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CONSUMER'S BEHAVIORAL INTENTION TOWARDS DRONE FOOD DELIVERY

BY

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DECLARATION

We hereby declare that:

(1) This undergraduate FYP is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the FYP.

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DEDICATION

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LIST OF ABBREVIATIONS

AT	Attitude
AVE	Average Variance Extracted
BI	Behavioral intention
CR	Composite Reliability
DFDS	Drone food delivery services
EC	Environmental concern
HTMT	Heterotrait-Monotrait
PEoU	Perceived ease of use
PLS-SEM	Partial Least Square - Structural Equation Modelling
PU	Perceived usefulness
SEM	Structural Equation Modelling
SN	Subjective norms
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology
VAF	Variance Accounted For
VIF	Variance Inflation Factor

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PREFACE

The global food delivery market is experiencing significant growth, largely accelerated by shifting consumer preferences during the COVID-19 pandemic. This paper explores the integration of drone technology with the food delivery markets in Malaysia. The pandemic has heightened demand for contactless services, making food delivery a permanent part of many people's lives. As a result, the integration of drone technology into food delivery services has gained attraction. This study explores the emergence of drone food delivery services (DFDS) in Malaysia, where adoption appears to be in the testing phase. Unlike other countries, DFDS is legally permissible in Malaysia, with approval from the Civil Aviation Authority. However, there is a lack of research on consumer attitudes and behavioral intentions towards DFDS in the Malaysian context. Therefore, this study aims to investigate factors influencing consumer attitudes and behavioral intentions, such as perceived ease of use, perceived usefulness, subjective norms, and environmental concerns, while considering the mediating role of attitude. Hence, the title of this research would be “Consumer’s Behavioral Intention towards Drone Food Delivery”.

ABSTRACT

This study merges the Theory of planned behavior (TPB) model and Technology acceptance model (TAM) to discover the consumer's behavioral intention towards drone food delivery services. The variable proposed are perceived ease of use, perceived usefulness from TAM, subjective norms from TPB, and environmental concern as an additional independent variable, with attitude as mediator, and behavioral intention as dependent variable. The target populations are the young adults aged 18 to 26 years old and the required sample size is 384. Partial least squares structural equation modelling (PLS-SEM) was applied to predict the consumer behavior. The mediating effect of attitude has also been tested in this research in relation to our model. All the hypotheses have been proven as significant including partial mediation been found. Additionally, this study includes discussions on the results, their implications, limitations, and suggestions for future research. This research can provide insights for the academic researchers, government agencies and policy makers, along with food delivery service providers about Malaysia consumers' behavioral intention to use drone food delivery.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This chapter discovers the research background, research problem about drone food delivery services as well as the research objectives, research questions, along with research significance.

1.1 Research Background

The global food delivery market is continuously growing, and it suggests that the market is a great opportunity for the future growth. According to Statista (2022a), the profit in the global food delivery market is estimated to reach US$0.91 trillion in 2023 and expected to reach US$1.45 trillion in 2027. In Malaysia, the food delivery market is estimated to reach US$2.61 billion in 2023 and the revenue is projected to increase at a 14.28% annual rate (CAGR 2023-2027), which will contribute to a market value of US$4.46 billion by 2027 (Statista, 2022b).

During the Covid-19 pandemic, the Ministry of Entrepreneur Development and Cooperatives (MEDAC) mentioned that a total of 37,415 businesses in Malaysia which consists of micro-entrepreneurs and small and medium enterprises (SMEs) were shut down (Bernama, 2021). However, the Covid-19 pandemic has facilitated services without physical interactions (Karim et al., 2020; Wen et al., 2020, as cited in Kim, Kim, & Hwang, 2021). Although it is not possible to always stay apart, people become more inclined to shun interpersonal interactions unless they are necessary. Hence, people have changed their food consumption habits and behaviors during the pandemic due to the lockdowns and restrictions implemented (Business Wire, 2020; Jain, 2020; Manivannan et al., 2020, as cited in Kim et al., 2021). Moreover, a survey conducted by Grab from over 60,000 online food

delivery users in Southeast Asia claimed that 7 in 10 customers admitted that delivery has become a permanent part of their lives (Digital News Asia, 2022). To put it another way, avoiding human interaction and social distance are causing the rise in demand for food delivery services. According to Rakuten Insight survey, 98% of Malaysians relied on food delivery services since the beginning of Recovery Movement Control Order (RMCO) in Malaysia on 10th of June 2020 (Amir, 2022). Food service companies have responded to this shift in consumer expectations by adapting their business models to be more flexible, adding additional take-out, drive-through, and delivery options, as well as extending sanitation measures (EHL, 2020, as cited in Kim et al., 2021).

Nowadays, drone technology has gained a lot of interest in the business market because of its high mobility, low price, and flexible deployment (Jasim, Kasim, & Mahmoud, 2022). According to Snead and Seibler (2017, as cited in Hwang and Choe, 2019), the interpretation of drone is a small and unmanned aerial that can fly autonomously with the assistance of on-board computers and sensors. In earlier times, drones' prototypes were pricy and often apply in military purposes. However, in nowadays, low-cost alternatives existed and are employed in many industries for various purposes, including forest observation, applications for analysing air quality, management of fisheries and farms, management of highways, and Olympic events' entertainment (Bamburry, 2015; Coren 2011; Gibson, 2018; Smith, 2015, as cited in Hwang and Choe, 2019). Furthermore, drones are also expected to become as popular as smartphones in the future. According to Grand View Research (2022), the commercial drone market size was expected to reach US$42.97 billion in 2023 and obtained a growth rate of 38.6% (CAGR 2023 – 2030). Statista (2023) also stated that the global commercial drone market will reach US$58.4 billion in 2026. In Malaysia, the Deputy Finance Minister mentioned that the drone industry was expected to reach RM12.13 billion in 2023 (Bernama, 2023). Thus, all the statistics and data suggested that the drone market is a growing industry which provides lots of business opportunities in Malaysia.

Drone food delivery attempts have been carried out in many countries, such as Australia, Korea, China, and USA. As the rising of the domain of food service industry, drone delivery is receiving high attention. Drone technology is therefore expected to cause a technological revolution in this industry. Some nations, including New Zealand, Dubai, Korea, Malaysia, America, Singapore, have undertaken successful initiatives to ensure drone food delivery services (DFDS) (Jasim et al., 2022). In current year, the applications of drone in Malaysia have the highest growth in agricultural, infrastructure, and security systems (Jacob, 2023). Due to the growing market in drone industry, drone companies tend to expand their business operations by providing more solutions to other industries. For example, the Malaysian Global Innovation and Creativity Centre (MaGIC) partnered with AirAsia's e-commerce platforms and plan to offer DFDSs in the future (The Star, 2021). Also, Average Drone Sdn Bhd also collaborated with Futurise to perform 3-month trial for drone food delivery at Cyberjaya, Selangor (Bernama, 2019). Therefore, it is exciting to investigate the merging of food delivery market and drone market in Malaysia and whether the DFDSs can be successfully implemented in Malaysia.

Moreover, there are several benefits of using DFDS. In terms of time, cost, and convenience, using drones to deliver meals is more efficient (Khalil, Shankar, Bodhi, Behl, & Ferraris, 2022). It allows restaurants to deliver faster, as well as in anytime, anywhere, and enables to reach remote areas where there is only limited ground transportation infrastructure available. Besides, drone delivery is considered an environmentally friendly technology because it uses less fuel than traditional delivery methods to deliver food. Furthermore, the current food delivery systems that rely on automobiles and motorbikes have led to a number of grave issues, including fatalities, injuries, and expenditures (Reuters, 2017, as cited in Hwang & Choe, 2019). Conventional food delivery services are a major contributor to road accidents because they incur commission losses when deliveries are delayed, which will make delivers hurry (China, Labour Bulletin, 2017, as cited in Hwang & Choe, 2019). Transport Ministry of Malaysia mentioned that there were 1,242 traffic accidents regarding food delivery reported from 2018 to May 2021 (Carvalho et al., 2022). The aforementioned problems may be resolved by using drones to distribute

food as they are operated by computer programmes rather than individual pilots and may be programmed with the correct coordinates (Kesteloo, 2018, as cited in Hwang & Choe, 2019).

1.2 Research Problem

DFDS is receiving a lot of attention as the food service business grows. Various nations including New Zealand, Dubai, South Korea, USA, and Singapore, have undertaken successful attempts to provide DFDS (Jasim et al., 2022). For instance, Domino's Pizza successfully used drone to travel 32km to deliver the Pizza to the customer in New Zealand (Reid, 2016). In Dubai, Costa Coffee, used drones to deliver drinks on the sandy beach (Seymour, 2017). In Korea, Yogiyo used auto-piloting drone to deliver the food in urban areas (Park, 2016). In America, Uber Eat offered DFDS (Carson, 2019). In Singapore, F-drones utilized drones to deliver items to ships anchored off the coast (Patel, 2022). While other countries are commercializing the drone food delivery technology, Malaysia still appears to be at the testing stage of using drone in the foodservice industry. Fortunately, DFDS is legal in Malaysia, and it requires to apply for permit from the Civil Aviation Authority of Malaysia (CAAM) (CAAM, 2023). Thus, there is no legal constraint that hinder the food delivery service providers to offer DFDS in Malaysia.

Although DFDS have been introduced widely, there are still very limited literatures and findings regarding the consumers' responses toward the DFDS in Malaysian context currently. To introduce this innovation commercially in Malaysia, it is considerable to analyse the consumers attitude (AT) towards the drones and determine the behavioral intention (BI) of adopting DFDS. Hence, the study of BI is critical to support our research as high level of BI to use DFDS indicates consumers are most likely to use it (Choe, Kim, & Hwang, 2021). According to Vermeir & Verbeke (2006), it mentioned that a significant positive impact on AT had a strong correlation with the BI to use. Thus, our research has planned to

discover the factors which can directly influence the consumers' AT of using DFDS and lead to the behavior intention to use it. Moreover, many past studies used Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) to illustrate consumers' BI toward using DFDS (Tom, 2020). However, most of the findings are in the context of US (Clothier et al., 2015), Korea (Choe et al., 2021), India (Mathew, Jha, Lingappa, & Sinha, 2021) and other countries. Due to cultural differences between nations, it is likely that various people will have varied perspectives towards the use of drones for food delivery. Many cross-cultural studies suggested that, in different cultures, the individuals might have different perceptions toward certain things (Li & Kirkup, 2007). Thus, our research focuses on filling the research gap regarding the consumers' BI towards the DFDS in Malaysian context.

