

**THE IMPACT OF TRAVEL MOBILE APPLICATIONS TOWARD  
TRAVELERS' PERCEPTION**



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**THE IMPACT OF TRAVEL MOBILE APPLICATIONS TOWARD  
TRAVELERS' PERCEPTION**

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## **THE IMPACT OF TRAVEL MOBILE APPLICATIONS TOWARD TRAVELERS' PERCEPTION**

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### **ABSTRACT**

The advancement of technology now is greatly developing all the time which cannot deny its importance in all industry. In hospitality industry is one of those which needs technology to drive the business to grow faster. There are various kind of technology but this study would like to pick mobile application to be the most important variable whether it has impact on travelers' perception. This research style used quantitative method in a form of personal interview with the 40 of sample group who are backpackers in Thailand.

The framework of Technology Acceptance Model (TAM) was used to analyze the interview gained from the sample group. The results revealed that travel mobile application does influence greatly on their behavior and perception on traveling.

It is dominant that gender and age are the most influential which shapes different traits of travel mobile application preferences. This result will be advantage for travel mobile application developer or anyone who are interested.

**KEY WORDS:** travelers/ travel mobile application/ backpacker perception/ TAM/  
Theory Acceptance Model.

42 pages

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## CHAPTER I

### INTRODUCTION

We are now in the world of smartphone as number one device that used to connecting others across the world (Forbes, 2016). More than 70% of mobile phones are currently smartphones among American people, and up to 1.4 billion around the world. Smartphone nowadays seems common to everyone in the world. It is a device that connects between people from every corner of the world. Before first smartphone was sold in 1992 by IBM (International Business Machines), there are several versions of device that were using such as regular mobile phone, and PDA (personal data assistant). Throwback time to 1980s, their function was initially used for utilitarian purpose. The very first mobile phone was big and heavy which is not comfortable to carry with. Then the time passed, technology adoption had made the better and better version of it and lately became in the form we called 'Smartphone' (MashableAsia, 2010).

What have made smartphone able to replace previous mobile devices is its diverse functions. Firstly, it is a combination technologies, telephony and computing systems. Second, apart from utilitarian usage, smartphone provides various innovative user experiences and mobile applications to satisfy personal information services (Pitt et al., 2011). With these interesting features, smartphone has quickly gained popularity all around the world. Therefore, it can be said that smartphone is the revolution of the communication device in the past decade. The amount of active mobile users are over the 7.19 billion mark and tends to increase gradually (GSMA, 2016).

As the growth of smartphone and users, the mobile application are also growing at the same time. (Cygnis media, 2016). Mobile application nowadays is among the most fast developing thing as we are in modern information and communication age. Mobile users are spending most of the time on applications than before. Mobile devices have taken us in a society that drove by applications (Nielsen, 2014). The Millennial's consumers might familiar to it more than people in the baby boom because they were born in the same time with immense growth of technology (Jameson, 2016). The

progress of mobile applications have been developing in order to working with smartphone, tablet, computer, and wearable devices. Everything from booking hotel, ordering food, online shopping, and internet banking are going the mobile way. Mobile phone takes part in all aspect in our lives (Sarah, 2015).

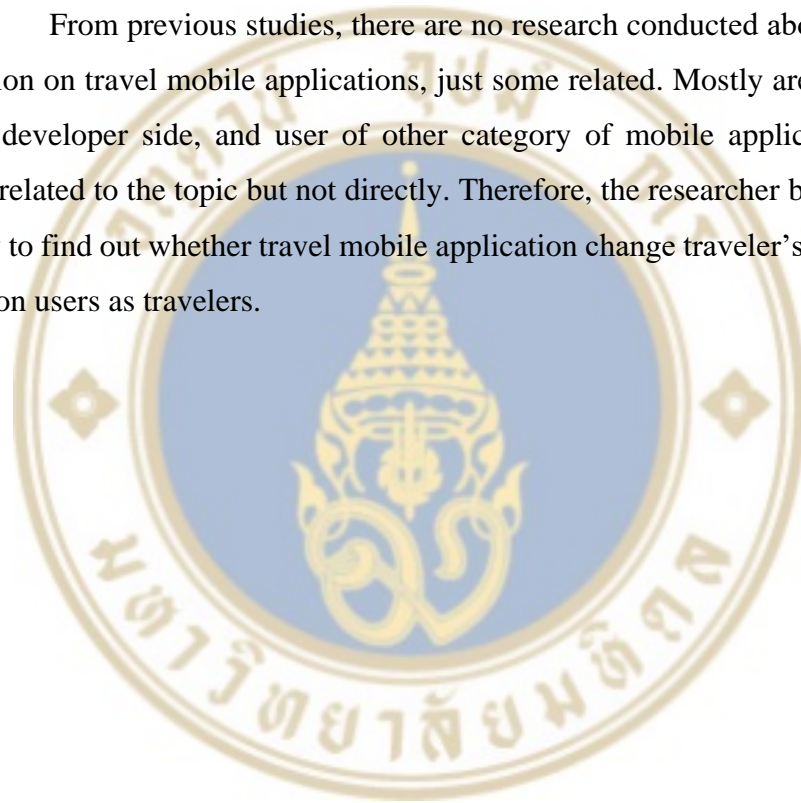
The main major software offering mobile application are Google Play and Apple App store. In June 2015, more than a hundred billion mobile application, from the Apple App Store, had been downloaded. The users can searching for application which categorized in each group such as games, entertainment, News and magazines, Socials, and Travel & local (Christian, 2015). Many mobile applications were used as daily routine, and one of them that this research aim to study is travel mobile applications used by tourists or anyone who like traveling. The most popular applications for traveler are map, compass, GPS, and suggested places to visit, eat, and sleep by searching nearby places that users are staying. From Xcubelabs record (2015), 51% of mobile application usage is map navigation search and weather.

