-152.

Kimes, S. E. (2011). Customer perceptions of electronic food ordering. *Cornell Hospitality Report*, 11(10), 6-15.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement,* 30, 607-610.

Kulviwat, S., Bruner, G. C., & Neelankavil, J. P. (2014). Self-efficacy as an antecedent of cognition and affect in technology acceptance. *Journal Consumer Marketing,* 31(3), 190-199.

Lee, W. I., Cheng, S. Y., & Shih, Y. T. (2017). Effects among product attributes, involvement, word-of-mouth, and purchase intention in online shopping. *Asia Pac. Manag. Rev.,* 22*,* 223–229.

Liu, Q., Yan, Z., & Zhou, J. (2017). Consumer choices and motives for eco-labeled products in China: An empirical analysis based on the choice experiment. *Sustainability*, *9*(3), 331.

Maziahtusima, A., Hazlina, A., Sakinah, A., & Yuslina, M. (2018). *Facing the Challenges of the Industrial Revolution 4.0 Era: The Relationship between Continuous Learning Practice and the Performance of the Role of Education Teachers as Agents of Community Change.* Proceedings of the National Seminar of the Council of Deans of Public University Education, 730-738.

Moon, J. W., & Kim, Y. G. (2001). Extending the Technology Acceptance Model a world wide web context*. Information and Management*, 38(4), 217-230.

Monsuwe, T. P., Dellaert, B. G. C., & Ruyter, K. D. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management,* 15(1), 102-121.

Ong, F. S., Kitchen, P. J., & Jama, A. T. (2008). Consumption patterns and silver marketing: an analysis of older consumers in Malaysia. *Article in Marketing Intelligence and Planning*, 26(7), 682-698.

Radam, A., Rusli, M. Y., Than, S. B., & Selamat, J. (2010). Consumers' perceptions, attitudes and willingness to pay towards food products with "No Added Msg" labeling*. International Journal of Marketing Studies*, 2(1), 65-77.

Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *J. Retail. Consum. Serv.*, 51*,* 221–230.

Reyes-Mercado, P. (2018). Adoption of fitness wearables: Insights from Partial Least Squares and Qualitative Comparative Analysis. *Journal of Systems and Information Technology*, 20(1), 103-127. https://doi.org/10.1108/JSIT-04-2017-0025

Ryan, R. M., & Deci, E. L. (2017). Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness, New York: Guilford.

Salunkhe, S., Petkar, S., & Udgir. (2018). Technology acceptance model in context with online food ordering and delivery services: An extended conceptual framework, *5*(5), 73-79.

Schiffman, L., & Kanuk, L. (2015). Consumer Behavior; Pearson Global Edition: Harlow, England.

Schwartz, S. H. (1992). Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries. *Advances in experimental Social Psychology*, 25,1-65. DOI:10.1016/S0065-2601(08)60281-6

Sethu, H. S., & Saini, B. (2016). Customer Perception and Satisfaction on Ordering Food Via Internet, a Case on Foodzoned.Com, in Manipal*. Finance and Social Sciences, Kuala Lumpur, Malaysia*, 15-17.

Shahkila, Z. M. Y., Fadzilah, M. Y., & Yusnidawati, M. Y. (2016). Determinants towards food delivery through e-commerce in Pasir Gudang Area. *Journal of Modern Education Review*, 6(9), 622- 631.

Surya, A. P., Sukresna, I. M., & Mardiyono, A. (2021). Factors affecting intention to use food order-delivery feature of ride-hailing applications: the UTAUT approach. *International Journal of Business and Society*, 22 (3), 1363-1383.

Van der Heijden, H. (2003). Factors influencing the usage of websites: The case of a generic portal in the Netherlands*. Journal of Information and Management,* 40(6), 541-549.

Wagner, G., Schramm, K. H., & Steinmann, S. (2016). E-shopping acceptance: qualitative and meta-analytic review. *Journal of Business Research,*1-15.

Wu, I. L. (2013). The antecedents of customer satisfaction and its link to complaint intentions in online shopping: An integration of justice, technology, and trust. *International Journal Information Management*, 33(1), 166–176.

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

Zhou, M., Zhao, L., Kong, N., Campy, K. S., Xu, G., Zhu, G., Cao, X., & Wang, S. (2020). Understanding consumers' behavior to adopt self-service parcel services for last-mile delivery. *Journal of Retailing and Consumer Services*, 52, 101911. https://doi.org/10.1016/j.jretconser.2019.101911

Zuroni, M. J., Syuhaily, O., Afida Mastura, M. M., & Roslina, M. S. (2020). Factors affecting household solid waste management behavior towards zero waste among Malaysian consumers. *Malaysian Journal of Consumer and Family Economics*, 25, 194-218.

Zuroni, M. J., Nurnazrentasah, R., & Wanani, S. N. S. (2021). Factors influencing consumer purchasing behavior towards online food delivery services. *Malaysian Journal of Consumer and Family Economics*, 27 (S1), 1-16.