The emergence of drone technology has led to the introduction of DFDS in Malaysia. However, the acceptance and willingness of customers to utilise DFDS is crucial in measuring the success of implementing this service. For this reason, this research intends to investigate the factors that impact the customers' AT toward DFDS along with their subsequent BI to use the service in Malaysia. The specific objectives in this research paper are to investigate the influence of perceived ease of use (PEoU), perceived usefulness (PU), subjective norms (SN), and environmental concern (EC) on the customer's AT and subsequently the BI towards DFDS along with the mediating effect of AT between PEoU, PU, SN, EC and BI. Hence, understanding these variables are essential for food delivery service providers to design successful strategies for promoting the acceptance and adoption of DFDS in Malaysia.

1.3 Research Objectives and Research Questions

1.3.1 General Objective

The objective of this research aims to analyse on the relationship between the four independent variables, PEoU, PU, SN, and EC, with the mediator, AT and the dependent variable, BI. Hence, the research can help to predict the potential success of implementing DFDS in Malaysia.

1.3.2 Specific Objectives

i. To examine the relationship between PEoU and AT.
ii. To examine the relationship between PU and AT.
iii. To examine the relationship between SN and AT.
iv. To examine the relationship between EC and AT.
v. To examine the relationship between AT and BI to use.
vi. To examine the mediating effect of AT in the relationship between PEoU, PU, SN, EC, and BI.

1.3.3 Research Questions

i. Does PEoU affect the AT of using DFDS?
ii. Does PU affect the AT of using DFDS?
iii. Do SN affect the AT of using DFDS?
iv. Does EC affect the AT of using DFDS?
v. Does AT affect the BI to use DFDS?
vi. Does AT have mediating effect on the relationship between PEoU, PU, SN, EC, and BI?

1.4 Research Significance

1.4.1 Academic Field

This research could contribute to the academic field in the form of literature for the academic researchers to seek information about the consumer BI towards drone food delivery among Malaysians. This research can be useful by providing insights into the factors that affect consumer's intention to use drone food delivery for future studies.

1.4.2 Government Agencies and Policy Makers

This research may also be useful to the government agencies and policy makers. This study helps the government to identify the factors that affect consumers' BI towards DFDS. If the study shows there is high acceptance of drone technology in delivery services, they may consider this as an opportunity to improve their service chain. Eventually, it will enhance the commercialization of drones through developing regulations and policies that ensure the safe and responsible use of this technology and foster the innovation and growth in the food delivery industry.

1.4.3 Food Delivery Service Providers

Besides, this research could be beneficial to the food delivery service providers. In this study, it can help them to determine the consumer's preference towards the usage of drones in food delivery by identifying the factors that can influence the BI of consumers when using DFDS and they

can develop effective marketing strategies to promote the use of drone delivery technology and subsequently implement the technology in their business models.

1.5 Conclusion

The research issue has been detailed in depth in Chapter 1 by describing the research background, problem statement, research gap, the objective and questions, as well as the significance of this study.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Chapter 2 covers about the underlying theories with the review of variables including PEoU, PU, SN, EC as the four independent variables, AT as mediator, and BI as dependent variable. Also, the proposed conceptual framework along with the hypotheses will be developed.

2.1 Underlying Theories

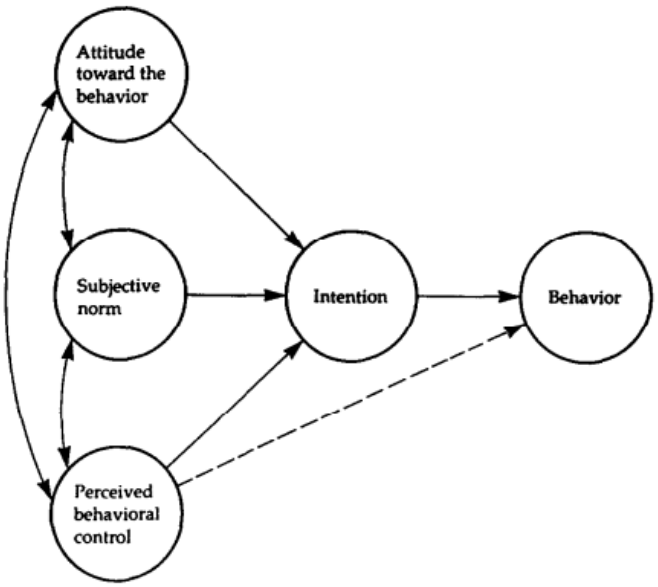

Figure 2.1: *Theory of Planned Behavior (TPB)*. Adapted from Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

TPB is popular to describe the general behavior of an individual. It takes place as an extension theory of Theory of Reasoned Action (TRA) which put forth by Ajzen and Fishbein (1980).

This theory describes how AT, SN, and perceived behavioral control affect how consumers make decisions (Ajzen, 1991). The psychological propensity that a person develops as a result of their level of like or disfavour for a specific thing is referred to as AT (Eagly & Chaiken, 1993). SN reflect what degree of an individual feels that important people want him to behave in a particular way (Fishbein & Ajzen, 1975). Perceived behavioral control refers to an individual's confidence in their capacity to carry out a particular behavior (Bandura, 1982).

Ajzen and Fishbein (1980) suggested that general determinants such as value orientations and general environmental concerns can have significant impact on behavior indirectly through their effect on how people perceive and assess a particular behavior (De Groot & Steg, 2007). EC is assumed to have impact on behavior-specific AT given that environmental outcome act as the possible behavioral beliefs.

The research by De Groot and Steg (2007) proved that EC have direct influence towards AT while there was no direct influence between EC and intention to use. It has been proven by using the approach of the integration of EC with Ajzen's (1985) TPB. Until now, it was found that several studies have used the extensions of the TPB that integrates EC as their independent variable to study the relationship of the consumer's BI in their research that involve environmental issues (Ali, Nakayama, & Yamaguchi, 2023; Tan, Ooi, & Goh, 2017; Ibrahim, Mariapan, Lin, & Bidin, 2021). Thus, due to the eco-friendliness of drone food delivery, we decided to integrate EC as our independent variable in our framework.

On the other hand, perceived behavioral control will vary depending on the situations and actions, and one of the limitations of TPB is where this theory is assumed that the individual has accessed to the resources and opportunities that is important in performing the desired behavior successfully (Ajzen, 1991; SPH, 2022). Therefore, as drone is yet to apply in the Malaysia's food delivery industry,

perceived behavioral control is not appropriate to be as an independent variable in this research.

Additionally, Choe et al. (2021) mentioned that it is insufficient to merely use TPB to describe consumers' usage intention towards DFDS when new technology like drones is involved. In addition to social influence like SN and personal resources like time and opportunity, consumers may be persuaded to use DFDS by their perceptions of the ethical implications of new technologies. Hence, it is encouraged to integrate both TAM and TPB theories to understand the consumer BI towards DFDS more accurately (Choe & Hwang, 2021).

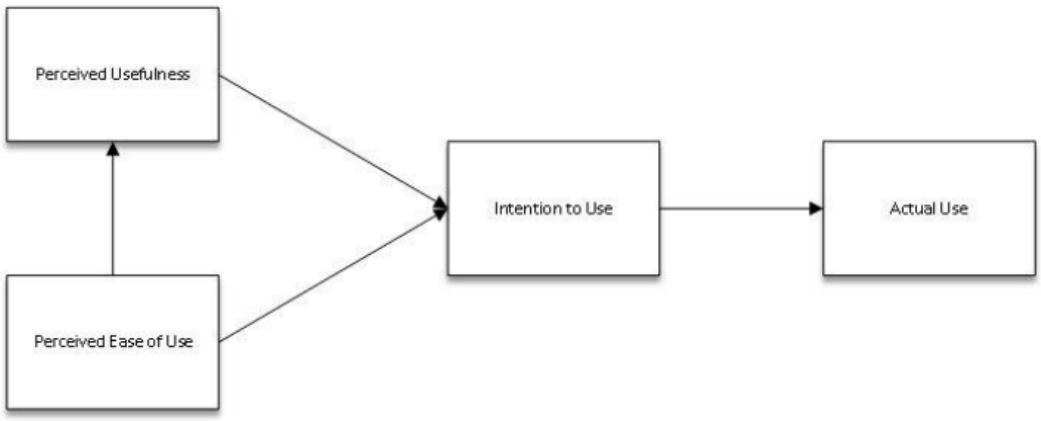

Figure 2.2: *Technology Acceptance Model (TAM)*. Adapted from Marikyan, D. & Papagiannidis, S. (2022) *Technology Acceptance Model: A review.* In S. Papagiannidis (Ed), TheoryHub Book.

TAM is able to foresee the application of new emerging technology as it is simple and can be supported by data (Rauniar, Rawski, Yang, & Johnson, 2014). It is one of the most important extensions of TRA and TPB, that have provided useful conceptual frameworks in addressing the complexity of human social behavior (Safeena, Date, Hundewale, & Kammani, 2013). It places emphasis on how a new technology's characteristics may affect how consumers perceive it and whether they ultimately adopt it. (Davis, 1985; Venkatesh & Davis, 2000, as cited in Choe et al.,

2021). There are two components under this theory, which are PU and PEoU that will link to consumers' AT towards new technology adoption.

To predict consumers' intention to employ technological breakthroughs, the TAM model uses "AT" as a crucial determinant factor and "PU" and "PEoU" represents the determinants of "AT". The degree to which one perceives that adopting a certain system would enhance the ability in work performance is known as PU; while PEoU is referred as the extent to which one perceives that utilising a certain system will reduce the amount of physical or mental effort necessary on their part (Davis, 1985). On the other hand, a summary of appraisal towards a thought object is referred to as AT. (Bohner & Wänke, 2002).

Some modifications have been proposed by past studies that were considered significant in improving the predictive ability of TAM, by extending the TAM model to anticipate individual intention to embrace new technology. Furthermore, other earlier research in the area of IT technology have been carried out. Thus, TAM is suitable to anticipate customers' usage intention towards drone delivery (Waris, Ali, Nayyar, Baz, Liu, & Hameed, 2022).