In references to global statistics, global tourism trend has stably increased every year. From 1995 till 2015, the number has been multiplied from around 530 million to 1.19 billion and expect to reach 1.8 billion in 2030. Europe is the area that have the high number of visitors in each year. The Asia Pacific region a few years ago has risen to be the second largest market. Between 2011 and 2015, mobile bookings in travel have grown amazingly over 1,600 percent which growing by 17% of online revenues (Statista, 2016).

Another number related to travelers who have a kind of mobile devices such as iPod, tablet, and smartphone is up to 85% worldwide which 31% of them are going to use their mobile in order to searching for the next trip. According to the information and statistic stated above, it implied that the usage of travel mobile applications are increasing every year and it is an important tool for tourism organization. Therefore, it is very competitive for travel mobile application developers to produce most innovative and best functionality so that can reach the top list downloaded (Nielsen, 2015). This can describe the reason most of companies are trying to develop mobile application connected with their business which enable them to stay competitive and gain huge amount of return on investment, especially for B2C (Positioning, 2016). Therefore, it is crucial for the business to understand their target market very well.

However, some of tourism business owner perspective not really understand its customer as expected, then perhaps make several impacts on their users or travelers. Customer's perception towards application is sensitive issue. The application can be both positive and negative to their usage in processes of preparation and during their trip more or less. Therefore, it is interesting to find out that travel mobile applications are really change, help, or annoy travelers in some way. Also, to see whether their traveling behavior changing when travel mobile application are available on their smartphones.

From previous studies, there are no research conducted about the traveler's perception on travel mobile applications, just some related. Mostly are more about the mobile developer side, and user of other category of mobile application which are closely related to the topic but not directly. Therefore, the researcher brought this topic to study to find out whether travel mobile application change traveler's behavior and its impact on users as travelers.



## **CHAPTER II**

### **LITERATURE REVIEWS**

Travel mobile application is one of the application categories on a smartphone which believe that the number of users is growing every year. People, who have smartphone, in this decade are inevitable using mobile application. They use it from calling, chatting, playing games, and searching for tourist attractions. The travel mobile application can help traveler to plan the trip in just a second unlike the traditional way that finding an information on the paper & map and out-of-date website. That is one of reason behind the fast growing of travel mobile application.

Customer is one of the most important factor driving the business to be successful. It is being said the product is no longer important as customer perception. Harris Interactive study found that 88% of customer tends to be loyal with a company that provides a customer service which focusing on quality and new product launched. Customer experience refers to practice of responding to customer interactions together with designing that can delight customer expectation or even better go far beyond their needs. Therefore, this study will focus on customer (travel) experience that influenced by travel mobile applications (Katsura and Sheldon, 2008; Morosan, 2014).

## **2.1 Mobile applications**

### **2.1.1 Development of Mobile Application**

The mobile devices' functionality has increased considerably in this decade. The development of mobile technology has encouraged widely use of mobile applications which developed in order to support the usage. Mobile application developer may not notice that what customers really needs from the device. For example, light, small size, high power, durable, and reasonable price. One major point of it is the context that customers use. Due to mobile phone is created for user using

when carrying wherever, a key success factor for application' success or failure depends on its ability to serve customer's need and wants (Rachel, 2013)

As this decade is smartphones era, any business cannot overlook the mobile application. If the business only has a website, it is not enough for them to hit the target market anymore. Smartphone applications has turned to be an efficient marketing tools for the business no matter what the size is. Also, the greatly increasing number of mobile users emphasizes that mobile application is a key of marketing which enable a business to engage with their customers. Application help business to enhance the repeat rate, online transaction, loyalty, engagement, etc. Even a small detail of application's logo shown on a mobile screen can build the brand awareness by using the unique design which make customer recognizes it. Some small business may think that the cost of having mobile application is expensive; however, the benefit of it is worth investing in (Harrison, 2016).

