

INTENTION TO USE THE DELIVER EAT ONLINE  
FOOD DELIVERY APP IN MALAYSIA, A  
BEHAVIORAL STUDY AMONG GEN Y

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**INTENTION TO USE THE DELIVER EAT ONLINE FOOD  
DELIVERY APP IN MALAYSIA, A BEHAVIORAL STUDY AMONG  
GEN Y**

By

**CHEW YI WEI**

A thesis submitted to the Department of Marketing,  
Faculty of Business and Finance,  
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in partial fulfillment of the requirements for the degree of  
Master of Business Administration (Corporate Management)  
June 2023

## DECLARATION

We hereby declare that:

- (1) This postgraduate project/case 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 research project/case analysis 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.
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Date: 25<sup>TH</sup> JUNE 2023

## ABSTRACT

This study focus on the use and uptake of mobile food delivery apps in Malaysia. With the rising trend of utilizing mobile apps to order meals, it is critical to identify the elements that drive such app adoption in Malaysia. The majority of millennials (those born between 1968 and 2006) are employees and students. They have spending power and are eager to employ the OFD service if it saves them time and effort. The outcomes of this study will emphasize the importance of identifying the IVs that influence mobile app usage intentions. Deliver Eat decision-makers may discover issues that can restrict or promote the implementation of mobile technology in their firm by studying these characteristics.

In this research, it is examining the effects of IVs: MAU; sub-variables of MAEU: compatibility and SE; and MAI to the intention to use Deliver Eat online mobile food app. The conceptual framework of this study is modified based on the MTAM by decomposing the MAEU into two sub-variables and one additional variable.

394 responses are collected from the online questionnaires where 10 are voided and the remaining are used as the analysis data in this study. The snowball sampling approach was applied in distributing the questionnaire, which used a 5-point Likert scale for assessing the variables' items. The regression results indicated the variables MAU, compatibility, and MAI are substantially associated to the intention to use Deliver Eat online mobile food app. In discussing the reason of each hypothesis is accepted or not supported, reasonable explanations and solutions are presented. Strategic methods are proposed by referring to the significant predictors' measurable items. The project's shortcomings and recommendations for future studies have also been explored.

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Thank you.

## APPROVAL SHEET

This dissertation/thesis entitled "**INTENTION TO USE THE DELIVER EAT ONLINE FOOD DELIVERY APP IN MALAYSIA, A BEHAVIORAL STUDY AMONG GEN Y**" was prepared by CHEW YI WEI and submitted as partial fulfillment of the requirements for the degree of Master of Business Administration (Corporate Management) at Universiti Tunku Abdul Rahman.

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**FACULTY OF BUSINESS AND FINANCE**  
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Date: 25<sup>TH</sup> JUNE 2023

**SUBMISSION OF FINAL YEAR PROJECT /DISSERTATION/THESIS**

It is hereby certified that **Chew Yi Wei** (ID No: **22ABM00696**) has completed this final year project entitled "Intention to use the Deliver Eat online food delivery app in Malaysia, a behavioral study among Gen Y" under the supervision of Dr. Chong Yee Lee (Supervisor) from the Department of Marketing, Faculty of Business and Finance.

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Yours truly,



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(CHEW YI WEI)



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## LIST OF ABBREVIATION

Remark	Code
Compatibility	C
Dependent Variable	DV
Food and beverage	F&B
Independent Variable	IV
Mobile App Ease of Use	MAEU
Mobile App's Innovativeness	MAI
Mobile App Usefulness	MAU
Mobile Ease of Use	MEOU
Mobile Technology Acceptance Model	MTAM
Mobile Usefulness	MU
Online Food Delivery	OFD
Perceived Ease of Use	PEOU
Perceived Usefulness	PU
Self-Efficacy	SE
Technology Acceptance Model	TAM

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# **CHAPTER 1**

## **INTRODUCTION**

In the study background, there is a brief introduction to food delivery applications and the market share is obtained. The problem statement states the identification of the problems that have been leading the target to have less intention to utilize the food delivery applications. The objectives and research questions are created in response to the identified problems. The uniqueness of the current study and briefing of the main points of each main topic is presented as well.

### **1.1 Research Background**

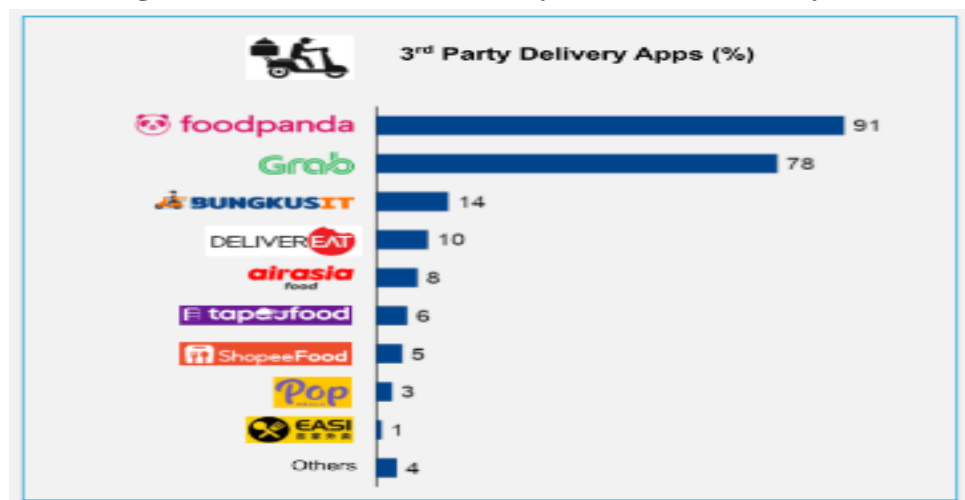
E-commerce grows rapidly due to the revolution of information communication technology systems and improvements in internet service coverage. Customers prefer to shop online due to several factors: convenience in sourcing products and services, and time and cost savings when the internet facilitation is accessible. The growth of online shopping entails an almost limitless offer and selection of goods and services, which benefits the user through product customization, real-time interaction, and quick delivery.

In Malaysia, ordering food using online food delivery (OFD) services is becoming a norm. With just one click at a specific app, the e-order can be confirmed; e-payment can be transacted immediately; and ordered food can be received within a short time frame. Such conveniences benefit people that have time constraints (Hooi et al., 2021). Food delivery services are widely adopted

in big cities like Kuala Lumpur, Penang, Johor Bahru, and Klang Valley (Hooi & et.al, 2021) due to busy working schedules, traffic jam chaos, and difficulty in getting car parking services. The OFD providers ensure buyers with on-time delivery.

Malaysian shoppers utilize their smart devices for online purchases (Chai & Yat, 2019). In 2016, 17.9 million Malaysian mobile device users adopted the internet facility and the adoption rate expects to reach 21.1 million by 2020. In response to such an ongoing internet adoption behavior as a result of busy working and life schedules, the OFD service is expected to grow continuously. A number of OFD companies have been established. FoodPanda is among the earliest delivery service providers in Malaysia. Later, other providers like Deliver Eat, Uber Eats, Honestbee, Running Man Delivery, FoodTime, Dahmakan, Mammam, and Shogun2U are established in serving specific market segments. FoodPanda capture the highest market share (91%) followed by Grab Food (78%) (See figure 1.1).

**Figure 1.1: Active Food Delivery Providers in Malaysia.**



Source: Oppotus (2022)

Comparatively, Deliver Eat only manages to capture a 10% market share among the active online app users (see Figure 1.1). Deliver Eat is an online meal ordering and delivery company founded in 2012 that aims to make life easier for busy people in Penang by offering fantastic food delivery services for a wide range of domestic and international culinary delights. Deliver Eat collaborates with food and beverage (F&B) suppliers like Sushi King, Chili's, Sakae Sushi, Morganfield's, Nando's, Kenny Rogers & Roasters, Subway, Tealive, and many more that are accustomed to small-scale eateries with a variety of cuisine preferences. Customers can download the Deliver Eat app for free for food and beverages purchase and delivery (Deliver Eat, 2022).

Food delivery service is a highly competitive business. In order to sustain and grow, OFD providers must be innovative in operating and delivering their services (Yeo et al., 2017). For example, during the COVID-19 outbreak, Malaysian OFD providers developed a contactless supply e-platform or an app which enables buyers to order food and request food delivery service within a specific time period without interacting with sellers physically (Perumal et al., 2021). However, such facilitation is replicable and soon all providers provide the same facilitation.

In establishing a competitive edge, the providers need to provide unique services that are difficult to be replicated by competitors which eventually prevent current customers from brand switching and attract new customers. The provision of unique services that enhance the functionality of food delivery apps

can be materialized if the providers understand their target consumers' feedback and expectation of the company app's functionality (Suhartanto et al., 2019).

People born between 1968 and 2006 are known as Generation Y (Gen-Y) (Suhartanto et al, 2019) that are grown up when the world digital revolution begin. The digital revolution enables the world economy to improve which eventually creates vast employment opportunities to Gen-Y. Being digitally educated, Gen-Y become savvy in using smart devices for e-purchasing goods and services offered by domestic and international suppliers compare to boomer generation. As a result, Gen-Y is one of the largest segments of e-market share as they have higher purchasing power compared to younger generations due to lengthier working experience. In examining the possibility of expanding the Gen-Y market for Deliver Eat, this project aims to find out the Gen-Y's reaction to a delivery app provided by Deliver Eat and suggest useful indications for improving the app's functionality.

## **1.2 Problem Statement**

In eliciting the problems that have been discouraging Gen-Y's usage intention of Deliver Eat apps, the current researcher explores the consumers' comments shown on websites. According to a review forum posted in Google Playstore (<https://play.google.com/store/apps/details?id=com.delivereat.customer>), most of the users complain that the Deliver Eat app likes having a lot of bugs, frequent app system down, unable to track locations, unable to search for a specific food, and unable to pay for ordered meals. The possible problems that cause the dissatisfaction of Gen-Y will be listed by current researcher in below.



To better understanding the requirements of Gen-Y to the mobile food app, a collection of responses has been carried out from forum participants where most of them are 18 to 40 years' old which fulfilled the ages of Gen-Y by using social media application (Facebook). Most of them are unsatisfied with the performance of the app's system which delays users in identifying specific food sellers at specific venues within a second. The participants of Gen-Y are agreed that they may use the mobile food app if the Deliver Eat mobile food app can:

- (1) provide long term discount, cashback or vouchers for the users' next food order;
- (2) able to check real time status of the user's food order;
- (3) provide a variety of payment methods like all types of e-wallets and online banks;
- (4) provide accurate delivery time to send the food from restaurants to customers;
- (5) the preferred F&B sellers are always updating their new menus;
- (6) all types of F&B images and pricing structure are shown on the app;
- (7) able to provide reviews and rating for restaurants and food sender;
- (8) provide specific food search filters like vegan, dietary options;
- (9) provide contact information to allow the users instant contact the delivery person;
- (10) allow users to cancel the orders if they are waiting too long.

The current researcher grouped up the obtained information that perceived as the usefulness of an online mobile food app by the Gen Y [or term as mobile app usefulness (MAU)].

Some of measuring items may be used repeatedly to determine the usefulness of mobile app literature (Hooi et al., 2021; Joshi & Bhatt, 2021). The purpose of this study aims to provide useful significations to decision-makers by determining the factors that affect the users' intentions to use Deliver Eat mobile food app. Testing the mobile app usefulness variable by applying particular

measuring items can yield a more accurate result. The measuring items may ask the Gen-Y with more specified questions in order to clearly show what aspect is being concerned by the Gen-Y in this study. For instance, the appearance information about the availability of certain foods, food prices, and delivery details should be shown in the Deliver Eat mobile app may consider as useful for the users which can show more specific and clearer details have been measured to determine the “usefulness” in this study.