Kim et al. (2019) imply that it is difficult to predict consumers' behavior processes for technology-based products or services due to technology complexity, and this complexity is yet unclear how it would affect the consumer acceptance (Song, Ruan, & Jeon, 2021). In other words, consumers need to take several steps to adopt these innovations. As mentioned by Safeena et al. (2013), TPB and TAM imply that behavior is determined by the intention to act a certain behavior, and that the AT influences the intention itself. Therefore, we have set AT as the mediator in our research.

2.2 Review of Variables

2.2.1 Perceived Ease of Use (PEoU)

According to Davis (1985), the definition of PEoU is "the degree to which an individual believes that using a particular system would be free of physical and mental effort." In our research, PEoU is used to explain a person's effort to use DFDS. Besides that, PEoU refers to the people's perception of how challenging it is to understand and accept new technology (Dong, Chang, Wang, & Yan, 2017). Furthermore, PEoU also can be explain as the consumers who use new innovations report feeling effortless and convenient (Stocchi, Michaelidou, & Micevski, 2019). By using these definitions as a guide, we would like to define PEoU in our research as the consumers' perceptions toward the DFDS will be easy to use and easy to learn.

2.2.2 Perceived Usefulness (PU)

PU is defined as "the degree that one believes that using a particular system would enhance one's performance" (Davis, 1985). According to Chen, Choi, & Charoen (2019), PU is a user's subjective assessment of a technology's potential to increase job effectiveness. Besides that, people's impression of whether using or adopting a new technology would be advantageous to them is known as PU. (Stocchi et al., 2019). It is crucial to note that PU is linked to practical, and efficient qualities (Jasim, Kasim & Mahmoud, 2022). To sum up all the definitions, we would like to define PU as the consumers' beliefs toward the adoption of DFDS will enhance their quality of activities.

2.2.3 Subjective Norms (SN)

According to Waris et al. (2022), SN is the perceived pressure of an individual to act in a particular manner. This is because SN refer to when important people of an individual believes that he or she should engage in that behavior will subsequently lead to greater intention to carry out with a certain behavior (Kim et al., 2021). Rachmawati, Bukhori, Nuryanti, & Hidayatullah (2020) has further explained that it can also be perceived as social influences that will subsequently lead to social pressure, which will explain why an individual would behave in a particular way that may not be typical for the individual himself. For instance, by relating it to our study context, the societal pressure related to eco-friendly behavior will affect a person's choice to practise pro-environmental behavior such as DFDS (Kim & Hwang, 2020).

2.2.4 Environmental Concern (EC)

EC is the consumer's concern about the environment which will occur when consuming products or services that shows the consumer's desire to protect the environment (Alagarsamy et al., 2021; Varshneya et al., 2017, as cited in Baumeister, Nyrhinen, Kemppainen, & Wilska, 2022.). It can be defined as "the degree to which an individual is aware of issues related to the environment and support attempts that could address them or show willingness to individually contribute to their solution" (Sadiq, Adil, & Paul, 2022). According to Prakash et al., (2019), EC is a reflection of altruistic values, where altruistic motives or values are significant in shaping an individual's behavior towards the environment and is increasing among the consumers. In our study context, consumers' environment concern includes environmental pollution, especially air pollution brought on by conventional delivery methods using gasoline-powered vehicles (Waris et al., 2022).

2.2.5 Attitude (AT)

AT represents "an individual's favorable or unfavorable opinion of the behavior in question" (Yoo, Yu, & Jung, 2018). It encourages the conformation of the individuals to the social environment so that they can express and defend their behavior, as well as adapt themselves to it (Junior, da Silva, Gabriel, & de Oliveira Braga, 2015). It can be clarified as an emotional reaction for conducting a particular behavior (Arvola et al., 2008, as cited in Kumar & Mohan, 2021). In order to evaluate the probable implications of engaging in the behavior, AT will make a variety of options based on different behavior evaluations. Therefore, it will reflect individual's positive or negative evaluation towards using a technology (Hua & Wang, 2019). Furthermore, Mousa, Jameel, and Ahmad (2019) mentioned that personal cognitive convictions are shaped by AT, which can be considered as a belief of people should or should not behave in certain situations and is measured by "favor or disfavor, good or bad, like or dislike" (Ajzen and Fishbein, 2000, as cited in Hwang et al., 2021). Thus, in this research, AT stands for a person's opinion of DFDS, whether it be favourable or unfavourable (Hwang et al., 2019).

2.2.6 Behavioral Intention (BI)

The definition of BI is "a stated likelihood to perform in a behavior" (Oliver et al., 1997, as cited in Hwang et al., 2019). Intention refers to "the degree of willingness to act or not to act a certain behavior in the future" where this usage intention is formed based on the favourable appraisal of using the product or service (Waris et al., 2022). Further, Verma & Sinha (2017) declared that there is difference between intention and likelihood. Intention is more defined as the propensity, whereas likelihood is the outcome that results from the propensity associated with additional factors, like the perception of

having sufficient resources to carry out a certain behavior (Verma & Sinha, 2017). Subsequently, Ajzen (1991) has interpreted BI as a measurement of "how hard people are willing to try", and "how much effort people are intending to put forth". Ajzen indicates that BI can be referred as the forerunner of behavior, which can be understood as the probability of a person to attempt a certain behavior (Hwang et al., 2021). In short, BI will be defined as an individual's probability to engage in the usage of DFDS in this research.

2.3 Conceptual Framework

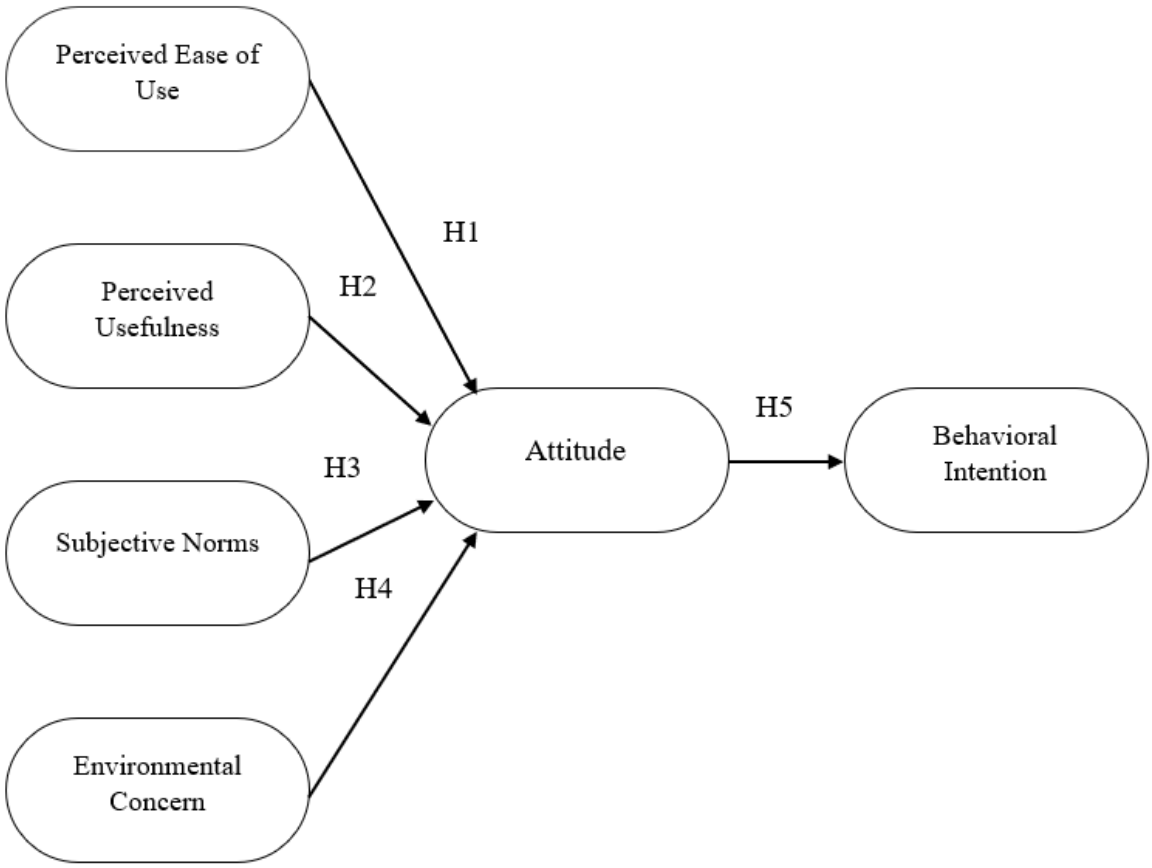

Figure 2.3: *Proposed Conceptual Framework*

The proposed research framework comprises four independent variables: PEoU, PU, SN, and EC. The AT is the mediator variable that can explain the relationship between the IVs and DV. BI is the dependent variable that used to examine the relationship with the IVs on the acceptance of drone food delivery.

2.4 Hypotheses Development

2.4.1 The Relationship between PEoU and AT

Another significant extrinsic factor that may influence consumers' intentions to adopt new technologies is known as PEoU (Davis, 1989). Moreover, researchers in hospitality and tourism have discovered that PEoU is one of the major indicators of consumers' AT (Wen, Pookulangara & Josiam, 2022). Research about the adoption of mobile-based agricultural extension services (AES) suggested that the level of PEoU is high, then AT is favourable (Verma & Sinha, 2017). Moreover, past studies suggested that PEoU directly or indirectly affect the BI to use new technology through AT (Yang et al., 2023). A study regarding the BI to adopt e-learning suggested that the students believed that the simplicity of the system would help to shape positive AT (Revythi & Tselios, 2019). Therefore, the study has shown PEoU has significant impact on the AT of using DFDS. If people think DFDS is simple to use, they are more probable to have a favourable AT and consider using it for long-term. Conversely, a person is more likely to have a negative AT towards using such service if they perceive DFDS is difficult to use.

Therefore, the following hypotheses is proposed:

H1: PEoU has a significant influence on the AT.