### **2.1.2 Mobile Application in Hospitality and Tourism Industry**

The hospitality and tourism industry had been considerably influenced from radically development of mobile technology (Ohetal, 2009). It has been shown that almost a half of smartphone users use their mobile devices to finding travel information, and around 11,000 travel iPhone applications are on the App store in 2010 (Bressler,2010). What users can find in mobile application are interaction channels and brand new marketing with marketing companies and hospitality and tourism businesses; in the meantime, it allows users to create their own experiences at any places and time (Kim et al., 2008).

Consequently, mobile technology advancement is one of the essential factor that support travelers' experiences and values. To understand impact of mobile application toward traveler's perception is needed for a business in order to be able to provide appropriate service and communication to users (Coussementand Teague, 2013).

According to new technology adoption, a unique mobile device characteristic might influence attitude and behavior of users; in other words, it has function which different from other devices or technology such as convenient and portable pocket size. Mostly they use mobile application to look up an information,

ordering food, share extraordinary experiences, and stay connect with others. Therefore, the purpose of using mobile application is both functionality and entertainment. Besides, people express their identity through mobile device' features (Walsh and White, 2007). Therefore, it is interesting to examine their experience when using mobile applications.

### **2.1.3 Mobile Application market in Thailand**

The study of mobile application users' behavior in Thailand is a few due to it is quite new to Thai people, while international is a huge number. However, in late August 2012 there was a research that study about benefits of mobile application for Thai business and behavior of Thai app users by group of marketing student of College of Management Mahidol University (CMMU). The study used sample group of 700 who currently using mobile application and 12 mobile app developers in Thailand. It revealed that in 2010 there was 1.3 million smartphones sold at 26 million Baht. Then in 2012 the sales increased to 2.3 devices at 70 million THB which growing 165% within 2 years. Whereas the developer said that 2 dominant benefits from having mobile app are for increasing sales and for supporting the brand identity. Both are the business owner's alternative to choose and apply with business which should be matched with objectives of that particular business. For example, NokAir airline has provided mobile application for people to check from available flight to boarding pass which create convenience for users. As a result, net download of Nok app is over 100,000 downloads (Benjarat et al, 2012).

In addition, IDC (Internet Data Center Thailand, 2015) revealed that Thailand content and application market are in the beginning phase and can grow much more due to the fact that smartphone market share in Thailand is the second largest in ASEAN.

The number of user is now 87.5 million numbers, 24 million of Thai applications which equal to 37% of population which made it attractive to foreign investors. However, if looking into detail of user percentage in the Travel category, the number of user is less than 25% of whole mobile application users; while the highest one are social media and online shopping. (IDC, 2015)

#### **2.1.4 Limitation of Mobile Application**

The capacity and limitation of mobile application platform is a big challenge. First is size of screen which is quite small compared with the PC screen. Its small size might make some users feel not comfortable when reading. Second, some kind of file format cannot be opened with smartphone. Third, the connection on mobile is quite slow and take time to processing. Last, price of smartphones and other devices that support mobile application are expensive. It is not only price of the device, the internet connection and mobile application somehow costly (Rashedul et al., 2010).

### **2.2 Mobile Tour Guide Application**

It was predicted that Internet soon become a dominant tourism electronic platform (Buhalis, 2002). We can use internet for two alternatives; a base information of tourism and an easier on services and products transactions of online tourism (Abella G. et al., 2004). Previous research revealed that it is crucial for travelers to searching for information on the internet (Gretzel et al., 2008), therefore travelers tends to use more in order to get full information of services and products of tourism (Law et al., 2010). Also, it is said that mobile device will chase a growth of the internet which is a main distribution channel (Buhalis, 2002).

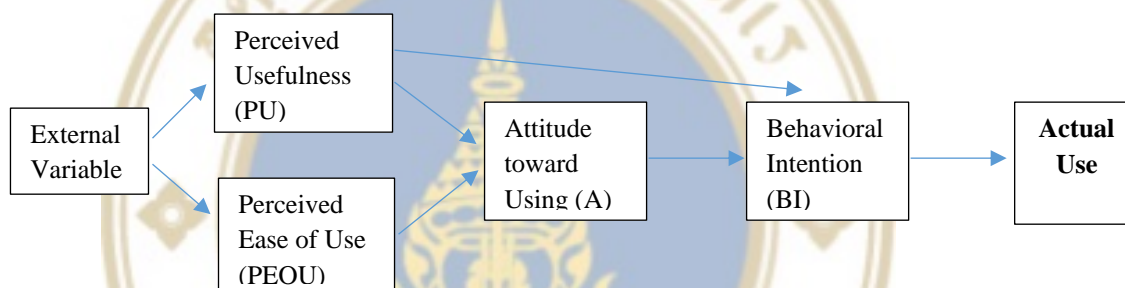
The latest generation of mobile devices are coming with high performance which allow travelers to download travel applications in their smartphones then becomes an app-based mobile tour guide or AMTG (Lai et al., 2010). They are able to see, choose, and get a route toward the desired place. It is more comfortable and precise than the old way that the use a map or ask at tourist information center which sometimes is not updated (Lim, 2007). When they reach the destination, the device will automatically sync the location and send information from travel application they used i.e. facts, recommendations, tips of that particular place so that they will not miss the best tourist attractions. Also, it provide various routes to create further plan of their trip (Hwang, 2011).