Different groups of participants may agree that ease of use of the mobile app literature is a crucial element that might motivate people to intentional behavior to adopt the mobile app but the manner in which each group defines the mobile app's ease of use would not be the same. Past MTAM study's conceptual models define MAEU as a variable. Based on the definition of MAEU in MTAM that aims to measure the components that ease the use of an app, the MAEU variable can be decomposed into a few-dimensional variables. For example, in past TAM studies, the authors decomposed that perceived ease-of-use variable into insecurity and discomfort (Ali et al., 2020); attitude and perceived enjoyment (Choi & Park, 2020), social influence and trust (Alyoussef, 2021). In response to the forum participants' comments, this project decomposes the MAEU into two-dimensional variables: compatibility and self-efficacy.

In evaluating compatibility of the mobile app, the forum participants agreed that they may use the Deliver Eat mobile food app if the app is able to: (1) search the specific food they want in view of current living lifestyle; (2) navigate food processes and order status; (3) install in the mobile device without affecting

current lifestyle; (4) use the mobile app without changing mobile app's system. Instead of asking the respondents about the ease of use of mobile app, the measuring of compatibility will get a more diversified result. It may clearly measure how much will be considered as convenient the Deliver Eat mobile food app is compatible in the users' mobile without affecting their current lifestyle.

Besides of compatibility of mobile food app, the self-efficacy is also assessed by the forum participants. The forum participants are agreed that they may have the intentions to use mobile food app if: (1) the app has assistance functions to new users; (2) the app has guidelines or procedures provided; (3) the users are capable to explore new mobile app. Self-efficacy refers to users believe in their own capabilities to use the mobile app. It is possible to affect the users' ability to use the mobile food app easily or difficultly.

Basically, the forum participants comment about the usefulness and ease-of-use of Deliver Eat apps in facilitating the delivery of ordered F&B. According to the mobile theory of acceptance model (MTAM), MAU and MAEU are the two independent variables (IVs) that explain respondents' intentional behavior. Therefore, in examining whether new Gen-Y users have the intention to use the Deliver Eat apps; the app's usefulness and decomposed variables of ease-of-use influence are tested in this project based on the framework of MTAM.

On top of the MAU and MAEU problems, an additional problem related to mobile app innovativeness (MAI) is elicited. The forum participants are agreed

that they may have the intentions to use Deliver Eat mobile food app if they can provide (1) new improvements in users' benefits continuously; (2) creative technologies functions that are not created by the other apps yet; (3) the degree of freshness like design, colour and functions; (4) allow to customize their orders or food before the food picked up by the driver; (5) promote the application of the AI technologies to assist the customers.

The mobile app's innovativeness will be tested in this study due to it may affect the users' experience to the app. If the features of the mobile food app are not innovative enough, it will not attract the new users to use the Deliver Eat mobile food app. The users will tend to use and stay loyal to the previous mobile food app that is easy to use and has much offers to them. In solving the problems elicited above, this project modifies MTAM by including an examination of an additional predictor variable, MAI. In summary, to solve the problems related to the functionality of a delivery app provided by Deliver Eat, MTAM is modified for robust examination and to generalize the Gen-Y's behavior.

### **1.3 Research Questions**

Based on the problems discussed above, the following research questions are proposed:

- i) How usefulness and ease-of-use of the studied delivery app relate to Deliver Eat's online mobile food app usage intention among Gen-Y?
- ii) How innovativeness of the studied delivery app does relate to Deliver Eat's online mobile food app usage intention among Gen-Y?

## **1.4 Research Objectives**

Generally, the project aims to determine the behavioral factors that influence on Gen-Y's intention to use Deliver Eat's online mobile food app. Specifically, this project proposes:

- i) To examine the effects created by the mobile app usefulness (MAU) and mobile ease of use (MAEU) on Deliver Eat's mobile food app usage intention among Gen-Y.
- ii) To examine the effect created by the mobile app's innovativeness (MAI) on Deliver Eat's mobile food app usage intention among Gen-Y.

## **1.5 Significance of Study**

### **1.5.1 To Managerial Decision Makers**

After the end of COVID-19 pandemic, customers are still motivated to order food online and have it delivered to their residence area. As a result, many F&B providers continue to collaborate with OFD providers in order to sustain and grow their business. As Gen-Y is a big market share, it is crucial to elicit and determine the relevant behavioral variables that have been influencing the Gen-Y's usage intention on a delivery app, developed by Delivery Eat (Tan et al, 2021).

In eliciting the behavioral variables, targeting the Gen-Y is a smart move because they represent the age group that has contributed most to the food sector. Given that the majority of Gen-Y uses mobile applications, it is crucial to investigate how they will increase the intention to use food delivery apps based

on the ease of use and usefulness of the apps. They may provide the most useful feedback since most of the mobile food app users are within the age range of Gen-Y.

Currently, the Deliver Eat mobile app is getting a lot of complaints from the users and the issues are not being fixed after numbers of updates of the app. The current business strategy of Deliver Eat is failed to address the issues and complaints from the customers. Based on the customers' reviews to the Deliver Eat app, the company is failed to address the bad service of their food delivery service, the Deliver Eat app is always hang and down, the customers are unable to track the order status, the app is poor customer service like bad attitudes or no one response, the app is unable to load the information immediately to the customers and low payment options are provided (Tripadvisor, 2018; Glassdoor, 2022; Knoji, 2019). Hence, the business current strategy of Deliver Eat is hard to draw the intention of the new users to use their app. It is due to the functions and services of the mobile food app are not match to what the Gen-Y agreed to the characteristics of usefulness, ease of use and innovativeness in above. If the policy makers target to improve the number of new users to use Deliver Eat mobile app, it is crucial for them to determine the complaints and issues from their existing customers to their current business strategy in order to have better understanding about the usefulness and ease of use of the mobile food app.

To improve the functions in mobile food app, the mobile food app has enhanced to allow the users to access restaurants, place food orders, and pay using a variety of ways, including cash on delivery, debit or credit cards, or e-wallets. Additionally, it provides more thorough, current, and accurate restaurant

information, including menu alternatives. Ratings is also implemented to allow the collection of online reviews in qualitative or quantitative. Companies of mobile food app apply star ratings to enhance their goods and services and to interact with their users. Because of star ratings, it may have a positive impact on a company's performance which allow the businesses to be handled efficiently (Cahyani & Nurcahyo 2020). Also, the mobility is also improved to allow the mobile food app deliver or receive information requested by a user via a mobile device without limitations on time or place (Cha & Seo, 2020).

As the research aims to analyze the usefulness and ease of use of the food delivery app, current researcher evaluated the items used to break down the usability into more precise item statements. In conclusion, this study's findings will assist policy makers in better understanding how the behavioral factors MAU, Compatibility, SE, and MAI impact the Gen-Y's intentions to use the Deliver Eat mobile food app. The study's strategic recommendations will be provided to help policymakers create more effective plans that will boost the likelihood that new users would use the Deliver Eat mobile food app.

### **1.5.2 To Academics**

This study is unique compared to the past studies. In the past studies, the past researchers are targeting all mobile app users in Malaysia, Pakistan and China respectively without scoping the range of age (Zhang et al., 2023; Lew et al., 2020; Sharmin et al., 2021; Chan et al., 2020). Therefore, current researcher is using the Gen-Y as the target population by scoping the age between 16 and 54 in the study which can fill up the literature gap from past studies.

The additional variable, MAI is unique in this study by examining as an independent variable. In the past studies, the innovativeness was analyzed in the aspect of technology of the mobile app. MAI replaces the technology innovativeness which analyze various aspects of the mobile app's innovativeness like creativity, new features, upgrade and also technology. For academics, although there are many past studies have examined the usefulness and ease of use of the mobile app literature, there is yet to have a publication of study which is examining the MAU, MAEU and MAI of mobile food app in one empirical study. Therefore, this study can fill up the literature gap by examining MAU, MAEU and MAI in one study.

In the past studies, the past researchers were examining the compatibility and self-efficacy as the independent variables. There are none of the studies is examining the compatibility and self-efficacy as a sub-variables of ease of use context. The compatibility was tested as an independent variable in the past studies (Prakarsa et al., 2020; Al-Emran et al., 2020), meanwhile, it is same to the self-efficacy (Zhang et al., 2023; Lew et al., 2020). Hence, the uniqueness of this study is decomposing the MAEU into sub-variables: compatibility and self-efficacy.

## **1.6 Organization Thesis**

There are 5 chapters in this research. The background and growth of Malaysia's OFD companies and the target providers, the Deliver Eat Company is discussed in Chapter 1. Then, the statements of problems for current study are formulated



based on past studies' suggestions. Then, appropriate research questions and objectives are established. The significance of the study is discussed as well. In Chapter 2, the MTAM theory is explained clearly. In identifying the literature gap, past studies and research models related to MTAM are examined. After that, the current hypotheses are challenged so that this project's conceptual framework can be developed. The development of a conceptual framework will assist to enrich the MTAM model. Chapter 3 focuses on the current project's research methodology. The research design is properly justified and the research methods are carefully planned in getting reliable and valid data so that the data findings can reflect the true scenario as closely as possible.

In Chapter 4, it will study and analyze the data collected from the questionnaire. After that, the set of strategic recommendations will be proposed to the managerial decision makers of Deliver Eat in Chapter 5. The limitations and recommendations for future research will be also discussed in Chapter 5.

## **CHAPTER 2**

### **LITERATURE REVIEW**

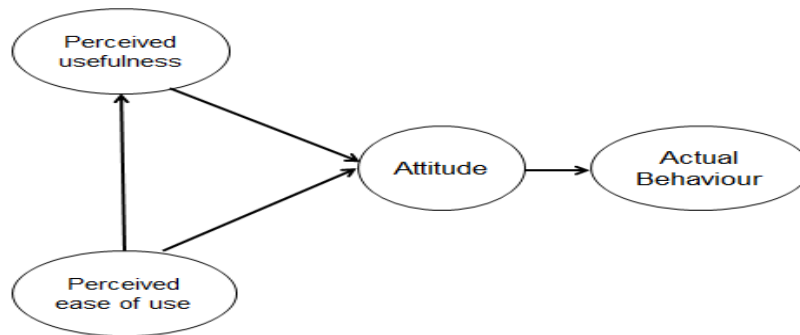
This chapter explains the theoretical framework of the TAM and MTAM, and how past researchers developed their research models that relate to e-services. The main purpose of this topic is to develop current project's hypotheses and conceptual framework by explaining how past studies work provide the foundation knowledge, acknowledging prior scholarship so that duplication can be prevented, and identifying the literature gaps.

#### **2.1 The Development of Technology Acceptance Model's (TAM) Theoretical Framework**

Davis (1989) developed the TAM to investigate the factors that influence people's intentions to embrace new technologies. Given its straightforward theoretical underpinning, this is one of the most well-known and commonly applied models for analyzing the intention to embrace innovative methods.

The model explains that a person's perceived usefulness (PU) and ease-of-use (PEOU) of the studied object or subject matter will influence the development of favorable or unfavorable attitude toward the performance of the behavior of interest which in turn will motivate the person to perform the behavior of interest (Davis, 1989). Perceived Ease of use (PEU) is a metric that measures how readily people comprehend and utilize technologies. Perceived usefulness (PU) is described as an individual's proclivity to utilize an application to improve their job performance. Individuals' attitudes (AT) towards using are

characterized by the good or bad sentiments they experience when undertaking behavior (Natasia et al., 2022). (see Figure 2.1)



**Figure 2.1: The Theoretical Framework of Original Technology Acceptance Model**

Source: Davis (1989)

Since its inception, numerous studies have been conducted based on the TAM's framework (Natasia et al., 2022; Rad et al., 2022; Baby & Kannammal, 2020). Nevertheless, the simplicity of the model invites criticism. TAM2 was developed utilizing TAM as the skeleton model to integrate new theoretical components combining social influence processes. TAM2 simulates the effects of three interconnected social forces on an individual faced with the decision of accepting or ignoring an innovative system which are subjective norms, voluntariness, and image. The reason why subjective norms have a direct impact on intention is that people might choose to engage in a behavior even if they are dissatisfied with it or its results. The direct compliance-driven influence of subjective norm on intention over perceived usefulness and perceived ease of use. According to TAM2, it will occur under mandatory but not optional system usage settings in the context of computer usage. The TAM2 proposes several notions of perceived usefulness and, with the use of longitudinal investigations,

extends the TAM1's theoretical framework (Baby & Kannammal, 2020; Bakri et al., 2020).