2.4.2 The Relationship between PU and AT

PU is a crucial element that influences a person's AT towards using DFDS. Many past TAM studies have proven that the AT is significantly impacted by PU. For instance, past research about the acceptance of mobile technology (Chang, Chou, Yeh, & Tseng, 2016) and the college students' adoption of E-wallet for transaction payment (Kustono et al., 2020) had both successfully suggested that the PU positively related to AT towards using a new technology. Besides that, PU can be measured by the efficiency, convenience, and accessibility of using new technology. The method of delivering food can be made more effective by the adoption of DFDS (Waris et al., 2022). Also, traffic congestion and other issues related to urban transportation can be resolved by DFDS. (Bandoim, 2018; Desatoff, 2018, as cited in Choe et al., 2021). Hence, using drone to perform food delivery can increase the accessibility which can reach many areas and customers are easier to receive food. Next, drones are more accurate than people in delivering food to the right locations (Grind Drone, 2020, as cited in Choe et al., 2021). Thus, PU is important in shaping people's AT towards using new services (Jun et al., 2022). Individuals have a greater tendency to be satisfied about adopting the new service if they perceive it is beneficial.

Therefore, the following hypotheses is proposed:

H2: PU has a significant influence on the AT.

2.4.3 The Relationship between SN and AT

Choe & Hwang (2021) predicted that SN will influence the behavioral intentions significantly. When a person has a high degree of SN, they will experience pressure to perform or refrain from performing a certain behavior (Ajzen, 1985; Lu et al., 2010, as cited in Choe & Hwang, 2021). This can be illustrated as parents, family, friends, or peers may have expectations about

the behavior of a person. Additionally, traditional media sources, social media, or other channels could also alter how people engage in day-to-day activities. For instance, Koch et al. (2020) discovered that consumer behavior toward online purchases was significantly impacted by expert advice and media coverage during COVID-19 pandemic (Daragmeh, Lentner, & Sági, 2021). It has been discovered that SN are important prior to, or during the early stages of the deployment of new innovations when consumers have only few direct experiences from which to form AT (Hartwick & Barki, 1994; Taylor & Todd, 1995, as cited in Altawallbeh, Soon, Thiam, & Alshourah, 2015). In relation to our study context, Waris et al. (2022) confirmed there is a positive impact of SN on the AT of using DFDS.

Hence, the following hypotheses was proposed:

H3: SN has a significant influence on the AT.

2.4.4 The Relationship between EC and AT

Yoo et al. (2018) mentioned that the environment concern of a person or the environmentally responsible AT would influence the intention to consume green products. Hartmann and Apaolaza-Ibáñez (2012) has declared that the environmental concern among customers will impact their consumption decisions. Many researchers have highlighted on the significance of green image over the company's overall image to draw in environmentally sensitive clients as consumer awareness of environmental issues has increased. Consumers who have high awareness towards the environmental issues will have high responsibility towards the environment and will consume based on their perception of green image from environmentally friendly products (Mathew et al., 2021; Kumar & Mohan, 2021). The satisfaction and AT of customers are more likely to be significantly impacted by eco-friendly practices such as DFDS (Mathew et al., 2021).

Thus, the following hypotheses is proposed:

H4: EC has a significant influence on the AT.

2.4.5 The Relationship between AT and BI

According to Singh, Sharma, Tandon, and Kaur (2022), the statement of AT towards drone delivery will positively affect the consumers' usage intention has been verified by Hwang et al (2021). According to several research, AT is an important indicator of consumers' usage intention (Waris et al., 2022). TPB and TAM theories have been merged by the past researchers and predicted AT has significant impact on the consumer BI to adopt DFDS, which can be supported by Peter et al. (2013, as cited in Verma & Sinha, 2017). Other researchers also discovered similar findings such as AT influences the usage intention of technology in a positive way (Waris et al.; Verma & Sinha, 2017). Consumers are likely to use a newly existing technology when they have a favorable AT towards it (Hwang et al., 2019). Theoretical and empirical evidence has predicted that AT have significance impact on the BI towards deploying drones for food delivery, for example, positive AT towards DFDS will lead to greater BI, while negative AT leads to negative impact on BI (Hwang et al., 2019; Singh et al., 2022).

Therefore, the following hypotheses is proposed:

H5: AT has a significant influence on the BI.

2.4.6 AT mediates the relationship between PEoU, PU, SN, EC, and BI.

PU and PEoU are the main variables that influence users' AT, which in turn influence the intention to use technological innovation. To put it in another

way, users are more likely to have favorable AT towards new innovations which will result in the intention and adoption of certain technology if they believe that using that certain technology will enhance their specific task with lesser effort used(Song et al., 2021). Chang et al. (2015) have mentioned that PU and PEoU are able to affect the adoption intention directly, but the results also show that may have an indirect influence on the intention through AT (Choe et al., 2021).

Besides, as mentioned that SN are important prior to, or during the initial stages of the deployment of new innovations, as consumers have only a few direct experiences from which to form AT that will result in the usage intention (Hartwick & Barki, 1994; Taylor & Todd, 1995, as cited in Altawallbeh et al., 2015). Waris et al., (2022) declared that past studies have demonstrated that SN have favourable effects on a person's acceptance as well as the AT that will result in new technology or innovative items adoption. By relating it to the context of DFDS, several past studies have verified that SN have a significant influence on the AT toward DFDS that will subsequently affect BI (Waris et al., 2022; Kim et al., 2021; Kim & Hwang, 2020).

Mathew et al., (2021) also mentioned that past experimental studies have proven the relevance of green image in constructing the consumer AT as well as their BI (Mathew et al., 2021; Indriani, Rahayu, & Hadiwidjojo, 2019). This is where consumers are more likely to have a positive AT towards drone food deliveries when they perceived a high level of green image from this technology. Additionally, advanced green technology such as drone deliveries is likely to have a greater impact on customer satisfaction and AT compared to preliminary eco-friendly practices. In relevant studies by Indriani et al., (2019), the AT has acted as a mediator between environmental knowledge and the intention of consumers to use green products.

Therefore, the following hypotheses is proposed:

H6: The relationship between PEoU, PU, SN, EC, and BI will be mediated by AT.

H6a: AT will mediate the relationship between PEoU and BI.
H6b: AT will mediate the relationship between PU and BI.
H6c: AT will mediate the relationship between SN and BI.
H6d: AT will mediate the relationship between EC and BI.

2.5 Conclusion

This chapter have discussed the underlying theories, review of variables, along with the development of proposed conceptual framework and hypotheses.

CHAPTER 3: METHODOLOGY

3.0 Introduction

Chapter 3 explores about the research method used in this study. Sampling design will be explained, as well as the explanation of data collection method and the proposed data analysis tool.

3.1 Research Design

Quantitative research will be applied to collect data related to the context. It is known as the numerical representation and manipulation of observation with the purpose of describing and interpreting the phenomena that reflected by the observations (Sukamolson, 2007). In the quantitative research method, we selected descriptive research design to examine the market characteristics by surveying the target populations. Descriptive research can provide information that is linked to the characteristics of the study's population (Burns & Bush, 2010). In this research, it is adopted to investigate the consumer's BI towards DFDS.

3.2 Sampling Design

3.2.1 Target Population

This research will be targeting on the young adults which aged 18 to 26 in Malaysia. It was claimed by Hwang et al., (2019) that young people are more enterprising and adventurous compared to the older people and they are more comfortable and know well about technological devices that lead to higher acceptance of using new technologies. In addition, it was also claimed that the population in this age range are people who are expected to become financially independent (NCBI, 2023). According to the statistics provided by Oppotus (2022), this age group of people are using food delivery services about 1.2 times a week, which indicates that they are using this service quite frequently and might be more familiar with this topic.

3.2.2 Sampling Frame

The sampling frame is not available and not accessible due to the young adults in Malaysia representing a huge population of people, so we are unable to obtain the exact number of the population. Besides, it is also inaccessible as we are unable to get their personal information, such as names and contact numbers.

3.2.3 Sampling Location

As we are targeting mainly on young adults in Malaysia without considering specific location of the target respondents, we will not be having any specific sampling location for this research.

3.2.4 Sampling Technique

As the sampling frame and sampling location not being available, a nonprobability sampling technique will be applied to determine the sample. The sampling technique used is judgemental sampling. It represents a strategy in which people and events with particular settings are chosen consciously so as to provide important information that is not able to be acquired from other options. (Maxwell, 1996, as cited in Taherdoost, 2016). It includes a sample of respondents who have certain characteristics that would enable a more comprehensive investigation as well as an understanding for the researchers of the main subject that they want to study (Sekaran, 2003).

Judgemental sampling is used for our research as it enables us to sort out the right respondents that fit the criteria, which is young adults who age between 18 to 26, to answer the survey. Target populations will be observed first before being asked to answer the survey. We will question the target populations by asking filtering questions.

Filtering questions will be provided in the survey that need to be answered by the target populations, which are: 1.*"Do you fall under the age range of 18 to 26 years old?*", 2. "*Do you use food delivery services?",* and 3.*"Do you*

know what is drone?". Subsequently, the questionnaire will be shared with those respondents who meet the criteria.

3.2.5 Sample Size

According to the statistic provided by Population Pyramid (2023), the total population in Malaysia is about 34,308,525 people, and the population of young adults is approximately 8,396,477 people.

As for the analytical studies, Comrey and Lee (1992) and MacCallum, Widaman, Zhang, and Hong (1999) have suggested researchers obtain 300 samples or more for each research. Furthermore, based on the Krejcie and Morgan's table, 384 sample size is suitable for population size above 1,000,000 (Krejcie, & Morgan, 1970). In summary, a total of 384 respondents were chosen as the target respondents for this research as young adults represents a large population.

TABLE 1
Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.

Table 3.1: *Krejcie and Morgan Table*. Adapted from Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

3.3 Data Collection Method

3.3.1 Primary Data

Hox and Boeije (2005) stated that primary data are the data that are gathered exactly for the research problem by implementing approach that work best for that research problem. Social scientists have utilized various data collection methods to collect data. Survey that uses structured questionnaires is one of the data collection strategies as it generally includes gathering information on large number of variables from huge and representative sample of respondents (Hox & Boeije, 2005). Thus, we will utilize questionnaire in this research as it provides a cheap, efficient, and effective way to gather a big amount of data from huge sample of respondents as the presence of the researcher is unnecessary when the respondents are doing questionnaires that will lead to greater flexibility on time and space (McLeod, 2018). Google Forms is used to create the questionnaire and distribute to 384 respondents through social media platforms. In addition, we will create a QR code for the Google Form and visit locations with a high concentration of members of young adults, such as universities and shopping malls, to ask them to complete the questionnaire.

3.3.2 Research Instrument

The survey will take place using a questionnaire and distribute to 384 respondents. There will be three sections in the questionnaire. Demographic questions including gender, age, race, education level, income level, frequency of using food delivery services were addressed in Section A. There are total of fifteen questions regarding the four independent variables and mediator are asked in Section B with three questions for each variable.