From the benefits mentioned previously undeniable makes AMTG an interesting and acceptable over the traditional method like website.

## 2.3 Technology Acceptance Model (TAM)

Despite the fact that the increasing of technologies using in the tourism industry is dramatic, there are a few studies conducted to find out an acceptance behavior in tourism technologies.

The model of technology acceptance (TAM) is the well-known theory used to indicate successful of technology usage by Davis (1985). This theory was built from TRA or theory of reasoned action, a part of 3 classic persuasion models of psychology by Martin and Icek (1967), as a foundation. TRA aims to study the human's behaviors and attitudes relationship. A decision of one person that will engage in a specific behavior is depended on the expectation after implemented (Rogers et al., 2002). See figure 2.1 below;



**Figure 2.1 Technology Acceptance Model (TAM) (Davis, 1989)**

References to the TAM (fig.2.1), it assumed that perceived usefulness and ease of use are primary concerned of users toward adaption of technology. First, Perceived usefulness is the perception of particular technology which is beneficial for help their work more efficiency. Then it will encourage users to accept the adoption and usage of technology. Another is Perceived ease of use. It is perception of comfortable and easy to use of the technology, not complicated. It is high possibility that will be accepted from the user due to it has direct influence toward acceptance. Also if user accept ease of use, so do perceived usefulness as a direct effect (Agarwal et. al, 1999). Therefore, the more users accept its usefulness and ease of use, the more likely adoption of information technology is.



### **2.3.1 Technology Acceptance in Tourism**

There are two main areas in the acceptance of technology in tourism; the employees' and travelers' behaviors in both tourism and hospitality organizations. First, employees' acceptance behavior, TAM is vastly used to examine their acceptance of different technologies such as internet marketing, reservation systems, decision support systems and hotel info systems (Kim et al., 2009). Second, from many observations of acceptance of new tourism technology of travelers published in journals. From the study of Kim and Park (2008) found that Perceived Usefulness and Ease of Use are impacted from technology and trip experience in which related with traveler's intention in using the mobile device within tourism.

The result of the study by Lee and Mills (2010), evaluate the element that drive the satisfaction and purchase intention of mobile user in tourism industry. Moreover, Wang (2010) found that the quality of system and information dominantly enhance perceived value of hotel reservation through mobile application.

There was a research conducted by D. Wang et al. (2012) on mobile app mediation mechanisms with the sample group of travelers which the result was information on mobile application allow travelers to be more effectively deal with problems, experience sharing, and keep their memories.

## **2.4 Travelers (consumers) in Thailand**

Traveler in this term means both international and Thai citizen at any age and gender who currently staying in Thailand.

### **2.4.1 Consumers Categorizations**

To categorize the customers or travelers in tourism, it can be done in several ways. First, use usage processes and buying stages (Middleton et al., 2009). In addition, Seybold (2001) highlight scenario of customers as a tool to examine online behavior. Gronroos (2000) divided customer life cycle into three stages; primary contact, buy, and consume.

Firstly travelers will search for information of interested destination and make a comparison, then choose a place and make a reservation such as booking hotel

and flight ticket. Second they will make a payment by method suits them best i.e. transferring, or credit card. During this method, they are allowed to cancel or postpone the trip but may pay some fee. Last is checking in the service they purchased and give or write a feedback on their experiences.

### **2.4.2 Traveler Behavior**

Nowadays most of travelers around the world are using mobile applications in planning a trip schedule including hotels, plane tickets, car rentals, and any online booking beforehand. Number of traveler in Thailand was around 20,000,000 in 2015 and expected to reach 22,000,000 by the end of 2016 (Ministry of Tourism and Sports, Thailand). It had a survey that more than a half of traveler are using travel mobile application at least 1 app. Therefore, travel mobile application is in the traveler's mind when they are planning to travel.

### **2.4.3 Individuals' perceived barriers**

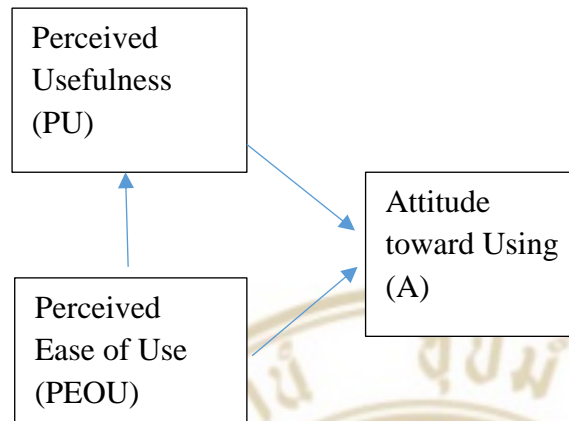
Even though the capability of mobile application has greatly change the travel distribution than existing channels. There are still some barriers for users. As dramatic growth of travel industry on mobile in the present, the follow up on users who use it during the trip is essential because user is the most important to drive the business (Bouwman et al., 2007).