The impacts of perceived risk and trust on system use have been included to the third iteration of the Technology Acceptance Model (TAM3) as it relates to e-commerce. The TAM3 is focused on the factors that affect an innovation's perceived usefulness and usability. Even if someone receives evidence of how simple a system is to use from others, it is doubtful the person would generate consistent observations of how simple a system is to use solely on that evidence rather on their own general ideas about computers and actual usage of the system. Standardized surveys with questions tailored to the technology and organizations under study were developed using verified items from past research. The study's conclusions opened the way for the development of the Unified Theory of Acceptance and Use of Technology (UTAUT) (Baby & Kannammal, 2020; Musyaffi et al., 2021).

Following a review of TAM1, TAM2, TAM3 and theories used to gauge technology adoption, the UTAUT was established. According to UTAUT, performance expectancy (PE), effort expectancy (EE), facilitating circumstances (FC), and social influence (SI) all have a role in determining intention to utilize a technology. These variables influence behavioral Intentions, which influence the use behavior (Hanif & Lallie, 2021).

Also, the definitions TAM variables are in their purest form, restricted to a general working environment in an organization (Estriegana et al., 2019).

Scholars argued that defining variables using a common concept is not appropriate because the technology adoption practice outside a workplace is dependent on many different factors (Lah et al, 2020). Finally, the requirement for a mobile-literature technology acceptance model emerged, and the Mobile Technology Acceptance Model (MTAM) was created and based on the TAM variables to adjust in order to meet the mobile context (Hanif & Lallie, 2021)

Rafique et al (2020) found that perceived usefulness and perceived ease of use are key factors that influence the attitude and intention of users to use mobile library applications. When they perceive that mobile digital payment technology can improve the quality and accuracy of information, they are more likely to be satisfied with the mobile library applications. Besides that, Prastiawan et al (2021) found that the influence of perceived ease of use (PEOU) and perceived usefulness (PU) on consumer intention to use online mobile shopping in Indonesia is explored in the analysis. The study reveals that PEOU and PU have a favorable relationship with consumer intention to use online mobile shopping. PU notably exerts a stronger impact on intention than PEOU.

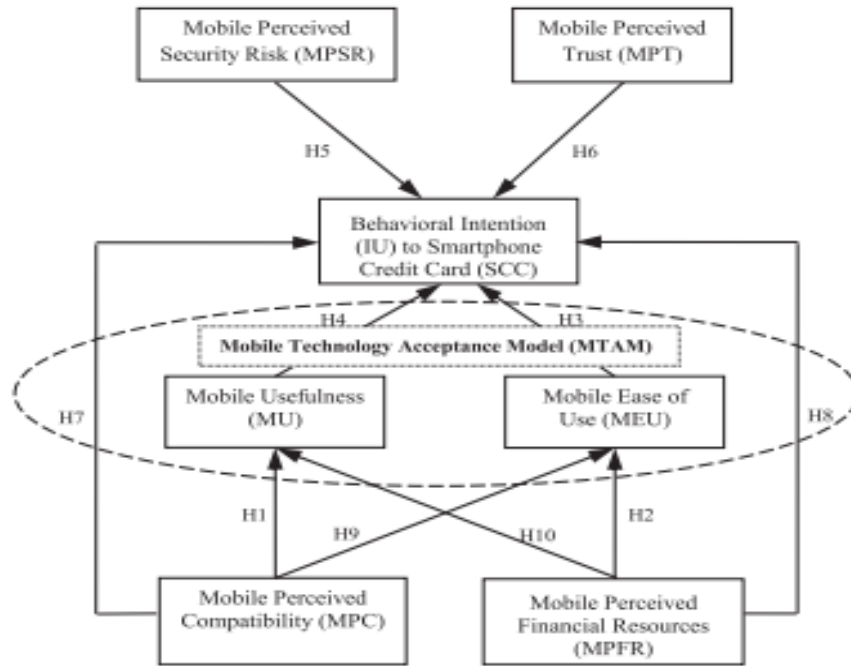
The theoretical framework of TAM is insufficient in explaining the respondent's acceptance behavior response towards the adoption of cutting-edge technologies (Ngubelanga & Duffett, 2021). Measuring a human's behavioral response based on only two predictor variables is disputable. Therefore, Ooi & Tan (2016) modified from TAM to become MTAM, in an effort to encapsulate the features of mobile technology by incorporating other predictor variables.

MTAM is used as the basic theory in this study instead of the other extension of TAM theories because MTAM was created expressly to look at the variables affecting the uptake and use of mobile technologies. PU, PEOU and other functionality motivations are among the elements of MTAM that have been proven to have a substantial impact on users' intentions to embrace and utilize mobile technology. Therefore, it offers a thorough and pertinent framework for researching how people accept and use mobile technology. The detail of the MTAM is discussed in the next sub-topic.

## **2.2 The Theoretical Framework of Mobile Technology Acceptance**

### **Model (MTAM)**

In the MTAM, the TAM's predictor variables are renamed as mobile usefulness (MU) and mobile ease of use (MEOU). MU represents the efficiency of using mobile devices while MEOU represents how easy it is to use the mobile devices (Zhang et al., 2023). Similar to the TAM's modeling, the perceived usefulness and ease-of-use are retained as the two predictor variables but in MTAM, the two predictor variables create direct effect on intentional behavior, not attitude. According to earlier TAM studies, attitude towards utilizing the technology only partially mediated the influence of perceived usefulness and perceived ease of use on intention, therefore, MTAM is excluding it from the thrifty TAM (Diop et al., 2020) (see Figure 2.2).



**Figure 2.2: Mobile Technology Acceptance Model Theoretical Framework**

Source: Ooi & Tan (2016)

The MTAM is created specifically for the mobile environment in information technology research, based on limitations of other models (Lew et al., 2020). MTAM addresses the original concept of TAM, one of its main limitations. The definitions of the variables for TAM are, in their purest form, restricted to an organizational environment. This is a concern since the adoption of technology outside of the workplace depends on many different factors, such as the kinds and complexity of jobs. Similar to the TAM's criticism, using the MU and MEU influences in explaining the behavioral intention to adopt a mobile technology system is insufficient to fully elaborate on the adoption of new technology as it can hardly account for 40% of the changes in usage intention and behavior (Lau et al., 2021). Therefore, additional variables need to be incorporated in the MTAM to explain the direct effect and indirect effect (if any) on intentional behavior. To explore the users' intention to adopt smartphone

credit card, additional variables like mobile perceived compatibility (MPC), mobile perceived trust (MPT), mobile perceived financial resources (MPFR) and mobile perceived security risk (MPSR) were incorporated into the frugal MTAM in order to account for the complexity that exists in the mobile environment. The integrated concept gives a fresh way to understand smart credit card from the perspective of the user, rather than solely from a technological standpoint (Ooi & Tan, 2016).

### 2.3 Application of MTAM in Mobile Technology Adoption Studies

The MTAM model has been applied in studies related to intention to adopt the NFC mobile payment app (Zhang et al., 2023) and mobile wallets in the hospitality industry (Lew et al., 2020), and mobile tourism app (Sharmin et al., 2021) – see Table 2.1. However, the collection of articles stored in the Web of Science and Scopus journal databases show that studies that apply the MTAM in examining mobile food delivery app usage intention is not published yet. The current study therefore fills the literature gap.

**Table 2.1: Application of MTAM in Mobile Technology Adoption Studies**

Author's name (Year of Publication)	Research model's variables	Results
Zhang et al (2023)	The MTAM variables: MU & MEOU The additional variables are: <ul style="list-style-type: none"> <li>● Perceived critical mass</li> <li>● Perceived enjoyment</li> <li>● Mobile Self-efficacy</li> <li>● Technology Self-efficacy</li> <li>● System and Service Quality</li> </ul>	All the MTAM variables and additional variables are positively related to the intention to adopt NFC mobile payment app except the Perceived Critical Mass.
Lew et al (2020)	The MTAM variables: MU & MEOU The additional variables are: <ul style="list-style-type: none"> <li>● Perceived critical mass</li> </ul>	All the MTAM variables and additional variables are positively related to response in the intention to adopt mobile wallets in the



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	<ul style="list-style-type: none"> <li>● Perceived enjoyment</li> <li>● Mobile Self-efficacy</li> <li>● Technology Self-efficacy</li> </ul>	hospitality industry, except the perceived critical mass and technology self-efficacy.
Sharmin et al (2021)	<p>The MTAM variables: MU &amp; MEOU</p> <p>The additional variable is satisfaction.</p>	All the MTAM variables and additional variables are positively related to the intention to use mobile tourism app.

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Past studies have decomposed the MAEU to few-dimensional variables; for example, perceived compatibility and perceived system quality in testing the intention to use virtual hotel operator mobile applications (Prakarsa et al., 2020); compatibility and complicatedness in mobile health care application (Nezamdoust et al., 2022); self-efficacy and subjective norm in mobile technology (Usman et al., 2020); self-efficacy, system accessibility and subjective norm in e-learning (Khan et al., 2023). However, studies that decomposed the MAEU variables to two-dimensional variables: compatibility and self-efficacy to improve the predictive accuracy for MAEU in one empirical study and relate to adoption of food delivery app has not been published in the Web of Science and Scopus journal databases either (see Table 2.2). Compatibility refers degree to which an invention is deemed to be consistent with shared values, prior learnings, and anticipated consumer demands. It can be a sub-variable of MAEU as the mobile app matches the needs of users, the users may find the app is easy to use. Meanwhile, self-efficacy, which refers to a person's perception of her or his capacity to complete a task or participate in an activity, is crucial for the development of motivation and behavior in people. When the users are confident to their abilities, they may find the mobile app is easy to use. Therefore, both dimensional variables: compatibility and self-efficacy can be measured as the sub-variables of MAEU. Also, it may fill up the

literature gap as compatibility and self-efficacy have not been tested in food delivery app study and in one empirical study (See Table 2.2).

**Table 2.2: Decomposition of Perceived Ease-of-Use in Mobile Technology Adoption Studies**

Author's name (Year of Publication)	Study context	Dimensional variables of Perceived Ease-of-Use
Prakarsa et al (2020)	virtual hotel operator mobile applications	1. Compatibility 2. System Quality
Nezamdoust et al (2022)	mobile health care application	1. Compatibility 2. Complicatedness
Usman et al (2020)	mobile technology	1. Self-efficacy 2. Subjective Norm
Khan et al (2023)	e-learning	1. Self-efficacy 2. System Accessibility 3. Subjective Norm

#### 2.4 Innovativeness of Mobile Apps Studies

Innovativeness of a mobile app or MAI may appear in a variety of ways, including the employment of cutting-edge methods, and imaginative designs which aim to enhance user experiences (Lee & Kim, 2021). As a result, intentional usage increase when potential consumers aware of the innovative feature that has been incorporated into a mobile app (Lee & Kim, 2021). Therefore, to attract new app's users, mobile app providers need to update the app's level of innovation constantly (Abbas et al., 2018; Almaiah et al., 2022; Hur et al., 2017; Jarrar et al., 2020; Morosan, 2018; Wang & Lee., 2020; Ye & Kankanhalli, 2020). Alalwan et al.'s (2018) study result show that the users'

perceived innovativeness is the most important element influencing customers' intention to use mobile internet.

The innovativeness of mobile apps has been examined as a predictor variable in the following study contexts: mobile tourism app (Jarrar et al., 2020); the hotel mobile devices (Morosan, 2018); mobile app payment (Patil et al., 2020); mobile banking (Abbas et al., 2018). The MAI has been examined in mobile tourism app, hotel mobile devices, mobile app payment, mobile banking, but studies relate to food delivery app study is not been published yet (see Table 2.3). This project therefore fills the literature gap. As the effect of MAI varies amongst users (Wang & Lee, 2020), it is useful to test whether MAI create significant effect on mobile food app usage intention among Gen-Y.