Lastly, three questions about consumer's BI are asked in Section C. In the questionnaire, 5-point Likert scale of noncomparative scaling technique is being used in Section B and C. The research instrument and questionnaire design can be referred to Table 3.2 and Appendix 3.1.

Table 3.2:

Construct measurement.

Constructs	**Measurement**	**Reference**
Perceived Ease of Use	• "I think learning how to use drone food delivery services appear to be simple." • "I think ordering food with drone food delivery services seem to be easy to use." • "I think using drone food delivery services do not appear to be difficult."	• Waris et al., 2022. • Choe et al., 2021.
Perceived Usefulness	• "I think that using drone food delivery services would allow me to receive my meal more quickly." • "I think that using drone food delivery services appear to be convenient when receiving food." • "I think that using drone food delivery services make it easier to receive my food."	• Waris et al., 2022. • Choe et al., 2021.

Subjective Norms	• "People who are important to me would think that I should use drone food delivery services if this technology has implemented." • "People who are important to me are more likely to support me to use drone food delivery services if this technology has implemented." • "People whose opinions I value would prefer me to use drone food delivery services if this technology has implemented."	• Kim et al., 2021. • Waris et al., 2022.
Environmental Concern	• "I think that drone food delivery services are more likely to be useful in protecting the environment." • "I think that drone food delivery services should be widely used to address environmental issues." • "I think I can show that I care about the environment through using drone food delivery services."	• Mathew et al., 2021.
Attitude	• "I think I am more likely to have favorable attitude towards drone food delivery." • "I think that using drone food delivery services when ordering foods are more likely to be good."	• Mathew et al., 2021.

	• "I think I am more likely to have positive attitude towards drone food delivery."	
Behavioral Intention	• "I think I will use drone food delivery services when ordering food in the future." • "I think I am willing to use drone food delivery services when ordering food in the future." • "I think I am likely to use drone food delivery services when ordering food in the future."	• Kim & Hwang, 2020.

3.3.3 Pilot Study

A smaller-scale study called "pilot study" is used to evaluate the overall research measure's first phase to help plan and adjust the main or larger study. (In, 2017). The pilot studies are frequently conducted prior to the main trial to assess the validity of the primary study. In (2017) recommended 12 to 30 samples per group for the sample size of pilot study. Therefore, we decided to conduct the pilot test with 30 respondents by distributing questionnaire created using Google Form.

After collecting the responses, we have used SmartPLS 4.0 to test our reliability. Based on Table 3.3, all variables have achieved a Cronbach's alpha value that is greater than 0.8, which indicates that the constructs are acceptable and strong.

Table 3.3:

Reliability analysis.

Variables	Number of items	Cronbach's Alpha Value	Result
AT	3	0.930	Excellent
BI	3	0.943	Excellent
EC	3	0.879	Very Good
PEoU	3	0.903	Excellent
PU	3	0.902	Excellent
SN	3	0.962	Excellent

3.4 Proposed Data Analysis Tool

In this research, SmartPLS 4.0 software will be used for data evaluation and interpretation as it is a significant software application for Partial Least Squares Structural Equation Modeling (PLS-SEM) with an interface that is user-friendly and advanced reporting features (Wong, 2013).

3.4.1 Descriptive Analysis

Descriptive analysis is applied to outline the data and interpret the relationship between the variables (Kaur, Stoltzfus, & Yellapu, 2018). Kaur et al. (2018) has explained that it is the first step when conducting the research and should done before comparing inferential statistic. It consists of various types of variables and measures of frequency, central tendency, variation, as well as position. As descriptive analysis can summarize the data

and project them into a simpler way, it helps the researchers to interpret and evaluate the data in a more structured form.

3.4.2 Inferential Analysis

Inferential statistical test will be applied for the data analysis. Inferential statistics refers to a generalisation about a population based on sample data and enables you to make conclusions about the characteristics of a population by using sample results (Levine, Stephan, Krehbiel, & Berenson, 2007). As the young adults in Malaysia is a huge population that we are unable to analyze the whole population, so we will need to estimate the population by using sample results that we collected from the respondents.

3.4.3 Structural Equation Modeling (SEM)

A group of statistical models called as SEM seeks to explain the relationship between numerous variables (Hair, Anderson, Babin, & Black, 2010). It has been frequently used in marketing research as it can examine theoretically supported linear and addictive causal models and test the theory by providing a conceptually appealing method where SEM will evaluate how well the theory adapts reality as represented by data (Wong, 2013; Hair et al., 2010). SEM is able to represent the unobserved concepts that exist in these relationships and take measurement error into account during the estimation process as well as construct a model to interpret the entire set of relationships (Hair et al., 2010).

3.4.4 Partial Least Squares Structural Equation Modeling (PLS-SEM)

The PLS-SEM will be used as our research objective is to predict consumer BI. Based on Hair, Hult, Ringle, and Sarstedt (2021), PLS-SEM will be more suitable to be used when the analysis focuses on examine a theoretical framework from a prediction perspective. Measurement model and structural model are involved.

3.4.4.1 Measurement Model Assessment

As we are testing theories with respect to BI, reflective measurement will be constructed. The reflective measurement model allows us to predict the relationships between the reflective latent variables and their items (Hair et al., 2021). Two types of reliability including indicator reliability and internal consistency reliability, as well as two types of validity, including convergent validity and discriminant validity will be assessed in the reflective measurement model.

Indicator reliability is the size of the outer loading which the assessment will consist of examining the outer loadings of the indicators (Hair et al., 2021). The standardised outer loadings should generally be 0.708 or greater. (Hair et al., 2021; Wong, 2013).

Internal consistency reliability will be evaluated subsequently where the traditional criterion of measuring is Cronbach's Alpha. The alpha criterion gives an illustration of the estimation of the reliability according to the intercorrelations of the observed indicator variables. Table 3.4 represents the Rule of Thumb on Cronbach Alpha:

Alpha Coefficient Range	Strength of Association
<0.6	Poor
0.6 to < 0.7	Moderate
0.7 to < 0.8	Good
0.8 to < 0.9	Very Good
0.9	Excellent

Table 3.4: *Rule of Thumb on Cronbach Alpha*. Adapted from Shamsuddin, A. (2015). *Perception of Managers on the Effectiveness of the Internal Audit Functions: A Case Study in Tnb.*

To test the reliability, it will show the result is unacceptable when the alpha value is less than 0.6, while if the alpha value is larger than 0.6, the result of the questionnaire is considered acceptable (Shamsuddin, 2015). Another measure of reliability, Composite Reliability should have a value of 0.70 above to ensure the reliability (Hair et al., 2021).

According to Hair et al. (2021), convergent validity demonstrates how a measure correlates well with different measures using the same construct. It can be measured by the Average Variance Extracted (AVE) and a result of 0.5 or greater should be obtained which indicates that more than half of the variance of its items can be explained by the latent variable.

Discriminant validity is where the construct truly differs from other constructs according to empirical standards. It indicates that a construct is distinct from others in the model and captures phenomena that are not covered by other constructs. It will be assessed by using the Heterotrait-Monotrait (HTMT) Ratio of correlations that helps to evaluate all construct measures in the same model and the Fornell and Larcker criteria. The HTMT ratio should fall below the cutoff value of 0.85 as a stringent criterion to affirm discriminant validity (Kline, 2015). For Fornell and Larcker's criteria, the square root of AVE (diagonal) should be greater than the correlations (off-diagonal) for all reflective construct to form discriminant validity (Fornell & Larcker, 1981).

3.4.4.2 Structural Model Assessment

The structural model allows us to assess how well the model can predict one or more target constructs and test the hypothesized relationships. Collinearity test for each set of predictors in the structural model is the initial step in the procedure of structural model assessment. The Variance inflation factors (VIF) value should be greater than 0.20 or lower than 5 otherwise should consider removing constructs, integrate predictors into a single construct, or developing higher-order constructs to address collinearity issues. Next, we will be testing the hypothesized relationships among the construct using the path coefficients that consists of evaluating the path coefficient value, p-value, t-value, R square, and F square (Hair et al., 2021).

The range of the path coefficients' standardised values should roughly be between -1 and +1 where the estimated path coefficient value that is close to +1 indicate strong positive relationships and conversely for negative values that are usually statistically significant. Besides, a confidence interval of 99% will be applied where Hair et al. mentioned that if the confidence

interval of a coefficient is narrower, the stability of the estimation will be higher. Thus, it also implies that the required value for the two-tail test includes a significant value of 1%, p-value < 0.01, t-value > 2.58, and a higher value of R square within the range of 0-1 as high levels indicate a higher level of explanatory power. The f square effect size represents the change in the R square value when a particular predecessor construct is excluded from the model. The effects of an exogenous construct on an endogenous construct are explained by the f-square values of 0.02, 0.15, and 0.35 with a larger value indicating a greater effect (Hair et al., 2021).

3.4.4.3 Hypothesis Testing for The Mediating Effect

To test the mediating effects, it is suggested to use bootstrapping instead of the Sobel test. Assessing the significance, indirect effects, and direct relationships are required in running a mediation analysis to differentiate between the types of mediation and nonmediation. Through bootstrapping, we will obtain the bootstrapping results of the indirect effects and path coefficient that are needed for the mediation analysis. If the 99% of confidence interval did not include zero, it implies that the indirect effects are significant. Meanwhile, t-values and p-values are also required when reporting the confidence intervals. Similar steps in assessing the indirect effects will be conducted to test the significance of direct effects (Hair et al., 2021).

Variance Accounted For (VAF) approach was used to determine the mediation type. The rule of thumb is where if the VAF is less than 20%, it suggests there is no mediation occurs. If the VAF is larger than 20% and lesser than 80%, it showed a typical partial mediation. When VAF is larger than 80%, it indicates a full mediation (Hair, Hult, Ringle, & Sarstedt, 2017). The formula for calculating VAF is as follow:

$$\text{VAF} = \frac{\text{Indirect effect}}{(\text{Indirect effect}) + \text{Direct effect}}$$

3.5 Conclusion

The guidelines for the data collection method as well as the instrument used for data analysis were covered in this chapter's discussion of research methodology.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

PLS-SEM was applied to analyse the data and we have utilized it for the measurement model and structural model analysis.