There are lots of previous study about barriers of using mobile devices and its service. According to Pagani (2004), found that ease of use, limit of internet connection, price, functions of software and hardware, and privacy were barriers. While Massoud and Gupta (2004) said that security, advantages of service and ease of use are obstacles. Carlsson et al. (2005) stated that security and financial cost are the enormous barriers.

From the previous findings, the researcher would like to propose four barriers; cost of devices, cost of services and further, security aspect, and not sufficient technology.

## 2.5 Research Framework

### Technology Acceptance Model (TAM)



**Figure 2.2 PU and PEOU toward Attitude toward using (adoption of technology)**

For this research, the framework used to study and analyze interviews collected from sample group is Technology Acceptance Model or TAM. As the original TAM consisted of External variable till Actual use respectively. However, the researcher decided to pick only ‘Perceived Usefulness (PU)’ and ‘Perceived Ease of Use (PEOU)’ that drive ‘Attitude toward Using (A)’. All these three factors then will influence user’s behavioral intention to use and eventually drive users toward actual use.

#### 2.5.1 Perceived usefulness (PU)

PU in technology acceptance model (TAM) was stated that usefulness of technology is the indicator the perception of user personally, that is the particular technology is useful in some way for them such as,

- Able to enhance their performance of information searching.
- Allow them to arrange everything more efficient (timetable of train, flight).
- Help them to save time and more comfortable (pre, during, and post).
- Be compatible with their trip planning.
- Allow to use while offline (no internet connection).

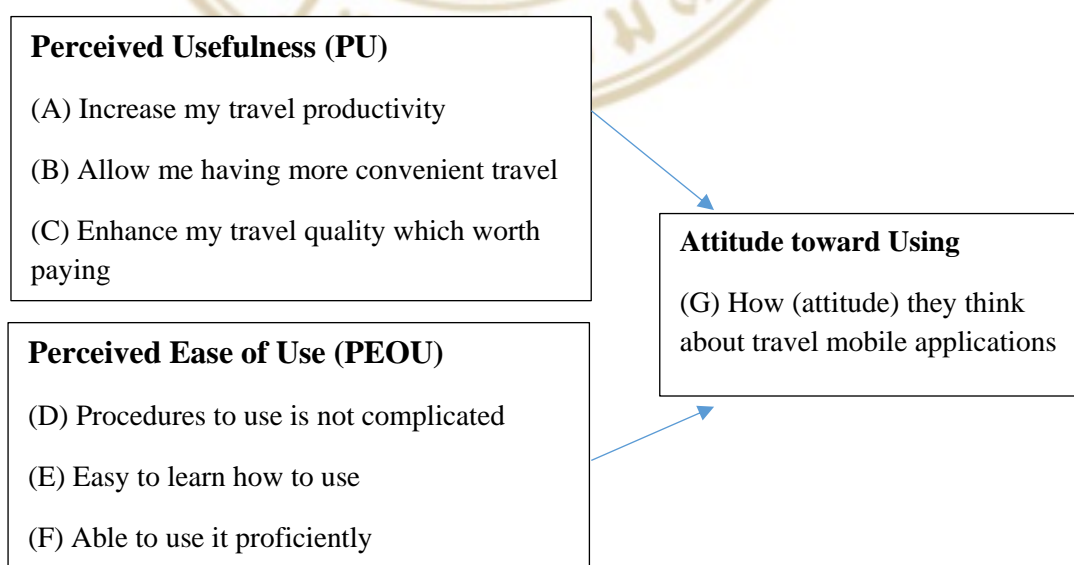
### 2.5.2 Perceived ease of use (PEOU)

According to Lei-da Chen (2008), PEOU is the perception of users that the particular technology is easy to use without much effort to understand how to use and not complicated to use it. Ease of use is the indicator of the degree and the success that whether matched with their expectations. For mobile application, user will perceive its usefulness whenever;

- Be clear and easy to follow & flexible procedures of using mobile application.
- Able to learn how to use travel mobile application quickly.
- Able to use travel mobile application proficiently.

This model describes how users accept and use information technology and information system. Perceived Usefulness (PU) is the level of users which support that their job performance will be increased by a certain technology, and Perceived Ease of Use (PEOU) is the level of users' beliefs of feeling less effort by a particular system (Davis, 1989). Both are intrinsic value which vary depending on each person preferences such as belief. In term of system usage, in technology acceptance model, a major factor is PU while PEOU is a minor. In addition, Davis proposed that PU, which believed it is stronger perception, is direct and positive influenced by PEOU (see fig. 2.2).