**Table 2.3: Examination of Mobile Apps Innovativeness Studies**

Author's name (Year of Publication)	Study context
Jarrar et al. (2020)	mobile tourism app
Morosan. (2018)	hotel mobile devices
Patil et al. (2020)	mobile app payment
Abbas et al. (2018)	mobile banking

## **2.5 Development of Hypotheses**

### **2.5.1 Mobile App Usefulness and Mobile Food App Usage Intention**

In past studies, the MTAM's mobile usefulness is used to explain how the perceived usefulness of examined mobile gadget or mobile system motivates user's intentional behavior. The positive relationship between the two variables

is supported in studies related to mobile tourism app (Sharmin et al., 2021) and mobile banking app (Zhang et al., 2023). Logically, in this project, the MAU expects to relate positively to the intention to use the Deliver Eat online mobile food app. This is because the use of mobile food apps can provide numerous benefits to users such as time and cost saving compared to physical shopping and take away ordered F&B at a seller's venue. Therefore, the hypothesis is formed as below:

H1: Mobile app usefulness relates to intention to use Deliver Eat online mobile food app positively.

### **2.5.2 Mobile App Ease-of-Use and Mobile Food App Usage Intention**

Mobile Ease of Use (MEOU) describes an individual's assessment of the simplicity or difficulty effort that is needed in using an app's system. MEOU is considered as one of the significant variables that have been positively affecting Chan et al (2020) and Lew et al.'s (2020) studied respondents in adopting the digital devices and mobile wallets in the hospital industry respectively. Similarly, this project predicts that the MAEU relates to the intention to use the Deliver Eat mobile food app positively because Gen-Y has a busy working or studying or daily schedule.

As explain in sub-topic 2.3, application of MTAM in mobile technology adoption studies, past studies composed the MAEU variable into few-dimensional variables. Past study results support the positive relationships between compatibility and intention to adopt virtual hotel operator mobile applications (Prakarsa et al (2020); compatibility and intention to adopt mobile

health care application (Nezamdoost et al., 2022); self-efficacy and users' intention to use mobile technology (Usman et al., 2020); self-efficacy and intention to adopt e-learning (Khan et al., 2023).

In this study, it is expected the compatibility and self-efficacy are both having positively relationship with intention to use the Deliver Eat online mobile food app. If the online mobile food app is matching the requirements or needs by the users, the users may have perceived the app as compatible and have intention to adopt it. The self-efficacy is the users' self-belief to their ability to use the mobile food app. Therefore, if the users are confident to their own ability to use the online mobile food app, it may increase their intention to use it. Henceforth, H2a and H2b are developed for testing in this project.

H2a: The compatibility of the food delivery apps relates to intention to use Deliver Eat online mobile food app positively.

H2b: The self-efficacy relates to intention to use Deliver Eat online mobile food app positively.

### **2.5.3 Mobile App's Innovativeness and Mobile Food App Usage Intention**

The positive relationship between innovativeness and intentional behavior is supported in the following studies contexts that related to mobile hotel services (Morosan, 2018); mobile tourism apps (Jarrar et al., 2020); mobile app payment (Patil et al., 2020); mobile banking (Abbas et al., 2018).

Nevertheless, Hur et al.'s (2017) study result does not support the relationship between fashion innovativeness and mobile app service usage intention. The fashion innovativeness in the business might take the shape of new fabric technology, design methods, or styling strategies. Hence, it is similar to mobile app's innovativeness, mobile apps that are innovative include new features, capabilities, or technologies that improve user experience and address user demands or concerns. In order to be competitive and relevant, both fashion innovativeness and mobile app's innovativeness go through similar cycles where they continually create and adopt new trends or inventions. Also, to enhance their goods and customize them to their users' requirements and desires, mobile applications and fashion both significantly rely on user feedback and insights. However, the target group of respondent's ages is from teens to 60s in this study and not all them are fashion enthusiast. Therefore, the innovativeness concept in fashion is perceived differently among the respondents, which explain why the hypothesis between fashion innovativeness and intentional behavior is not supported.

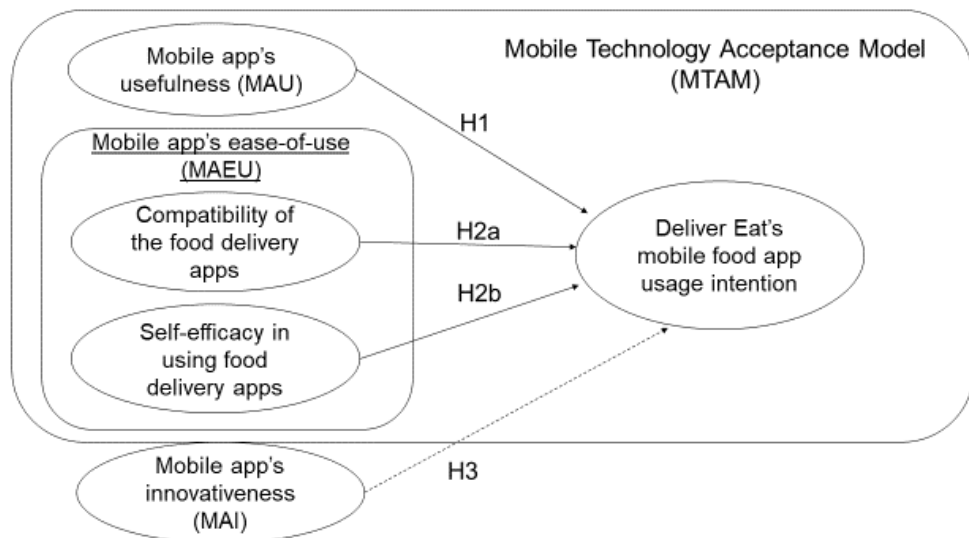
The current researcher predicts that the MAI is positively related to mobile food apps usage intention. As most of the Gen-Y are working or studying, they might be the group of people that mostly interact with mobile applications. Therefore, the requirements of uniqueness of mobile applications may be requested by them. The probability that users increase their intention to utilize the app is increased if they believe it to be cutting-edge and well-designed. Additionally, innovative functions can improve the user experience and enabling the app use

simpler and more fun. The argument therefore drives the development of the below hypothesis.

H3: Mobile food app's innovativeness relates to the intention to use Deliver Eat online mobile food app positively.

## 2.6 Current Study Research Model

The conceptual framework of this study has four IVs: MAU; compatibility and self-efficacy (the dimensional variables of MAEU); and mobile app's innovativeness which all IVs are positively related to the Deliver Eat's mobile food app usage intention (see Figure 2.3).



**Figure 2.3: Proposed Conceptual Framework for Current Study**

**Source: Developed for the project**

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This chapter will discuss the methods used to collect data like research designs, sampling design, development of pre-test, pilot study, and questionnaires. The data analysis tools will be also described in this chapter. All the methods will be given explanations about the reason they are used in this project.

#### **3.1 Research Design**

In designing the research methodology, the researcher aims to provide a useful indication in this study. Quantitative data is collected for statistical testing in order to test current hypotheses and confirm the hypothetical relationship. This is because the basic variables of MTAM: usefulness and ease-of-use are conceptually similar to TAM, which has been tested by a number of researchers such as Chan et al., 2020; Lew et al., 2020; Sharmin et al., 2021; and Zhang et al., 2023. Therefore, investigating and confirming the measuring items of the theory's variables is not necessary.

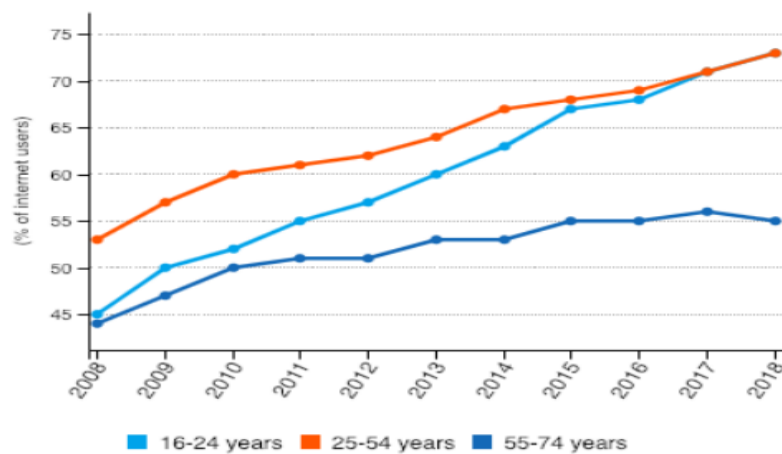
#### **3.2 Sampling Design**

##### **3.2.1 Targeted Population**

As Deliver Eat only manages to capture a 10% market share among the active online app users, this study intends to find out what can be done in attracting new users that will be keen to use the online mobile food delivery app of Deliver Eat. The target is Gen-Y resides in Malaysia that is born between 1968 and 2006 or are aged between 17 and 55 (Nguyen, 2019). The Gen-Y is selected because



they have higher purchasing power compared to the younger generation and are more tech-savvy compare to the older generation, which may likely drive them to frequent purchases. Also, this group is the largest market shares using OFD (Windasari et al., 2022). In Malaysia, the Gen-Y population makes up 40% of the country's total population, is also the country's largest age group among Internet users (Hasim et al., 2020). The number of Gen-Y online users is expected to keep growing in the whole world in the future. This growing trend is also similar in Malaysia due to the impact of pandemic COVID-19 to the community. It has caused an increasing trend towards the usage of online mobile applications (Pratama et al., 2020). (see Figure 3.1).



**Figure 3.1: Online Users in 2018.**

Source: Nguyen (2019)

### 3.2.2 Sample Size

According to the data, citizens ages from 16 years old to 54 years old comprise a total of 57.49% of Malaysia's population (Index Mundi, 2022). Currently, Malaysia's population count is 32.7 million people (Department of Statistics

Malaysia, 2022). Therefore, the millennial population count is about 18.8 million. By using Morgan’s table, the sample size for this project is 384.

**Table 3.1: Morgan’s Table Sample Size.**

<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

*Note: N is Population Size; S is Sample Size* *Source: Krejcie & Morgan, 1970*

Source: Rajendran & Shah (2020)

### 3.2.3 Sampling Method

The probability sampling strategy is the best one for minimizing bias. However, the current study cannot use it since the sampling frame that can reflect the target population accurately is yet unavailable. As a result, this study uses a non-probability sampling approach. In ensuring the collected data is valid, the current researcher is proposing the below sampling method that aims to reduce the sampling error. The snowball sampling method is proposed. The snowball sampling method is based on the principles of networking and recommendation. In most cases, the researchers begin with a limited group of initial contacts who

meet the research requirements and are invited to participate in the study. The willing participants are then requested to suggest further contacts who meet the research requirements and may be willing participants, who in turn suggest additional possible volunteers. In order to create early linkages and build a sampling momentum that would eventually capture a larger chain of participants, researchers exploit the collection of data from their social networks (Parker et al., 2019).