4.1 Data Collection

Data was collected from the young adults of Malaysia with the basic understanding of DFDS. A total of 472 responses was collected over three months. However, 88 responses were excluded from data analysis due to straight lining answering and filtered out during the pre-screening session. Therefore, only 384 responses were valid and used for the final data analysis. The demographic details of the respondents are showed in Table 4.1. Majority of the respondents (55.21%) was female. A significant 51.3% of 384 respondents belonged to the age group of 21-23 years. Besides, majority of respondents was Chinese that comprised with 82.55% and followed up by Malay (8.6%), Indian (6.51%) and Kadazan-Dusun (2.34%). Most of the respondents (76.04%) are pursuing their studies in bachelor's degree. Moreover, 310 out of 384 respondents are having no income as they are full-time student or unemployed. A total of 44.01% of 384 respondents had used online food delivery services once or more times in a week.

Table 4.1:

Demographic details of respondents.

Attributes	Frequency	Percentage
	Gender	
Male	172	44.79
Female	212	55.21
	Age	
18-20	138	35.94
21-23	197	51.3
24-26	49	12.76
	Race	
Malay	33	8.6
Chinese	317	82.55
Indian	25	6.51
Kadazan-Dusun	9	2.34
	Education Level	
SPM/O-Level	15	3.91
STPM/Matriculation/UEC/A-Level/Foundation	60	15.63
Diploma	11	2.86
Bachelor's Degree	292	76.04
Master's Degree	6	1.56
PhD	0	0
	Income Level	
No income (Unemployed/Full-time student)	310	80.73
RM1500 and below	19	4.95
RM1501 - RM2500	16	4.17
RM2501 - RM3500	28	7.29
RM3501 and above	11	2.86

	Food Delivery Services Frequency	
Never	0	0
Rarely (Once a month or less)	123	32.03
Occasionally (2-3 times a month)	92	23.96
Sometimes (Once a week)	77	20.05
Frequently (2-3 times a week)	72	18.75
Very frequently (4 or more times a week)	20	5.21

4.2 Inferential Analysis

4.2.1 Measurement Model Assessment

The constructs' AVE values were ranged from 0.683 to 0.854 and the outer loadings of items were in the range of 0.697 to 0.927 (Table 4.2). Only one outer loading of EC3 is below than 0.7. However, all the constructs have met the satisfactory level of AVE result of >0.5 and CR result of >0.8 which suggests that the result can be remained (Ramayah, Cheah, Chuah, Ting, & Mumtaz, 2018, p. 93). Therefore, the model's convergent validity was established. Moreover, two measures of reliability–Cronbach's Alpha and Composite Reliability (CR) were found to be above the value of 0.70 (Table 4.2). As a result, it can be assumed that all the constructs are consistent and highly reliable.

Table 4.2:

Measurement model analysis.

Items	Outer loadings	Cronbach's Alpha	Composite Reliability	AVE
AT1 <- AT	0.913			
AT2 <- AT	0.906	0.900	0.937	0.833
AT3 <- AT	0.919			
BI1 <- BI	0.922			
BI2 <- BI	0.923	0.914	0.946	0.854
BI3 <- BI	0.927			
EC1 <- EC	0.875			
EC2 <- EC	0.893	0.768	0.865	0.683
EC3 <- EC	0.697			
PEoU1 <- PEoU	0.905			
PEoU2 <- PEoU	0.906	0.880	0.926	0.806
PEoU3 <- PEoU	0.882			
PU1 <- PU	0.819			
PU2 <- PU	0.885	0.832	0.899	0.747
PU3 <- PU	0.888			
SN1 <- SN	0.899			
SN2 <- SN	0.906	0.882	0.927	0.809
SN3 <- SN	0.892			

Two measures were used to assess the discriminant validity which are the Fornell and Larcker criteria and the HTMT ratio. Results in Table 4.3 proved that all the constructs have fulfilled the Fornell-Larcker criterion. Thus, the discriminant validity is achieved.

Table 4.3:

Fornell-Larcker criterion.

Latent Variable	AT	BI	EC	PEoU	PU	SN
AT	**0.913**					
BI	0.771	**0.924**				
EC	0.633	0.568	**0.827**			
PEoU	0.501	0.552	0.367	**0.898**		
PU	0.523	0.522	0.455	0.464	**0.865**	
SN	0.581	0.542	0.477	0.418	0.481	**0.899**

Note. Bold diagonal values indicate square root of AVE.

Moreover, to fulfil the criterion of HTMT, the HTMT value of all constructs must be less than 0.85 (Kline, 2015). The results showed in Table 4.4 proved that the HTMT value for all constructs was < 0.85. Therefore, discriminant validity is confirmed.

Table 4.4

HTMT ratio.

Latent Variable	AT	BI	EC	PEoU	PU	SN
AT						
BI	0.848					
EC	0.744	0.663				
PEoU	0.558	0.611	0.446			
PU	0.596	0.590	0.564	0.541		
SN	0.651	0.602	0.574	0.472	0.557	

4.2.2 Structural Model Assessment

Figure 4.1 provides the PLS-SEM with t-value results while Table 4.5 shows the detailed results from the hypotheses testing.

VIF is used to evaluate the level of collinearity in the model. The inner VIF values for the four independent variables (PEoU, PU, SN, EC) (Table 4.5) range from 1 to 1.551 which are less than 5 (Hair et al., 2017). Therefore, it means that collinearity is not a concern. Furthermore, a path coefficient indicates the direct effect of an independent variable on a dependent variable in the model, and it ranges between -1 to 1. The path coefficient values of the variables are more than 0.1 which means there are significant relationships between PEoU→AT, PU→AT, SN→AT, EC→AT, and AT→BI (Table 4.5).

A *t*-value greater than 2.58 and a *p*-value less than 0.01 are prerequisites for the two-tailed test (Hair et al., 2017). Thus, all hypotheses were proven valid as the *t*-statistics for all pathways ranged from 2.702 to 30.961 and the *p* values are all below 0.01. The hypotheses testing results are presented in Table 4.5. Hypothesis 1 to 4 suggests that the PEoU (β =0.191, $p = 0.000$), PU (β =0.140, $p = 0.006$), SN (β =0.254, $p = 0.000$), and EC (β =0.378, $p = 0.000$) had significant relationships with AT, which are supported. Hypothesis 5 suggests that the AT has a significant impact on the BI (β =0.771, $p = 0.000$), which has been accepted. Therefore, it came to the conclusion that all of the hypotheses were supported.

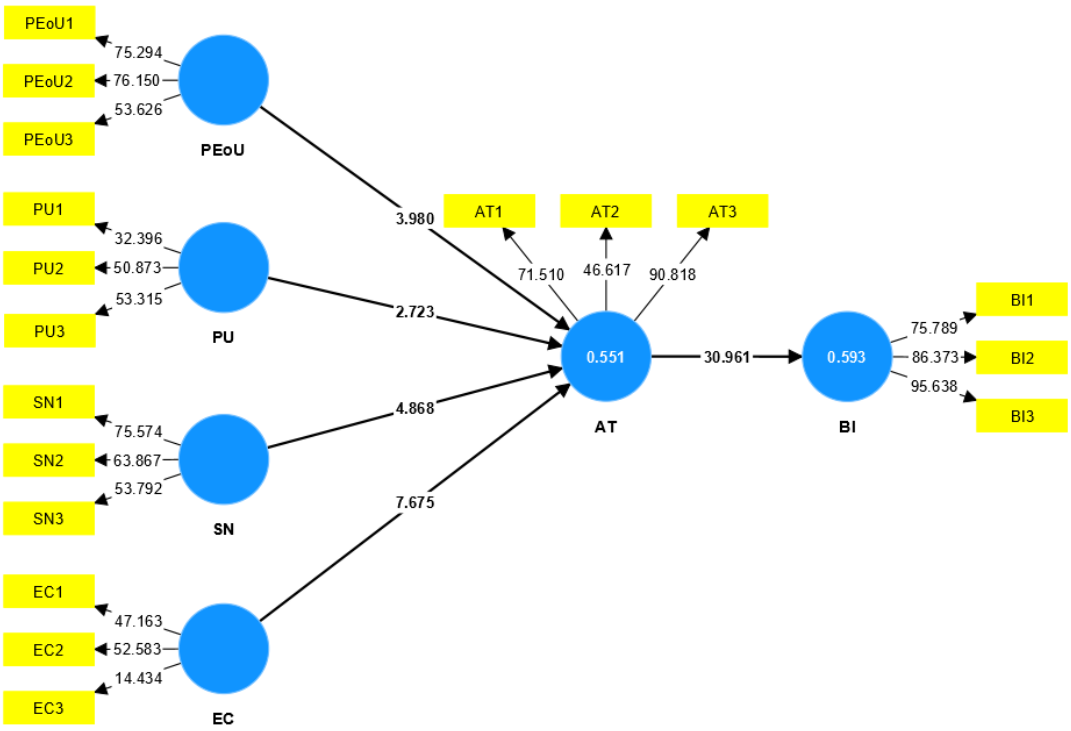

Figure 4.1. Partial least square (SMART-PLS 4.0) *t* value results.

Table 4.5:

Hypotheses testing.

Hypothesized Relationship		VIF	Path coefficients (β)	T statistics	P values	Result
H1	PEoU -> AT	1.381	0.191	3.980	0.000	Supported
H2	PU -> AT	1.551	0.140	2.723	0.006	Supported
H3	SN -> AT	1.521	0.254	4.868	0.000	Supported
H4	EC -> AT	1.439	0.378	7.675	0.000	Supported
H5	AT -> BI	1.000	0.771	30.961	0.000	Supported

The bootstrapping analysis demonstrates that all four indirect effects, β = 0.146, β = 0.108, β = 0.195, and β = 0.291, are significant with *t*-values of 3.887, 2.702, 4.777, and 7.472. The indirect effects 95% Bootstrapped CI Bias Corrected: [LL = 0.046, UL = 0.241], [LL = 0.010, UL = 0.215], [LL = 0.095, UL = 0.299], and [LL = 0.187, UL = 0.392], do not straddle a 0 in between suggesting there is mediation (Preacher & Hayes, 2008). Consequently, it proved that the mediation effects were statistically significant. The results of hypothesis testing on mediation are shown in Table 4.6.

Table 4.6:

Hypothesis testing on mediation.