All variables above can be summarized in the figure 2.3 below;



**Figure 2.3 PU and PEOU toward Attitude toward using travel mobile application.**

## 2.6 Research Gap

Many studies related to information system have used TAM as a based model because PU and PEOU are two factors that describe best the use of IS. From empirical studies on both IT and IS usage, it found that the results were supportive of TAM and directly influenced from PU, while previous study of Davis stated that PEOU positively influences PU. Nevertheless, there is no exact conclusion of PEOU toward usage of IT and IS.



## **CHAPTER III**

### **RESEARCH METHODOLOGY**

The qualitative method was used in the research in order to gain in-depth information and opinion from all 40 participants whose traveling style is backpacking in Bangkok area. The eleven open-ended questions related to the framework were asked to test their perception on travel mobile application. The interview process was divided into 3 main parts; introduction, questions, and summary. The interview took about 30-40 minutes.

#### **3.1 Population and Sample**

The sample of 40 backpackers in Thailand who are currently looking for the trip or already have a plan to go soon were selected. The participants must be a backpacker that use a smartphone for any traveling purposes. The objective of this study is to see how travel mobile applications have an impact on their experiences. The participants' background such as age, education, and gender is not the barrier of this study. It is opened for everyone who currently a traveler or anyone who is interested in this issue. The areas that choosing will be in Bangkok area. The in-depth interviews were held in a closed environment where participants will feel comfortable. Some participants who are not available interview through online channel, skype and video call was applied.

The participants were all informed that they were a part of the study. Interview questions were well-prepared in order to decrease mistake. The conversation during the interview was recorded in mobile voice recorder and also took a note under their permission. The duration of each interview will be varied from 25 to 35 minutes depending on each participant' experiences. According to Grunert and Bach-Larsen (2005), a sample size of 20 to 100 is acceptable for qualitative studies.

### **3.2 Research Design**

The purpose of this study is to specify impact of travel mobile application on travelers' perception. Denzine and Lincoln (2008) stated that some kind of finding customer's perception is better to be done by in-depth interview with whoever has direct experience in that specific area so that this study is suitable to use a qualitative method. The reason of choosing this style is to understand true feelings, values, perceptions that underlie and influence behaviors of sample group. Information gained from qualitative study is better to catch closely context or meaning of the data. Moreover, there might be further interesting information that may obtained from participant which can be useful for the study.

A qualitative research design is aimed to collecting in-depth information from participants. All questions asked were open-ended which allow interviewee feel free to provide his/her own experience and information about what being asked. Noted that all questions used in this study were used without any guidance from the researcher; otherwise, this research will not be completely gained exact information from the sample group. The core concept of all questions was to clarify the participants', as a backpacker, perceived when using travel mobile applications.

### **3.3 Interview Process**

The interview was divided into three parts; introduction, questions, and summary. The introduction part contained the background and purpose of this study in order to let participant know what will take place then and ensure them that the recorded information during this interview done for the academic purpose; in other words, asking for permission on collecting their statement during the interview. Right after the participant accepted the agreement, all prepared questions were used in the interview consecutively. At the end of interview, all participant will be given the appreciation to be a part of this study.

Each participant will required to interview about half an hour with eight questions listed below;

### 3.3.1 Introduction:

After finding the desired sample group, first of all, introduce the purpose of this study is needed for the participants. The researcher must ensure them that all conversation took place will be confidential in order to avoid ethical issues. Then, ask them for permission and lead to the first question. This part will take less than 3 minutes.

### 3.3.2 Research Questions:

There will be eight questions in total. The keyword used in the following questions are travel mobile application, impact of the travel mobile application, and perception.

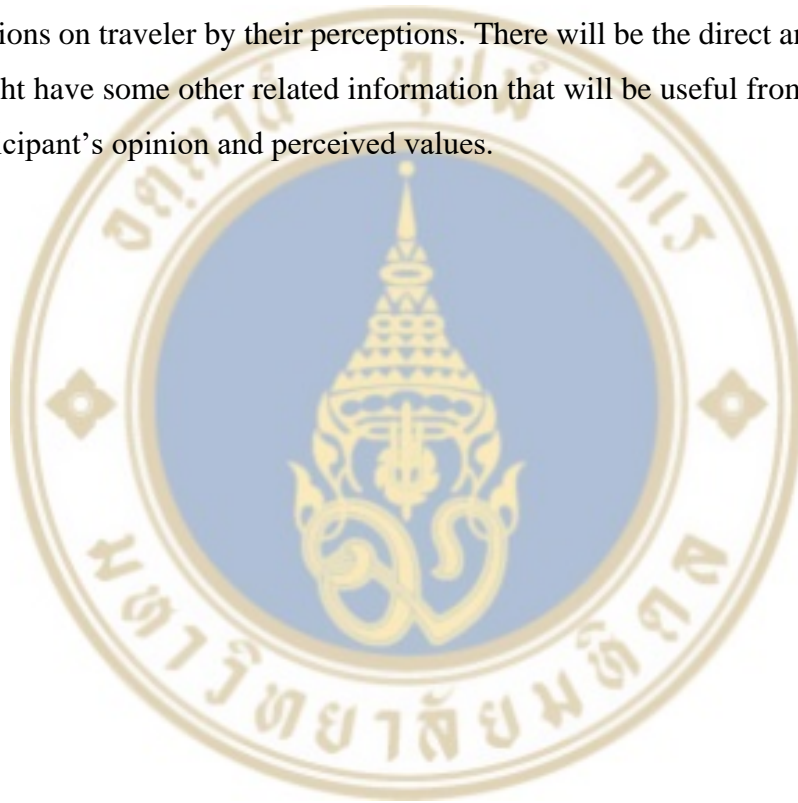
- When was your last time that you traveled? Where was it?
- Please describe yourself on your personal traveling style?
- Have you ever experienced travel mobile application?
- How often do you use travel mobile application? What are the purposes?
- Could you please identify what travel mobile application that you usually use? (specify name and type)
- As the present travel mobile application is widely used, does it have any Influences on your traveling style? Please identify how?
- From your experiences what are the benefits that you have gained from travel mobile application? How it helps you? (in which aspects), What feature do you like the most?
- Compare to other travel sources (website, books, maps, etc.), is travel mobile application more convenient than those? How?
- Have you found any difficulties?
- Please explain the reasons of what drives you to download travel mobile application?
- What are the criteria that you are looking for from it?
- After all, are you going to use travel mobile application for your next/prospect trip? Why?
- What are your opinion/attitude on it? (overall)
- Are there any recommendations to improve/develop travel mobile