### **3.3 Development of Questionnaire and Data Collection Method**

#### **3.3.1 Pre-test & Pilot Study**

In designing the questionnaire, two predetermined stages: pre-test and pilot study are proposed. Under the pre-test stage, the supervisor of this project will evaluate the 1<sup>st</sup> drafted questionnaire that is drafted by referring to past studies measuring items of each studied variable. This kind of activity is crucial to ensuring that the item statement measures what it is meant to measure. On the basis of the supervisors' comments or suggestions, the first drafted questionnaire was then being modified. Table 3.2 will show the suggestions given by the supervisor:

**Table 3.2 Modifications on Adopted Variable Items**

Variable	Original Items	Modified Version
Mobile App's Usefulness (MAU)	<ol style="list-style-type: none"> <li>1. It is useful</li> <li>2. It is helpful for shopping</li> <li>3. It can enhance shopping efficiency</li> <li>4. I can obtain the information on shopping easily</li> </ol>	<p>The modified item statements are expected to clearly reflect the usefulness of mobile app that the respondents aim to get. The following statements are modified:</p> <ol style="list-style-type: none"> <li>1. The Deliver Eat app is useful for ordering when the food I want to order is supplied by a vendor in the mobile app.</li> <li>2. The food ordered via the Delivery Eat app should be delivered within the delivery time requested by me if the ordered food is on sale and within the range of distance for delivery.</li> <li>3. The usage of the Delivery Eat app should benefit me in terms of time and cost savings. For example, I don't need to travel to food outlets physically upon using the Delivery Eat app.</li> <li>4. The information about the availability of certain foods, food prices, and delivery details should be shown in the Deliver Eat mobile app.</li> </ol>
MAEU Mobile App's Ease-of-Use (MAEU)	<ul style="list-style-type: none"> <li>• <b>Compatibility of the food delivery apps</b></li> </ul> <ol style="list-style-type: none"> <li>1. Using MHB fits my lifestyle.</li> <li>2. Smartphone meets user needs.</li> <li>3. Using learning vocabulary through mobile phones does not require significant changes in my existing work routine.</li> <li>4. To use learning vocabulary through mobile phones, I don't have to change anything I currently do</li> </ol>	<p>The modified item statements are expected to clearly reflect the ease of use of mobile app that the respondents aim to get. The MAEU will be analyzed with two variables: compatibility and self-efficacy. The following statements are modified:</p> <ul style="list-style-type: none"> <li>• <b>Compatibility of the food delivery apps</b></li> </ul> <p>In view of my current hectic working and/or living lifestyle, the Delivery Eat app should be easy for me ...</p> <ol style="list-style-type: none"> <li>1. to search for the availability of specific food.</li> <li>2. to navigate the food product searching and ordering processes.</li> <li>3. to install the app in my mobile device.</li> </ol>

- **Self-efficacy skill in using food delivery apps**

1. I could use MHB if only there is a built in-help facility for assistance.
2. I could use MHB if someone else had helped to get started.
3. I am confident of using the e-portfolio even if I have never used such a system before.

Mobile food app's innovativeness (MAI)

1. When I hear about new mobile app technology, I will look for possibilities to use it.
2. I like to explore the new information technology.
3. I think it is very interesting to try new technology.
4. Generally speaking, I like to utilize new technology.

Delivery Eat's mobile food app usage intention

1. If there is an opportunity, I would like to utilize this service.
2. I have an intention to utilize this service.
3. I have an intention to recommend this service this mobile app to my friends

4. to use the application system without the need to change the mobile's operating system.

- **Self-efficacy skill in using food delivery apps**

1. As a new user, I should be able to use the Deliver Eat app easily if a "built in-help facility for assistance" is available in the app.
2. As a new user, I should be able to use the Deliver Eat app easily if someone else has shown me how to use the app.
3. Although I am a new user, I should be able to use the Deliver Eat app without much problem.

1. Whenever I hear about the incorporation of a new or upgraded application technology in food delivery apps, I will look for possibilities to use it.
2. I like to explore the new application information technology that is incorporated in existing or new mobile food delivery apps.
3. I think trying a new or upgraded application technology in mobile food delivery apps are interesting.
4. Generally speaking, I like to utilize or operate new or upgraded technology in mobile delivery apps whenever available.

1. I shall use the Deliver Eat mobile app when I intend to use a food delivery service.
2. I have the intention to use the Deliver Eat mobile app.
3. I have the intention to recommend Deliver Eat mobile app to my friends.

After that, the pilot test was carried out at the second stage. A total 20 Gen-Y representatives were invited to evaluate whether they can comprehend what each item shown in the second drafted questionnaire aims to measure. To better understanding the feedback of each representative, they were all invited to join the interview. The current researcher has divided the representatives into five in a group and arranged an open discussion for them.

In the discussion, some representatives commented a feedback that the initial measuring item statements of MAU1 (It is useful) is too short and claimed that it is difficult to provide a valuable indication in the analysis result. The representatives advised to have a clear description and function of the mobile food app in the item statement. Therefore, the current researcher accepted the advices from representatives and modified to: “The Deliver Eat app is useful for ordering when the food I want to order is supplied by a vendor in the mobile app” and agreed by all the representatives.

Furthermore, there are some representatives responded that the C2 statement (Smartphone meets user needs) the term “user needs” is confusing as different user may have different needs. Hence, the current researcher has revised it to: “In view of my current hectic working and/or living lifestyle, the Delivery Eat app should be easy for me to navigate the food product searching and ordering processes.”

Also, the representatives provided the feedback of the term “think” in MAI3 (I think it is very interesting to try new technology.) is not fully evaluating the relationship of MAI with the users’ intention to use Deliver Eat mobile food app. Therefore, the MAI3 item statement has been modified to: “I think trying a new or upgraded application technology in mobile food delivery apps are interesting.” Upon getting the pilot study’s representative feedback, the questionnaires were modified.

After addressing all the feedbacks, the current researcher was developed the pilot test into the third phase. The current researcher was requested the same 20 pilot representatives to answer the latest modified questionnaire. The answered questionnaire was used to run the reliability test. The reliability coefficient scores that higher than the cutoff value of 0.7 means the variable is considered acceptable and the scores that higher than 0.8 are considered good (Habidin et al, 2015). In the result of pilot test, the coefficient scores for all variables are more than 0.7. Therefore, the questionnaire was finalized and distributed to the main study’s respondents.

**Table 3.3 Pilot Test Result**

Variables	Number of Items	Cronbach Alpha Score
Mobile App’s Usefulness (MAU)	4	0.917
MAEU Mobile App’s Ease-of-Use (MAEU)		
• Compatibility of the food delivery apps	4	0.863
• Self-efficacy skill in using food delivery apps	3	0.787
Mobile food app’s innovativeness (MAI)	4	0.927
Delivery Eat’s mobile food app usage intention	3	0.863

### **3.3.2 Questionnaire Design for Main Study**

In ensuring the respondents are in the Gen-Y category and have not used Deliver Eat's mobile food app before, two screening questions are posted before requesting respondents to answer the questionnaire. The screening questions are: are you aged between 18 to 25 years old and have not used Deliver Eat's mobile food app before? If yes, please continue to answer the statements posted below. If not, thank you very much for reading this notification and you are not required to answer the statements posted below.

The questionnaire is divided into two parts: parts A and B. The respondent's demographic profiles will be collected from section A, and their comments related to the studied variable's measuring items are captured in part B.

The questionnaire item statements are measured using a 5-point Likert scale that ranges from strongly disagree, disagree, neutral, agree, to strongly agree. Instead of using a scale with more points, a 5-point scale was chosen because it would lower patient respondents' degree of annoyance while also increasing response rate and answer quality. By comparing with 3-point and 7-point scale, the 5-point Likert scale will be relatively easier for the respondents to understand without having too many or too less options for each measuring item (Sachdev & Verma, 2004). Additionally, this study uses a 5-point Likert scale since the numerical given to each choice makes it simpler to evaluate the data obtained. Table 3.2 shows the item statement for each variable.



**Table 3.4: The Questionnaire Items of Current Studied Variables**

Variables	Items' Coding	Measuring Items
MAU	MAU1	1. The Deliver Eat app is useful for ordering when the food I want to order is supplied by a vendor in the mobile app.
	MAU2	2. The food ordered via the Delivery Eat app should be delivered within the delivery time requested by me if the ordered food is on sale and within the range of distance for delivery.
	MAU3	3. The usage of the Delivery Eat app should benefit me in terms of time and cost savings. For example, I don't need to travel to food outlets physically upon using the Delivery Eat app.
	MAU4	4. The information about the availability of certain foods, food prices, and delivery details should be shown in the Deliver Eat mobile app.
MAEU	• Compatibility of the food delivery apps	
	C1	In view of my current hectic working and/or living lifestyle, the Delivery Eat app should be easy for me ...
		1. to search for the availability of specific food.
	C2	2. to navigate the food product searching and ordering processes.
	C3	3. to install the app in my mobile device.
	C4	4. to use the application system without the need to change my mobile's operating system.
	• Self-efficacy in using food delivery apps	
	SE1	1. As a new user, I should be able to use the Deliver Eat app easily if a "built in-help facility for assistance" is available in the app.
	SE2	2. As a new user, I should be able to use the Deliver Eat app easily if someone else has shown me how to use the app.
	SE3	3. Although I am a new user, I should be able to use the Deliver Eat app without much problem
MAI	MAI1	1. Whenever I hear about the incorporation of a new or upgraded application technology in food delivery apps, I will look for possibilities to use it.

- MAI2 2. I like to explore the new application information technology that is incorporated in existing or new mobile food delivery apps.
- MAI3 3. I think trying a new or upgraded application technology in mobile food delivery apps is interesting.
- MAI4 4. Generally speaking, I like to utilize or operate new or upgraded technology in mobile delivery apps whenever available.

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Delivery Eat's mobile food app usage intention	INT1	1. I shall use the Deliver Eat mobile app when I intend to use a food delivery service.
	INT2	2. I have the intention to use the Deliver Eat mobile app.
	INT3	3. I have the intention to recommend Deliver Eat mobile app to my friends.

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### **3.3.3 The Field Work of Main Survey**

E-questionnaire was used to distribute to the respondents in answering the questionnaire in May 2023 by using Google Form. E-questionnaire was used as the data collection tool due to it is convenient which allows the respondents answer it anytime when they are free. Also, as the target population of this study is Gen-Y in Malaysia, e-questionnaire can reach the respondents that live in other states. As the distribution of questionnaires was via online, the current researcher sent the questionnaires to the potential respondents from 10:00 a.m. to 10:00 p.m. daily until receiving sufficient number of respondents.

The e-questionnaires were distributed to the respondents by using the social media apps like Wechat, Whatsapp, Instagram and Facebook. The current researcher sent the questionnaire link by direct message to the social media account of the respondents one by one. Also, the current researcher also posted the link on the Instagram Story and Facebook Story to facilitate the responses from them. The first batch respondents were the friends and family of the current researcher. After that, the current researcher requested the help the first batch respondents to distribute the questionnaire. The second group of responders was also asked to distribute the e-questionnaire among their contacts.

In order to get more responses from the targeted population, the current researcher also assigned few friends and family as the facilitators of this study. The requirements and details like range of age and ensuring the respondents are online mobile food app users were briefed to the facilitators. The current researcher also explains all the measuring item statements to the facilitators to ensure they are able to explain to the respondents.

### 3.4 Data Analysis Tool

The collected data is analyzed descriptively and inferentially. The descriptive data reflects the distribution count and percentage of the respondent's demographic data, such as age, gender, ethnicity, current residence location, and employment status. If the profile of the respondents is evenly spread, bias concerns can be avoided. On the other hand, inferential analysis is used to test and validate the current hypotheses and to see if the data reflect the target population's behavior as accurately as possible.

The reliability of each variable will be tested for internal consistency reliability using the internal consistency scores for each variable. Each variable is considered acceptable if the Cronbach alpha's value is larger than the threshold of 0.7 (Arof et al, 2018).

**Table 3.5: Cronbach Alpha.**

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.6-.69	Questionable
5	0.5-0.59	Poor
6	Less than 0.59	Unacceptable

Source: Arrof et al (2018)

The normality of the data for each variable is next examined using a Q-Q plot. If the data are normally distributed, the points shown in the Q-Q plot would be located on a straight diagonal line. To examine the correlations between each IV and the DV, the collected data's Pearson's correlation coefficient is generated. Prior to examining the causal relationship between an IV and a DV, it is

imperative to ensure that the variables are correlated. A positive correlation coefficient number implies that both variables are favorably associated when the precision level is less than 0.05, while a negative value suggests the opposite.

**Table 3.6: Pearson Correlation Coefficient**

<b>Scale of correlation coefficient</b>	<b>Value</b>
$0 < r \leq 0.19$	Very Low Correlation
$0.2 \leq r \leq 0.39$	Low Correlation
$0.4 \leq r \leq 0.59$	Moderate Correlation
$0.6 \leq r \leq 0.79$	High Correlation
$0.8 \leq r \leq 1.0$	Very High Correlation

Source: Selvanathan et al (2020)

The stepwise regression method was carried out to test the relationship between the IVs and DV. Regression with multicollinearity shows that there are linear connections between the IVs. When a regression model has a number of IVs that are substantially correlated not only with the dependent variable as well as with one another, this is known as multicollinearity (Shrestha, 2020). However, the IVs should not have highly correlated with each other in this study. The correlation between the IVs was examined using the VIF test. The VIF coefficient below the threshold value of 10 indicates that there is not a substantial connection between the IVs. In contrast, the IV that has higher than 10 of VIF value, the current researcher can combine the two IVs into one measuring variable.