No	Relationship	Std. Beta	Std. Error	t-value	Confidence Interval (BC)		Result
					LL	UL	
H6a	PEoU→AT→BI	0.147	0.038	3.887	0.046	0.241	Supported
H6b	PU→AT→BI	0.108	0.04	2.702	0.010	0.215	Supported
H6c	SN→AT→BI	0.195	0.041	4.777	0.095	0.299	Supported
H6d	EC→AT→BI	0.291	0.039	7.472	0.187	0.392	Supported

Note. BC = bias corrected; LL = lower level; UL = upper level.

VAF was used to determine the mediation type. Based on the rule of thumb, by using the result produced in Table 4.7, the mediation results may all be characterized as typical partial mediation as the VAF value of 34.03% (H6a), 40.30% (H6b), 48.51% (H6c), and 50% (H6d), were in the range of VAF being greater than 20% and less than 80%.

Table 4.7:

Mediation analysis.

	Effect	Confidence Interval (BC) LL	UL	t-value	p-value	VAF (%)
PEoU→AT→BI						
Direct effect (PEoU→BI)	0.285	0.159	0.398	6.069	0	34.03
Indirect effect (H6a)	0.147	0.046	0.241	3.887	0	
PU→AT→BI						
Direct effect (PU→BI)	0.16	0.031	0.298	3.054	0.002	40.3
Indirect effect (H6b)	0.108	0.01	0.215	2.702	0.007	
SN→AT→BI						
Direct effect (SN→BI)	0.207	0.081	0.332	4.261	0	48.51
Indirect effect (H6c)	0.195	0.095	0.299	4.777	0	
EC→AT→BI						
Direct effect (EC→BI)	0.291	0.158	0.412	5.924	0	50
Indirect effect (H6d)	0.291	0.187	0.392	7.472	0	

It is necessary to calculate the coefficient of determination score (R^2) in order to assess the predictive accuracy of the model. R^2 measures the amount of variance in the dependant variable explained by all independent variables that are connected to it (Ramayah et al., 2018). Further, adjusted R^2 was being used as it could help to have a better model complexity control when comparing different models (Wherry, 1931). Referring to Table 4.8, the adjusted R^2 values of AT (0.551) and BI (0.593) indicated it has a moderate predictive power (Hair et al., 2017).

Table 4.8:

R^2 results.

	R-square	**R-square adjusted**
AT	0.555	0.551
BI	0.594	0.593

The effect size of the predictor constructs can be evaluated by Cohen's f^2(Cohen, 1988). Referring to Table 4.9, the results indicate that PEoU (0.059), PU (0.029) and SN (0.029) have a small effect size in generating the R^2 for AT. Besides, EC (0.223) has a medium effect in producing the R^2 for AT. Lastly, AT (1.464) has a large effect size in producing the R^2 for BI which suggests that AT is the most effective variable in the model.

Table 4.9:

f^2 results.

	AT	Effect Size	BI	Effect Size
AT			1.464	Substantial/Large
BI				
EC	0.223	Medium		
PEoU	0.059	Small		
PU	0.029	Small		
SN	0.095	Small		

4.3 Conclusion

This study has proven all the hypotheses. It also proved that there was mediating effect of AT between PEoU, PU, SN, EC, and BI. In additions, the study also showed a partial mediation effect in the mediation analysis.

CHAPTER 5: DISCUSSION, CONCLUSION, AND IMPLICATIONS

5.0 Introduction

The outline of the statistical results along with the discussion on the key findings will be explained. The implications, limitations and future recommendations are also mentioned in Chapter 5.

5.1 Summary of Statistical Analysis

	Hypothesis	Result
H1	PEoU has a significant influence on the AT.	Supported
H2	PU has a significant influence on the AT.	Supported
H3	SN has a significant influence on the AT.	Supported
H4	EC has a significant influence on the AT.	Supported
H5	AT has a significant influence on the BI.	Supported
H6	The relationship between PEoU, PU, SN, EC and BI will be mediated by AT.	
H6a	AT will mediate the relationship between PEoU and BI	Supported
H6b	AT will mediate the relationship between PU and BI	Supported
H6c	AT will mediate the relationship between SN and BI	Supported
H6d	AT will mediate the relationship between EC and BI	Supported

5.2 Discussion on Major Findings

5.2.1 The Relationship between PEoU and AT

The results revealed that PEoU significantly affect the AT towards DFDS. It is also consistent with prior studies (Choe et al., 2021; Leong & Koay, 2023; Waris et at., 2022; Yaprak, Kılıç, & Okumuş, 2021). Moreover, the findings from previous studies about e learning management system (Riyath & Rijah, 2022) and facial recognition payment (Zhong, Oh, & Moon, 2021) are aligned with the results. Thus, it proved that PEoU can help to shape the consumers' AT towards the new food delivery method. Hence, consumers are more probably to have a favorable AT towards DFDS as they perceived it is simple, easy, and not difficult to use. As people are becoming more tech-savvy, they are capable to learn the new feature of drone delivery service through the online food delivery applications effortlessly.

5.2.2 The Relationship between PU and AT

The study found out that PU has a significant impact on the AT of using DFDS. Further, the result is consistent with prior studies (Choe et al., 2021; Leong & Koay, 2023; Waris et at., 2022; Yaprak et al., 2021) and other studies (Nguyen et al., 2019; Qi, Tian, & Ploeger, 2021; Zhong et al., 2021) that discussed different technologies. It indicates that the consumers believe that using drones as a new food delivery method may allow them to receive meal more quickly than conventional delivery methods such as cars, motorcycles, or bikes. Moreover, consumers have a greater tendency to have a positive AT towards DFDS if they perceive the service can perform timely and convenient delivery of their ordered meal.

5.2.3 The Relationship between SN and AT

The findings revealed that SN is having a significant relationship towards the AT of using DFDS. It recommends that consumers' decisions to adopt DFDS are affected by the social factors including the opinions of family members, close friends, or peers. Moreover, our findings are aligned with prior studies (Choe et al., 2021; Hwang and Kim, 2021; Waris et al., 2022). Although DFDS are relatively new, the consumers may receive information regarding DFDS that are currently operating in China, South Korea, America and others through social medias or online articles. Hence, it tends to form the consumer's perception and value towards the new delivery method as well as influence their AT of using the services.

5.2.4 The Relationship between EC and AT

The finding shows that EC will affect the consumer's AT toward using DFDS. This research has found that if consumers perceived high level of environmental consciousness of this service, as well as consumers themselves have a high level of environment awareness, it will probably generate a favorable AT because of the eco-friendly characteristic of this service. As drones do not exhaust harmful gas to the environment, which can reduce environment pollution, consumers will have greater interest and acceptance of this service. Thus, this result is in line with prior relevant studies (Mathew et al., 2021; Kirmani & Khan, 2016; Kumar & Mohan, 2021).

5.2.5 The Relationship between AT and BI

The result shows AT has a strong effect on the BI to adopt DFDS proven by a high t-value (30.961) and low p-value (0.000). This is because AT act as a belief for individuals to determine whether should behave or not in particular situations. As Shrigley (1990) said, AT precedes behavior. AT will be formed based on how consumers perceived DFDS is meaningful to them. Thus, this result is in line with relevant studies (Hwang et al., 2019; Verma & Sinha, 2017; Waris et al., 2022), where positive AT towards DFDS will contribute greater lead of BI, and negative AT will cause negative influence.

5.2.6 The Relationship between PEoU, PU, SN, EC, and BI will be mediated by AT.

H6a: AT will mediate the relationship between PEoU and BI.
H6b: AT will mediate the relationship between PU and BI.
H6c: AT will mediate the relationship between SN and BI.
H6d: AT will mediate the relationship between EC and BI.

A mediating effect of AT that occurs between PEoU, PU, SN, EC, and BI has been proven with all results stated as significant respectively.

The PEoU of consumers towards DFDS is determined by the simplicity of this services (Kemarauwana & Darmawan, 2020). The simplicity of using DFDS affects the AT of consumers based on the level of PEoU, which will in turn affect the BI (Humida, Al Mamun, & Keikhosrokiani, 2022). Thus, this finding is aligned with similar studies by Venkatesh (2000), Kemarauwana & Darmawan (2020).

Moreover, the simpleness and convenience of using DFDS when ordering food such as receiving meals more quickly, will affect the impression of consumers, which will in turn influence their BI. Literature by Choe et al. (2021) and Chang et al. (2015) can corroborate this conclusion.

For SN, as DFDS is still new for consumers, thus before trying new technology, they will first gather opinions from others and form their perceptions that will subsequently form their BI (Hartwick & Barki, 1994; Taylor & Todd, 1995, as cited in Altawallbeh et al., 2015). This result is aligned with prior studies (Waris et al., 2022; Kim et al., 2021, Kim & Hwang, 2020).

Likewise, DFDS as an eco-friendly practice will first influence the perception of people, especially those who have high environmental consciousness, lead to creating a favorable AT as they are attracted to the features offered by this service (Yoo et al., 2018). Subsequently, it will enhance the willingness and BI to consume for this service, and this conclusion is in line with studies by past researchers (Mathew et al., Kumar & Mohan, 2021).

Hence, AT is able to explain some of the effects of PEoU, PU, SN and EC respectively on the BI.

5.3 Implications of the Study

5.3.1 Theoretical Implications

This research uses TPB and TAM models to examine consumer's BI toward DFDS as they have the ability to illustrate the formation of individual's intention and also the acceptance towards new emerging technology. The primary constructs are PEoU, PU, SN, and EC as an additional construct adapted by the extension of TPB, associated with AT as the mediator and BI as the dependent variable.

The result has proved that all the relationships are significant, with all the values are in the acceptable range. AT is considered the most significant variable in this study context as it has the highest value of f square (1.464). This is because the factors that will influence the BI should have shaped the AT first before having the intention and people will act depends on the AT formed. According to Sample & Warland (1973), the intention of a person to engage in any behavior in a given context, and ultimately the behavior itself represents a function of the person's AT towards performing the behavior in that context, the perception of the norms controlling the behavior, as well as the person's compliance with the norms. Thus, the favorability has impact on the consumer's BI to use DFDS. Therefore, AT is crucial in determining the BI for using DFDS with partial mediation have been found in this research.