applications? (for travel mobile app developer) Please explain.

### **3.4 Data Analysis**

Due to this study used Qualitative style so there will not be any statistic and number included. For the method used will be done by descriptive method which the researcher will observe the interviewers and analyze the collected data gained from participants. The researcher aimed to investigate what are the effects of travel mobile applications on traveler by their perceptions. There will be the direct and indirect effect and might have some other related information that will be useful from this study from the participant's opinion and perceived values.



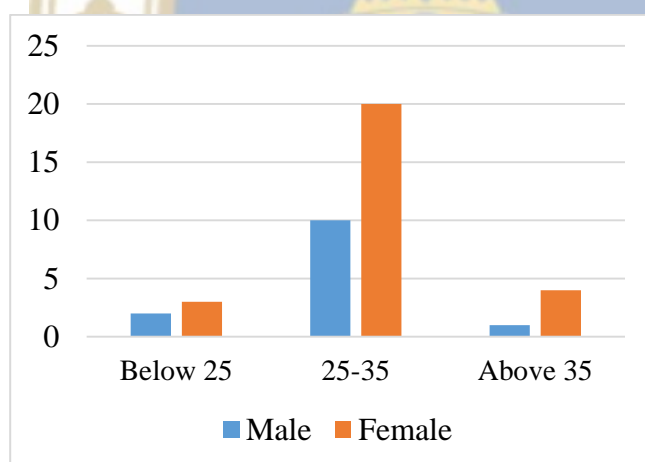
## CHAPTER IV

### DATA ANALYSIS AND FINDINGS

#### 4.1 Analysis

The interview process was conducted during November 10-17, 2016. After interview all 40 participants, these are the results of qualitative data which 11 questions were used to analyze their attitude and opinion toward travel mobile applications through their experiences. The approximately time spent on each participant was around 30-40 mins depending on how long they share their experiences and further information that beyond the question provided.

##### 4.1.1 Demographic



**Figure 4.1 Gender-Age classification.**

This in-depth interview was collected from a Backpacker, a low cost and independent seeker, as a focus group to meet the research criteria. The total sample participants are consisted of 20 males and 20 females in Bangkok, Thailand. Upon the age range, it can be separated into 3 main groups which the highest number of participant is aged 25 to 35 years old, equal to 75% of 40 respondents. The graph in figure 4.1 above shows the comparison between age and gender in each group.

The table 4.2 was to illustrate the demographic into detail. According to the interview result, more than a half of participant are working at state enterprise and private company with salary around 15,001-45,000 THB. Their education level is bachelor's degree and above. 82.5% of them are using mobile phone system of iOS.

**Table 4.1 Summary of Respondents' Profile.**

Variable	Category	Frequency	Percentage
<b>Age</b>	Female	20	50
	Male	20	50
<b>Gender</b>	Below 25	5	12.5
	25-35	30	75
	Above 35	5	12.5
<b>Occupation</b>	Student	4	10
	Government employee	6	15
	Private company	13	32.5
	State enterprise employee	15	37.5
	Others	2	5
<b>Income</b>	Below 15,000	5	12.5
	15,001-30,000	14	35
	30,001-45000	15	37.5
	More than 45,001	6	15
<b>Education</b>	Less than high school	0	0
	High school	0	0
	Bachelor's degree	29	72.5
	Master's degree	11	27.5
	Ph.D.	0	0
<b>Mobile Operation System</b>	iOS	33	82.5
	Android	17	42.5