Also, t-test was carried out to examine the significance relationship between the IVs with the DV. The IV is indicated to have significant relationship with DV at the precision level of 0.05 (Yu et al., 2022). When the IV is having the t-test precision level with lower than 0.05, the hypothesis between the IV and DV will

be found supported. The relationship analysis can demonstrate the relative importance of each IV to the DV as well as the predicted cumulative effect of all relevant variables. Therefore, the multiple linear regression's equation is as below:

$$\begin{array}{c}
 \text{Constant/Intercept} \\
 \downarrow \\
 \mathbf{Y}_i = \beta_0 + \beta_1 \mathbf{X}_i \\
 \begin{array}{ccc}
 \uparrow & & \uparrow \\
 \text{Dependent} & & \text{Slope/Coefficient} \\
 \text{Variable} & & 
 \end{array} \\
 \begin{array}{ccc}
 & & \downarrow \\
 & & \text{Independent} \\
 & & \text{Variable}
 \end{array}
 \end{array}$$

**Figure 3.2: Linear Regression's Equation**

Source: Eda (2021)

Based on the linear regression formula concept in Figure 3.2. The equation for this study is as follows:

$$Y = \sigma + \beta_1 X_1 + \beta_{2a} X_{2a} + \beta_{2b} X_{2b} + \beta_3 X_3$$

where,

Y= Delivery Eat's mobile food app usage intention

X<sub>1</sub>, X<sub>2</sub> & X<sub>3</sub>: Independent variables (IV), in which;

X<sub>1</sub>: Mobile App's Usefulness (MAU)

X<sub>2a</sub>: Compatibility of the food delivery apps (C)

X<sub>2b</sub>: Self-efficacy in using food delivery apps (SE)

X<sub>3</sub>: Mobile App's Innovativeness (MAI)

σ: Intercept point of the regression line or constant; and

β<sub>1</sub>, β<sub>2</sub> & β<sub>3</sub>: The coefficient of regression for the respective IV

### **3.5 Ethical Consideration**

In the collection of survey responses, the researcher ensured all the respondents were volunteers to answer the questionnaires. There were no benefits in terms of monetary or goods that will be given to the participants. All the responses were solely based on the voluntary contribution towards academic research. Furthermore, informed consent were listed in the first page of questionnaires to ensure the respondents authorize and understand what they agreed to. To protect the personal data of all respondents, the information gathered from the questionnaires were kept confidentially. The information was stored at the google form storage and the researcher is the only one who is authorized to access. Therefore, the personal data of all the respondents are kept safely. The researcher was clarified the results of the respondents and provided the indications to the decision makers so they can improve the Deliver Eat app and increase their market share. There were no potential risks and benefits in this research. All the findings are kept for research purposes only.

### **3.6 Summary of Methodology**

The study methodology is carefully designed in ensuring reliable and valid data can be collected. To ensure the respondent's data can represent the population's parameter, Morgan's sample size chart is used, or a total of 384 answered questionnaires are targeted. In ensuring the questionnaire can be understood by the respondents, the drafted questionnaire is screened through the pre-test and pilot-study stages. A series of statistical tests are planned to check the data's reliability, linearity, and the variable's correlation and causal relationship. The ethical consideration will also be discussed in this chapter. Overall, the current

researchers aim to ensure this study's results can be extrapolated to represent the response of the intended population.



## **CHAPTER 4**

### **RESULT AND DISCUSSION**

This chapter discusses the results based on the data collected from the questionnaires. The inferential and descriptive results will be discussed and presented in the sub-topics of this chapter.

#### **4.1 Descriptive Result**

##### **4.1.1 Responses Collected**

394 answered e-questionnaires were collected. However, 10 sets are voided as the respondents disagree in acknowledging the personal data protection notice and do not respond to all item statements. The balance of 384 sets were descriptively and inferentially analyzed.

##### **4.1.2 Respondent Demographic Profile**

The distribution of gender is almost equally distributed with a slightly higher percentage for females. However, 62.5% of the respondents are aged between 18 to 25 years old. Probably, such an incident happened due to the use of snowball sampling in collecting data - the first batch of respondents tend to recommend subsequent respondents who are part of their social group that composes of a similar range of age members. Besides that, 74% of respondents are Chinese and the majority of the first batch of respondents contacted by the current researchers are Chinese – family members, friends, and social groups. More than half (57.6%) of the respondents are in full-time employment. This is because most of the current researcher's social groups are working adults and

therefore, they have a tendency to connect with subsequent respondents who are their colleagues and friends. Although more than 50% of the respondents work as full-time employees, not many earn more than RM5000 per month. 57.6% of the respondents earn between RM2000 to RM5000.

**Table 4.1: Demographic Profile Distribution**

	Frequency	Percent	Cumulative Percent
<b>Gender</b>			
• Male	190	49.5	49.5
• Female	194	50.5	100.0
<b>Age</b>			
• 18 – 25	240	62.5	62.5
• 26 – 30	90	23.4	85.9
• 31 – 40	34	8.9	94.8
• 40 – 55	20	5.2	100.0
<b>Ethnicity</b>			
• Malay	36	9.3	9.3
• Chinese	284	74.0	83.3
• Indian	44	11.5	94.8
• Others	20	5.2	100.0
<b>Current Occupation</b>			
• Full-time Employment	221	57.6	57.6
• Part-time Employment	30	7.8	65.4
• Self-employed	37	9.6	75.0
• Student	86	22.4	97.4
• Unemployed	10	2.6	100.0
<b>Average Monthly Salary</b>			
• Less than RM2000	101	26.3	26.3
• RM 2,001 – RM 3,000	61	15.9	42.2
• RM 3,001 – RM 4,000	86	22.4	64.6
• RM 4,001 – RM 5,000	74	19.3	83.9
• RM 5,001 – RM 6,000	28	7.3	91.2
• RM 6,001 and above	34	8.8	100.0

## 4.2 Inferential Result

### 4.2.1 Reliability Result

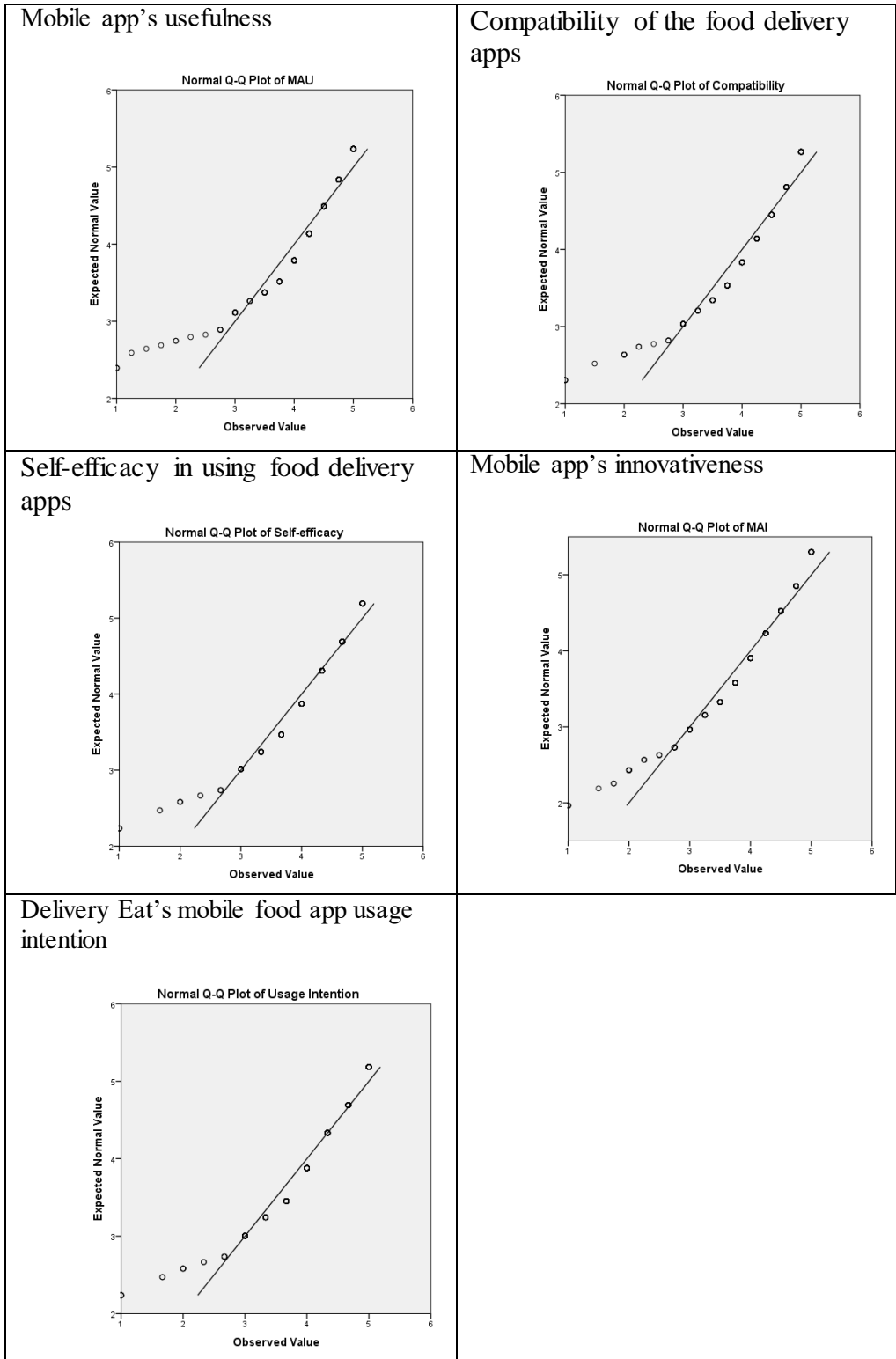
Before testing the relationship between variables, a reliability test was conducted to ensure the collected are reliable or that respondents give a consistent response on the items used to measure specific IV and DV. The reliability test result shown in Table 4.2 indicates that the respondents consensually agree that each variable's items is measuring specific IV and DV produced cohesively.

**Table 4.2: Reliability Test Result**

Variable's Name	Number of Items	Cronbach Alpha Score
Mobile app's usefulness (MAU)	4	0.858
The dimensional-variables of mobile app's ease-of-use (MAEU)		
• Compatibility of the food delivery apps	4	0.872
• Self-efficacy in using food delivery apps	3	0.832
Mobile app's innovativeness (MAI)	4	0.887
Delivery Eat's mobile food app usage intention	3	0.834

### 4.2.2 Normality of Data Distribution

The plotted QQ plots for each variable show that the observed (or collected) values are linearly distributed and the values are not widely different from the expected values. In brief, the data of all variables are normally and linearly distributed which justifies the use of linear multiple regression analysis that aims to confirm current hypotheses.



**Figure 4.1: The Q-Q Plots of Each Variable**

### 4.2.3 Correlation Result

All IVs: MAU, compatibility of the food delivery apps, self-efficacy in using food delivery apps, and MAI are positively and moderately correlated with the DV (see Table 4.3). In other words, each pair of IV and DV tends to change positively at a moderate level. Nevertheless, the correlation result doesn't show a causal relationship. In testing the hypothesis, regression analysis is carried out.

**Table 4.3: Pearson Correlation Coefficients Result**

		Mobile app's usefulness (MAU)	The dimensional-variables MAEU		Mobile app's innovativeness (MAI)	Deliver Eat's mobile food app usage intention (Intention)
			Compati-bility	Self- efficacy		
MAU	Pearson Correlation	1	.813**	.710**	.596**	.712**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	384	384	384	384	384
Compatibility of the food delivery apps	Pearson Correlation	.813**	1	.693**	.639**	.714**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	384	384	384	384	384
Self-efficacy in using food delivery apps	Pearson Correlation	.710**	.693**	1	.566**	.586**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	384	384	384	384	384
MAI	Pearson Correlation	.596**	.639**	.566**	1	.687**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	384	384	384	384	384
Intention	Pearson Correlation	.712**	.714**	.586**	.687**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	384	384	384	384	384

\*\* . Correlation is significant at the 0.05 level (2-tailed).