However, an additional test has been conducted to evaluate the strength of the mediating effects by comparing them with the direct effects from each independent variables to the dependent variable. The results demonstrated that the indirect effect of PEoU, PU, SN to BI that mediated by AT will be weaker when compared to the direct effects given the VAF value lesser than

50%, except for the indirect effect of EC that have a 50% of VAF value, which indicates the strength of the indirect effect is almost the same with the direct effect. This finding has shown that although there are partial mediations, the strength of the mediations is not stronger than the direct effects, indicating the mediator have lesser effect in influencing the independent variables on the dependent variable.

In sum, this study can provide insights to academic and market researchers by using this as a reference in academic fields or businesses to understand the consumer's BI towards drone food delivery in the Malaysian context with TPB and TAM models are confirmed as appropriate for predicting the consumer's BI towards new emerging technologies or technology advancement in the conventional services. Also, it provides insight of the mediating effect of AT in relation to our model as well as the strength compared with direct effects.

5.3.2 Managerial Implications

To ensure the success of the introduction of DFDS in Malaysia, it is crucial for marketers to educate the consumers about the new food delivery method by using drones through informative advertising. It could possibly spark up the curiosity of consumers and develop positive AT towards DFDS. Hence, high acceptance of using the service which leads to stronger BI to use DFDS. According to the results, AT is the strongest predictor of consumer's BI to use DFDS. So, DFDS providers should emphasize on the PEoU, PU, SN, and EC that help to develop positive consumers' AT towards DFDS.

Based on the findings, EC has the strongest significant influence on AT compared to other independent variables. Hence, it is critical to spend more efforts in emphasizing on the eco-friendly aspects of using DFDS as it is the most effective way to form favourable consumers' AT towards the new services, which results in higher BI to adopt the services. Firstly, service providers are highly recommended to emphasize on the positive environmental impact of using drone food delivery compared to the conventional delivery methods through green marketing. For instance, drone is an eco-friendly tool as it does not require any fuel to operate which can help to lessen the carbon footprint and cause lesser environmental damage. Secondly, government have a critical role in promoting environmental friendliness and sustainability. Thus, government should launch public education campaigns to educate and encourage the citizens to adopt eco-friendly behaviors in their daily lives. If consumers have high levels of the awareness of EC, it will increase the possibility of using DFDS. Thirdly, the government should provide tax incentives or subsidies to support these green technologies such as drones. The purpose is to encourage more companies to adopt these sustainable practices and influence the citizens to accept such new services.

Next, the findings of the study indicated the significant impact of SN on the AT of using DFDS. Service providers should emphasize on viral marketing and encourage consumers to spread positive word-of-mouth regarding the benefits of using DFDS. Besides, it is recommended to launch user-generated content (UGC) campaigns as it is one of the most effective methods to promote the DFDS in Malaysia. If service providers can encourage customers voluntary share good reviews about the new services to people around them, it can improve the chances for the individuals to be favourably affected by others which leads to positive AT towards such services.

Moreover, the results demonstrated that PEoU has a significant effect on AT. Thus, the service providers should emphasize on the simplicity of using such services. Online food delivery applications such as Food Panda, Grab Food, AirAsia Food, or others should include the new feature for using DFDS in the interface of the food delivery apps while providing the tutorial videos on how to use the new DFDS. Besides that, service providers should offer responsive customer support to provide timely assistance to the consumers who face difficulties in trying the new services. Eventually, consumers only require minimum efforts to learn on using the services and leads to positive AT.

Furthermore, the finding also proved that PU can significantly influence consumers' AT. Service providers should implement comparative advertisements to compare the benefits of using DFDS over traditional delivery methods. Information such as delivery time, cost, accuracy of delivery, and the convenience of using the services are crucial in shaping positive AT towards the services. In addition, government should implement strict regulations to ensure the safety concerns of using DFDSs and protection of user's data privacy. Hence, service providers should emphasize on the transparency in the DFDSs to reduce perceived risks and enhance PU.

5.4 Limitations

Although 384 questionnaires were collected and analysed in the study, there are still several limitations should be mentioned. Firstly, the demographic profile indicated that around fourth fifths of Chinese was participating in the research while the remaining was from other races such as Malay and Indian. Thus, as other races were not distributed equally, it would result in the outcome being prone to common source bias. Besides that, the difficulty of collecting useful feedbacks was a challenge in this study. The main reason is that the respondents may not be familiar with DFDS as it is not commercialized in Malaysia. Thus, the respondents tended

to provide straight lining answering which could assume they did not answer the questions seriously. Therefore, many questionnaires were disqualified during the data filtering process. Moreover, this study had successfully explained the consumer's BI using TAM and TPB in the context of DFDS. However, limited predictor variables were measured in this study to forecast the consumer's BI to use the DFDS.

5.5 Future Recommendations

Aforementioned, the results may have bias as different races have distinct cultures and values which could provide different feedbacks. Thus, future researchers are suggested to balance the quota of each race according to the population of the Malaysia to give a more comprehensive picture of the consumer's BI to use DFDS in Malaysia context. Furthermore, it is suggested to show a short introduction video of DFDS to the respondents before asking them to answer the questionnaires. The purpose is to ensure the respondents to have a brief understanding of the DFDS. Therefore, they can provide accurate feedbacks and enhance the quality of the data. Furthermore, it is advised to consider more predictor variables such as perceived behavioral control should use to forecast consumer's BI to use drone food delivery more effectively and accurately.

5.6 Conclusion

384 sets of questionnaires in total were used for analysis and hypothesis testing. To sum up, this research has successfully achieved all objectives by proving the validity of all hypotheses and the significant relationships between each construct.

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Appendices

Appendix 3.1: *Survey questionnaire.*

Consumer's Behavioral Intention towards Drone Food Delivery

Survey Questionnaire

Dear respondent,

We are students currently pursuing Bachelor of Marketing (Honours) in Universiti Tunku Abdul Rahman (UTAR). We are conducting research on the topic of "Consumer's Behavioral Intention towards Drone Food Delivery".

Drone food delivery attempts have been carried out successfully in many countries, such as America, China, Dubai, Korea, New Zealand, Singapore and many more. Currently, Malaysia still appears to be at the testing stage of using drone in the food delivery service industry. Thus, the acceptance of customers to use drone food delivery service is crucial in measuring the success of implementing such service. Therefore, the purpose of this research is to study the effect of perceived ease of use, perceived usefulness, subjective norms, and environmental concerns on consumers' behavioral intentions toward drone food delivery service in Malaysia.

Your help in completing the questionnaire is vital for our study. We truly appreciate if you could take your time and effort in completing the following questionnaire. Please read the instruction carefully before answering the questions. The respond data will be kept **PRIVATE** and **CONFIDENTIAL** and will be used solely for academic purpose.

Thank you for your willingness to participate in this survey!

Yours sincerely,
Chan Jia Jian
Vooi Wen San

Pre-Screening Questions

1. Are you aged 18-26 years old?
   - Yes
   - No

2. Do you use food delivery services?
   - Yes
   - No

3. Do you know what is drone?
   - Yes
   - No

Note: If yes, you may proceed to the next section; if no, you may stop answering the questionnaire and thanks for your time and cooperation.

Section A: Demographic Profile

This section serves to collect essential background information from survey participants, which is vital for data analysis purposes. Please choose **ONE** appropriate answer.

1. What is your gender?
   - Male
   - Female

2. What is your age?
   - 18-20
   - 21-23
   - 24-26

3. What is your race?
   - Malay
   - Chinese
   - Indian
   - Other:

4. What is your education level?
    - Primary School
    - SPM/O-Level
    - STPM/Matriculation/UEC/A-Level/Foundation
    - Diploma
    - Bachelor's Degree
    - Master's Degree
    - PhD
    - Other:

5. What is your income level (monthly)?
    - No income (Unemployed/Full-time student)
    - RM1500 and below
    - RM1501-RM2500
    - RM2501-RM3500
    - RM3501 and above

6. How often do you use food delivery services
    - Never
    - Rarely (Once a month or less)
    - Occasionally (2-3 times a month)
    - Sometimes (Once a week)
    - Frequently (2-3 times a week)
    - Very frequently (4 or more times a week)

Section B: Factors that Influence the Intention to Use Drone Food Delivery Services in Malaysia

Based on your opinion, please choose the most appropriate option that best indicate your agreement level about the following statements based on the scale of 1 to 5.

(1) = Strongly Disagree; (2) = Disagree; (3) = Neutral; (4) = Agree; (5) = Strongly Agree.

No	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived Ease of Use						
PEoU1	I think learning how to use drone food delivery services appear to be simple.	1	2	3	4	5
PEoU2	I think ordering food with drone food delivery services seem to be easy to use.	1	2	3	4	5
PEoU3	I think using drone food delivery services do not appear to be difficult.	1	2	3	4	5
Perceived Usefulness						
PU1	I think that using drone food delivery services would allow me to receive my meal more quickly.	1	2	3	4	5
PU2	I think that using drone food delivery services appear to be convenient when receiving food.	1	2	3	4	5
PU3	I think that using drone food delivery services make it easier to receive my food.	1	2	3	4	5
Subjective Norm						
SN1	People who are important to me would think that I should use drone food delivery services if this technology has implemented.	1	2	3	4	5
SN2	People who are important to me are more likely to support me to use drone food delivery services if this technology has implemented.	1	2	3	4	5
SN3	People whose opinions I value would prefer me to use drone food delivery services if this technology has implemented.	1	2	3	4	5

Environmental Concern						
EC1	I think that drone food delivery services are more likely to be useful in protecting the environment.	1	2	3	4	5
EC2	I think that drone food delivery services should be widely used to address environmental issues.	1	2	3	4	5
EC3	I think I can show that I care about the environment through using drone food delivery services.	1	2	3	4	5
Attitude						
AT1	I think I am more likely to have favorable attitude towards drone food delivery.	1	2	3	4	5
AT2	I think that using drone food delivery services when ordering food are more likely to be good.	1	2	3	4	5
AT3	I think I am more likely to have positive attitude towards drone food delivery.	1	2	3	4	5

Section C: Behavioral Intention

Based on your opinion, please choose the most appropriate option that best indicate your agreement level about the following statements based on the scale of 1 to 5.

(1) = Strongly Disagree; (2) = Disagree; (3) = Neutral; (4) = Agree; (5) = Strongly Agree.

BI1	I think I will use drone food delivery services when ordering food in the future.	1	2	3	4	5
BI2	I think I am willing to use drone food delivery services when ordering food in the future.	1	2	3	4	5
BI3	I think I am likely to use drone food delivery services when ordering food in the future.	1	2	3	4	5