#### 4.2.4 Multiple Linear Regression Result and Multicollinearity

In determining the causal effect created by multiple IVs on DV, regression analysis is carried out. Using the “stepwise method”, the result shows that the self-efficacy variable is omitted or excluded from the regression model because the variable creates a very less significant effect on the DV (see Table 4.4). The remaining three IVs - the compatibility of the food delivery apps, the mobile food app’s innovativeness, and the mobile app’s usefulness – are used to run the subsequent regression test.

**Table 4.4: Excluded Variables from the Regression Model**

Model	Beta In	t	Sig.	Collinearity Statistics			
				Partial Correlation	Toleranc e	VIF	Minimum Tolerance
1 • Mobile app's usefulness (MAU)	.386 <sup>b</sup>	6.622	.000	.321	.339	2.952	.339
• Self-efficacy in using food delivery apps	.176 <sup>b</sup>	3.585	.000	.181	.519	1.926	.519
• Mobile app's innovativeness (MAI)	.389 <sup>b</sup>	9.245	.000	.428	.592	1.689	.592
2 • Mobile app's usefulness (MAU)	.307 <sup>c</sup>	5.655	.000	.279	.329	3.041	.302
• Self-efficacy in using food delivery apps	.088 <sup>c</sup>	1.910	.057	.098	.494	2.026	.430
3 • Self-efficacy in using food delivery apps	.008 <sup>d</sup>	.161	.872	.008	.442	2.262	.287

a. DV: Deliver Eat's mobile food app usage intention

b. Predictors in the Model: (Constant), Compatibility of the food delivery apps

c. Predictors in the Model: (Constant), Compatibility of the food delivery apps , Mobile App's Innovativeness

d. Predictors in the Model: (Constant), Compatibility of the food delivery apps , Mobile app's innovativeness (MAI), Mobile app's usefulness (MAU)

Overall, the three IVs: compatibility of the food delivery apps, mobile food app’s innovativeness, and mobile app’s usefulness explain 63.1% of variants of Delivery Eat’s mobile food app usage intentional behavioral (see Table 4.5). The balance 36.9% of the DV variants are explained by variables that are not examined in this project.

**Table 4.5: Regression's Model Summary Result**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714 <sup>a</sup>	.510	.509	.51784
2	.774 <sup>b</sup>	.600	.598	.46861
3	.794 <sup>c</sup>	.631	.628	.45064

a. Predictors: (Constant), Compatibility of the food delivery apps

b. Predictors: (Constant), Compatibility of the food delivery apps , Mobile app's innovativeness (MAI)

c. Predictors: (Constant), Compatibility of the food delivery apps , Mobile app's innovativeness (MAI), Mobile app's usefulness (MAU)

d. DV: Deliver Eat's mobile food app usage intention

The ANOVA test result shows that at least one of the three IVs: compatibility of the food delivery apps, mobile food app's innovativeness, and the mobile app's usefulness can estimate the change of the DV – see Model 3 result shown in Table 4.6.

**Table 4.6: ANOVA Analysis Result**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	106.620	1	106.620	397.608	.000 <sup>b</sup>
	Residual	102.435	382	.268		
	Total	209.054	383			
2	Regression	125.389	2	62.694	285.501	.000 <sup>c</sup>
	Residual	83.666	381	.220		
	Total	209.054	383			
3	Regression	131.884	3	43.961	216.474	.000 <sup>d</sup>
	Residual	77.170	380	.203		
	Total	209.054	383			

a. DV: Deliver Eat's mobile food app usage intention

b. Predictors: (Constant), Compatibility of the food delivery apps

c. Predictors: (Constant), Compatibility of the food delivery apps , Mobile app's innovativeness (MAI)

d. Predictors: (Constant), Compatibility of the food delivery apps , Mobile app's innovativeness (MAI), Mobile app's usefulness (MAU)

The IVs should be correlated with the DV as this shows that the changes of IV and DV tend to occur harmoniously. Contrarily, the IVs should not be correlated as this challenge the independent effect created by each. As a result, the VIF test is carried out to test the multicollinearity effect. Table 4.7 shows that the VIF values of all significant variables: compatibility of the food delivery apps, mobile food app's innovativeness, and mobile app's usefulness are lower than 10. Hence, multicollinearity is not an issue in this project.

**Table 4.7: Regression Coefficient Result for Significant Variables**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.115	.148		7.554	.000		
Compatibility of the food delivery apps	.707	.035	.714	19.940	.000	1.000	1.000
2 (Constant)	.711	.141		5.061	.000		
Compatibility of the food delivery apps	.461	.042	.465	11.048	.000	.592	1.689
Mobile app's innovativeness (MAI)	.367	.040	.389	9.245	.000	.592	1.689
3 (Constant)	.405	.146		2.777	.006		
Mobile app's innovativeness (MAI)	.330	.039	.350	8.506	.000	.575	1.740
Mobile app's usefulness (MAU)	.328	.058	.307	5.655	.000	.329	3.041
Compatibility of the food delivery apps	.238	.056	.241	4.245	.000	.302	3.313

DV: Deliver Eat's mobile food app usage intention

The regression coefficient (denote by the unstandardized coefficient score) shows the intensity effect created by each significant variable. Comparatively, the innovativeness of the mobile app creates the most significant effect on Delivery Eat's mobile food app usage intention, followed by the mobile app's usefulness and compatibility with the food delivery apps. From the model 3 result shown in Table 4.7, the below regression equation is developed.



$$Y = 0.405 + 0.330X_3 + 0.328X_1 + 0.238X_{2a}$$

where,

Y: Delivery Eat's mobile food app usage intention

X<sub>3</sub>: Mobile App's Innovativeness (MAI)

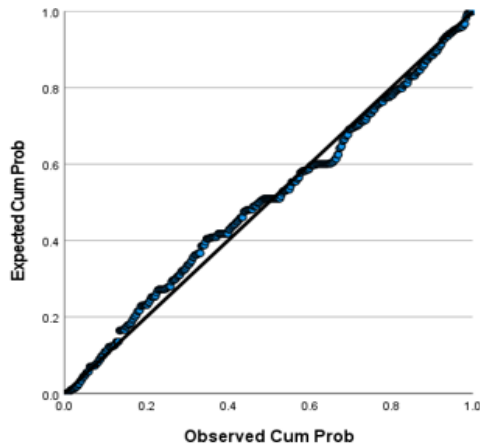
X<sub>1</sub>: Mobile App's Usefulness (MAU)

X<sub>2a</sub>: Compatibility of the food delivery apps

Since the provision of food delivery service is highly competitive and increasing internet accessibility coverage areas, every food delivery company provides mobile app service to customers. In this way, customers can order the desired F&B and receive the ordered F&B faster. For customers or mobile app users, the functionality of the mobile app is an important criterion that determines their mobile app's usage intention. Probability, explains why the innovativeness of mobile apps creates the highest determinant effect on the usage intention. Mobile apps that can provide value-added functions like increasing the speed and navigation friendliness in tracking specific F&B, and updating the images of the F&B attract more users.

Next, the second highest determinant effect created by MAU shows that value-added services like the ease in tracking desired F&B and availability of specific e-information are important to many current and potential customers because many Gen-Ys have a busy work life and/or daily life. The third highest determinant effect relates to the compatibility of the food delivery apps as perceived by users. Basically, customers select mobile delivery apps that fit the users' existing routines, existing values, and past experiences. For example, modifying a smart device's operating system so that a specific delivery app can be installed is not favorable to Gen-Y users.

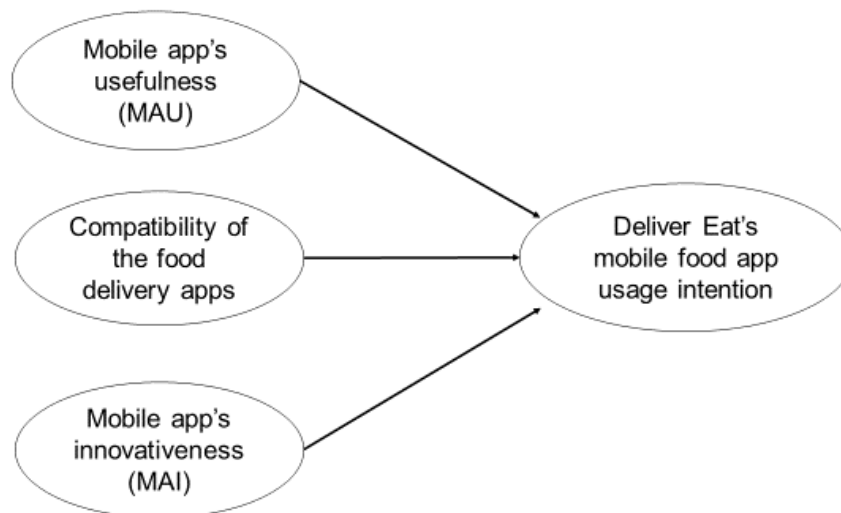
Finally, to ensure the linearity assumption is not violated, the P-P graph is plotted. Figure 4.2 shows that all the significant IVs are linearly correlated with the DV, which fit the assumption well.



**Figure 4.2: Normal P-P Plot of Regression Standardized Residual**  
*n.b. Dependent Variable: Deliver Eat's mobile food app usage intention*

### 4.3 Current Developed Research Model

Based on the study result, the research conceptual framework in this study is finalized, see Figure 4.3.



**Figure 4.3: Current Developed Research Model**

#### 4.4 Conclusion of the Analysis Result

Table 4.9 shows the confirmation of the hypotheses based on the regression result.

**Table 4.8: Summary of the Confirmation of Current Hypotheses**

	Hypothesis	Remark
H1	Mobile app's usefulness relates to Delivery Eat's mobile food app usage intention positively	Supported
H2a	The compatibility of the food delivery apps relates to Delivery Eat's mobile food app usage intention positively.	Supported
H2b	The self-efficacy in using food delivery apps relates to Delivery Eat's mobile food app usage intention positively.	Not Supported
H3	Mobile food app's innovativeness relates to Delivery Eat's mobile food app usage intention positively.	Supported

## **CHAPTER 5**

### **CONCLUSION AND IMPLICATION**

This chapter will discuss the accomplishment of research objectives based on the regression result for this study. The implications for policymakers and academia will be also discussed in this chapter. Limitations of the study and recommendations are included in this chapter.

#### **5.1 Accomplishment of Research Objectives and Discussions**

This project has two research objectives that aim to determine the behavioral factors that are affecting Gen-Y's mobile food app usage intention which is developed by Deliver Eat. To achieve the first research objective, H1 (relates to MAU) and H2 (relates to MAEU) are developed. To better explain the effect of MAEU, the variable is decomposed to two-dimensional variables which relate to the compatibility of the food delivery apps and self-efficacy skill in using food delivery apps or denote by hypotheses H2a and H2b.

Based on the analysis result, the hypothetical effects created by MAU (H1) and compatibility (H2a) are supported while the self-efficacy's effect (H2b) is not supported. The support of H1 shows that Gen-Y evaluates the usefulness of using Deliver Eat online mobile food app for food delivery service. When Gen-Y can specify the delivery or receive time for ordered F&B, Deliver Eat online mobile food app is their choice. Also, comprehensive information such as the availability of certain F&B and selling prices are important to Gen-Y users in making comparisons and purchasing decisions. The result is consistent with the

past studies analyzed by Zhang et al., (2023); Lew et al., (2020); Sharmin et al., (2021).

The support of H2a shows that compatibility of food delivery apps is an important criterion for Gen-Y in deciding whether to use or not use Delivery Eat's mobile food app. A food app should navigate a Gen-Y user to search specific F&B easily and can be installed in a mobile device that uses different operating systems like Android, Macintosh, or Windows. The result is also consistent with Abdullah et al. (2016), and Ozturk et al.'s (2016) study results.

The non-support of H2b shows that self-efficacy skill in using food delivery apps is not a significant variable that influences the usage intention of Delivery Eat's mobile food app. Although Gen-Y generally is tech-savvy, the older age Gen-Y has lower information communication technology (ICT) skills compared to later-born Gen-Y. The rapid growth of ICT widens the gap between the Gen-Y groups. For example, for earlier-born Gen-Y, built in-help facility is an important tool in helping them to use a new mobile app. Such an assistant may not be required for younger age Gen-Y. The contradictory behavior between groups of Gen-Y respondents explains why the H2a is not supported and is consistent to Rabin et al. (2020) and Winarno et al.'s (2021) study result.

In achieving the second research objective, H3 (relates to mobile food app's innovativeness) is developed. Based on the study result, H3 is supported which is consistent with the following past study results: Alalwan et al (2018); Hur et al (2017); Jarrar et al (2020); and Patil et al (2020). Although the study result does not support the relationship between self-efficacy skill and intentional

usage behavior, the respondents overall feel excited and have the tendency to explore a delivery app that incorporates new application information technology. Probably, they can seek assistance from their family members or social groups easily.

## **5.2 Implications**

### **5.2.1 Implication for Policymakers**

As the innovativeness of mobile apps is the top concern among the respondents, the policymakers of Deliver Eat should incorporate new or upgraded application technology in their food delivery apps if they intend to attract new users. The app design needs to include creative designs and unique functions which are absent in the current app. For example, providing value-added info like the maximum calories for kids, adults, and the elderly; and the estimated calorie count for specific F&B would be beneficial for users that appreciate such information. Personalized service such as helping users to customize the compilation of F&B based on healthy measures is another suggestion for improvement.

Next, the policymakers of Deliver Eat should increase the perceived usefulness of using their app for F&B ordering and delivery. Deliver Eat should increase the number of vendors selling the same and different types of F&B in the mobile app. On top of providing more options to users, Deliver Eat needs to ensure the ordered F&B will be delivered within the time requested by customers. Also, Deliver Eat needs to ensure the selling price of food in mobile apps is similar to

the selling price in physical stores. Otherwise, the users will feel expensive while using the app to make orders.

In handling the third most influential factor: the compatibility of the food delivery apps, Deliver Eat's policymakers need to ensure the mobile app is easy to use or navigate in order to facilitate users' hectic working and living lifestyle. As currently scammers are tricking victims to install scam apps, policymakers need to convince new users of the authenticity of the mobile apps. For example, collaborate with Google so that new users install the apps via Google Play Stores. In addition, the policymakers need to ensure the availability of different application systems so that the mobile app can be installed on mobile devices that use specific operating systems.

As the level of self-efficacy skill in using food delivery apps varies among different groups of respondents, the current researcher feels that the revision of specific planning or strategy that aim to increase the respondent's self-efficacy skill is not cost and time effective. Such efforts benefit a certain group of users and are redundant to another group of users. The discussion about non-supported hypothesis is further discussed in the next topic, implications to academics.

### **5.2.2 Implication for Academia**

Academic researchers have been adopting and adapting the TAM and MTAM model to analyze the intentional usage of mobile tourism apps, hotel mobile devices, mobile internet, and mobile banking (Jarrar et al., 2020; Morosan, 2018;

Alalwan et al., 2018; Abbas et al., 2018). Publication of TAM or MTAM studies related to delivery apps however is yet found in Web of Science and Scopus databases. Therefore, this study fills the literature gap.

In addition, this project fills another literature gap by decomposing the MAEU into two dimensional variables: compatibility and self-efficacy; which has not been examined in one empirical study stored in Web of Science and Scopus journal databases. The examination of an additional variable in this project, the mobile app's innovativeness is also another literature contribution. In mobile app studies, the relationship between the innovativeness of the app and the intention to perform specific actions is rarely being examined.

Generally, developing a research model through the modification of the MTAM model that decompose the MAEU and include the examination of an additional variable: the innovativeness of mobile app is enriching the mobile app literature. Future researchers are encouraged to test the current research model especially related to delivery apps so that a more concrete conclusion can be developed to explain the relationship with the current variables and additional variables (if applicable to future studies).

In meeting potential consumers' expectations, food delivery companies need to be innovative in improving the performance of their mobile apps, and such a statement is confirmed via current study results. Nevertheless, the non-significant role played by the self-efficacy variable denotes that the current respondents are behaving differently in relating their self-efficacy skill in using



food delivery apps and mobile app usage intention. In summary, the respondents overall feel excited and have the tendency to explore a delivery app that incorporates new application information technology. No issue among respondents that have high self-efficacy skills. For respondents with low self-efficacy skills, probably they can seek assistance from their family members or social groups easily. Therefore, in testing the hypothesis of variables that lead respondents to behave differently due to their self-efficacy skills, future respondents are encouraged to define their target respondents narrowly such as composing of those with high or adequate or low self-efficacy skills about the behavior of interest.

### **5.3 Limitations of Study**

The target population in this study is online mobile food app Gen-Y users in Malaysia that haven't used Deliver Eat's mobile food app yet. Therefore, online questionnaires are used in order to collect responses from all around Malaysia as it is time and cost-consuming for data collection. However, the distribution of online questionnaires has its limitations; researchers have difficulty monitoring whether the respondents are engaging in answering the questionnaire or paying attention to understanding what aims to be measured by each variable's item before answering.

Snowball sampling is used because it enables researchers to collect data in a shorter time frame, and reach respondents that are unknown to researchers and reside at different locations. However, just like other sampling methods, the snowballing method has its own limitations. Using the snowball sampling

method, the first batch of respondents of the current project is the researcher's family members and social groups. The researcher lives in Perak and most of the family members and social group reside in West Malaysia. Therefore, few respondents originated from East Malaysia. Also, most of the respondents are Chinese as the majority of the first batch of respondents is Chinese.

Another limitation is found in this study which is the accessibility of journal articles. Although the researcher's university subscribes to the Web of Science and Scopus journal database, not all the indexed journal articles can be accessed. As payment is required to access the articles, the current researchers can only get brief information from reading the abstract of the article.

#### **5.4 Recommendations for Future Research**

In ensuring the selected respondents are answering the questionnaire; researchers can arrange online video or face-to-face meetings with the respondents. Also, the meetings help respondents to seek clarification in real-time, if they are unsure what specific item statement intends to measure.

Using the snowballing method, researchers can segregate the first batch of respondents according to specific demographic profiles like residential area and race. In this way, the sample's data result can represent the population's behavior of interest more accurately. To access journal articles that are not subscribed by the studied university, researchers can request the institution library's assistance in getting the articles a special pricing or collaborate with counterpart researchers working in other institutions.

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## Appendix 1: Master Copy of the Finalized Questionnaire



**UNIVERSITI TUNKU ABDUL RAHMAN (UTAR)**

**FACULTY OF BUSINESS AND FINANCE**

**Master in Business Administration (Corporate Management)**

**Research Topic: Intention to use the Deliver Eat online food delivery app in Malaysia, a behavioural study among Gen Y.**

### Survey Questionnaire

**Dear Respondents,**

I am student from University Tunku Abdul Rahman (UTAR), Faculty of Business and Finance, currently pursuing Master of Business Administration (Corporate Management). I am currently conducting a study titled “Intention to use the Deliver Eat online food delivery app in Malaysia, a behavioral study among Gen Y” as my research project.

The main objective of the study is to examine the behavioral factors that have been influencing the millennials’ intention to use Deliver Eat food delivery app, using the Mobile Technology Acceptance Model (MTAM) as the basic theory. I sincerely hope that you can take a few minutes to complete this questionnaire. Your response is very important to complete this study to have better understanding to consumer behaviour. Your participation is on a voluntary basis.

The information gathered in this questionnaire will be used solely for academic purpose. All information provided to this study will be kept private and confidential. Your cooperation and time participated in this study is truly appreciated.

<b>NAME</b>	<b>STUDENT ID:</b>	<b>Email</b>
CHEW YI WEI	22ABM00696	ivanweii1234@1utar.my



**PERSONAL DATA PROTECTION STATEMENT**

Please be informed that in accordance with PersonalData Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

**Notice:**

1. The purposes for which your personal data may be used are inclusive but not limited to:-
  - For assessment of any application to UTAR
  - For processing any benefits and services
  - For communication purposes
  - For advertorial and news
  - For general administration and record purposes
  - For enhancing the value of education
  - For educational and related purposes consequential to UTAR
  - For the purpose of our corporate governance
  - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan
2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

**Consent:**

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
3. You may access and update your personal data by writing to us at [ivanweii1234@lutar.my](mailto:ivanweii1234@lutar.my).

**Acknowledgment of Notice**

I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

I disagree, my personal data will not be processed.

*Wei*

.....  
Name: Chew Yi Wei

**Demographic Profile**

The following questions refer to the respondent’s demographic profile. Please tick the option that can best describe your demographic profile.

**Gender:**

<sub>1</sub> Male

<sub>2</sub> Female

**Age (years old):**

<sub>1</sub> 18 – 25

<sub>3</sub> 31 – 40

<sub>2</sub> 26 – 30

<sub>4</sub> 40 – 55

**Ethnicity**

<sub>1</sub> Malay

<sub>3</sub> Indian

<sub>2</sub> Chinese

<sub>4</sub> Others: \_\_\_\_\_

**Current Occupation:**

<sub>1</sub> Full-time Employment

<sub>4</sub> Student

<sub>2</sub> Part-time Employment

<sub>5</sub> Unemployed

<sub>3</sub> Self-employed

**Average Monthly Salary:**

<sub>1</sub> Less than RM 2000

<sub>4</sub> RM 4,001 – RM 5,000

<sub>2</sub> RM 2,001 – RM 3,000

<sub>5</sub> RM 5,001 – RM 6,000

<sub>3</sub> RM 3,001 – RM 4,000

<sub>6</sub> RM 6,001 and above

Please read and put only ONE tick (✓) on each item statement below to indicate to what extent you agree or disagree towards the question below:

		Strongly Disagree	Disagree	No comment	Agree	Strongly Agree
	<b>Mobile App’s Usefulness</b>					
1	The Deliver Eat app is useful for ordering when the food I want to order is supplied by a vendor in the mobile app.					
2	The food ordered via the Delivery Eat app should be delivered within the delivery time requested by me if the ordered food is on sale and within the range of distance for delivery.					
3	The usage of the Delivery Eat app should benefit me in terms of time and cost savings. For example, I don’t need to travel to food outlets physically upon using the Delivery Eat app.					
4	The information about the availability of certain foods, food prices, and delivery details should be shown in the Deliver Eat mobile app.					

		Strongly Disagree	Disagree	No comment	Agree	Strongly Agree
	<b>Mobile App's Ease of Use</b>					
	<i>Compatibility of the food delivery apps</i> In view of my current hectic working and/or living lifestyle, the Delivery Eat app should be easy for me ...					
1	to search for the availability of specific food.					
2	to navigate the food product searching and ordering processes.					
3	to install the app in my mobile device.					
4	to use the application system without the need to change my mobile's operating system.					
	<i>Self-Efficacy in using food delivery apps</i>					
1	As a new user, I should be able to use the Deliver Eat app easily if a "built in-help facility for assistance" is available in the app.					
2	As a new user, I should be able to use the Deliver Eat app easily if someone else has shown me how to use the app.					
3	Although I am a new user, I should be able to use the Deliver Eat app without much problem.					
	<b>Mobile App's Innovativeness</b>	Strongly Disagree	Disagree	No comment	Agree	Strongly Agree
1	Whenever I hear about the incorporation of a new or upgraded application technology in food delivery apps, I will look for possibilities to use it.					
2	I like to explore the new application information technology that is incorporated in existing or new mobile food delivery apps.					
3	I think trying a new or upgraded application technology in mobile food delivery apps is interesting.					

4	Generally speaking, I like to utilize or operate new or upgraded technology in mobile delivery apps whenever available.					
	<b>Delivery Eat's mobile food app usage intention</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>No comment</b>	<b>Agree</b>	<b>Strongly Agree</b>
1	I shall use the Deliver Eat mobile app when I intend to use a food delivery service.					
2	I have the intention to use the Deliver Eat mobile app.					
3	I have the intention to recommend Deliver Eat mobile app to my friends					

**Thank you for your participation**