Before looking into the influence of PU and PEOU, all participants were asked to make sure that they are currently using application when they travel. They told that information technology is useful in various ways, so do the tourism purpose. Most of them said that the availability of travel mobile application make a backpacker travel

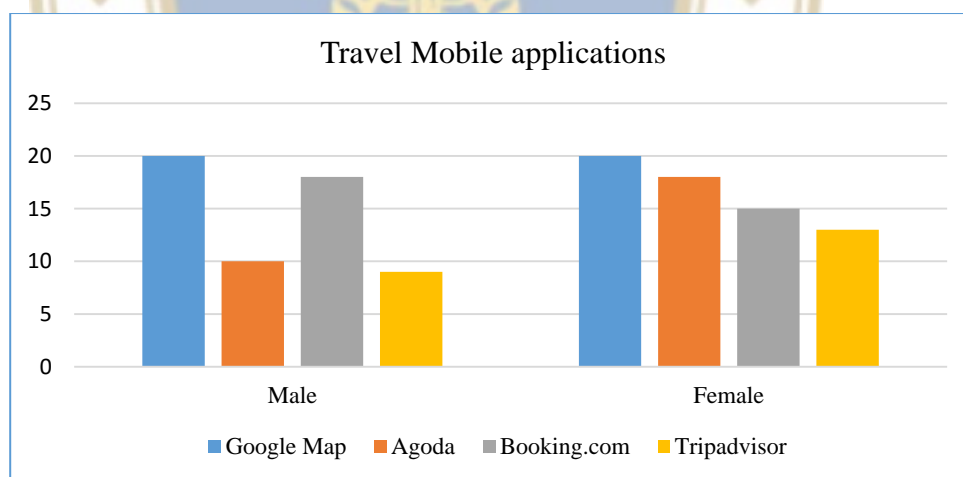
more convenient due to it provides lots of great functions from planning a trip. Moreover, it has encouraged them to travel more often because of the attractiveness of the travel blogger and review content by other backpackers.

Then the following part is the discussion about the Technology Acceptance Model (TAM), the main theory of this study, were asked in the form of the indirect questions in order to test their perception and attitude. As claimed by data result from the interview to answer the TAM theory; PU, PEOU, and attitude toward travel mobile application, it will be shown in the following sections respectively.

#### 4.1.2 PU: Perceived Usefulness and User Attitudes

*“Perceived usefulness has influenced in travelers’ attitude and attention toward travel mobile application.”*

As technology is the leading and fast growing at the present day, there are various kinds of electronic devices has been invented such as smartphone, the one that play a big role for our lives in many aspects. With its smart functionalities and benefits, the users are looking for the most effective one that meet their expectation and needs.



**Figure 4.2 Samples of travel mobile applications participants are using.**

The result came out that Google Map and Agoda application are the top two that everyone thought of. It was dominantly that all of them use Google Map while 80% use for Agoda.

Google Map was stated by all respondents as the most frequency travel mobile application they use, even in everyday life to see the routes. Majority said that it

is the most useful application due to its intelligence functions such as GPS tracker, knowing the current position of users and navigate them to reach the destination, and also shown traffic prediction which monitor real-time congestions and estimated arrival time.

*“I believe that I cannot go wherever I want without Google Map. It does make my trip more comfortable. I am no longer getting lost and do not need to waste time on it so I can say that it is very useful for me.” (Respondent 5).*

Another popular travel mobile application among participants is Agoda, about 80%. It is an application that provide choices of accommodation and flights worldwide. The participants found it is convenient to find hotel and flight within one app. Other than that, there is also recommendations on tourist attractions that travelers should not miss. Therefore, they do not need to download lots of application on their phone which consumes memory space and battery. In addition, it took just a few second to complete the process.

*“I love Agoda. It help me find the best price of accommodation and flight. I do not need to compare the price myself which takes long time and confusing.” (Respondent 18).*

*“It took me just few second and clicks to finish my info searching. I really appreciated that we have some kind of wonderful technology.” (Respondent 22).*

In accordance with positive feedback of its usefulness, they all agree to continue using it for their upcoming trip.

#### **4.1.3 PEOU: Perceived Ease of Use**

*Travelers’ attitude and attention toward travel mobile applications was influenced by Perceived ease of use.*

Through the technology these day goes far beyond those inventions in the past. It allows people to find real-time travel information, easily booking flight and accommodation, and navigate to the destination. In the past time, map, traveling books, and compass were used during the trip which considered as essential tools. Conversely the present time people are more rely on the technology. With its abilities, tourists found it is more trustable and comfortable to use travel mobile application in supporting their traveling experiences.

Over 90% stated that travel mobile app is easy to use. They spent less time to find information than manual way of map and books. The participant aged over 35 years added that they have not found any obstacles to use application because it is easy to follow the steps to be done.

*“I think that I might not so good at learning new things but my thought was totally changed. The application provide me effortless to use.” (Respondent 2).*

For Agoda, most of them said in the same direction is it is easy to use.

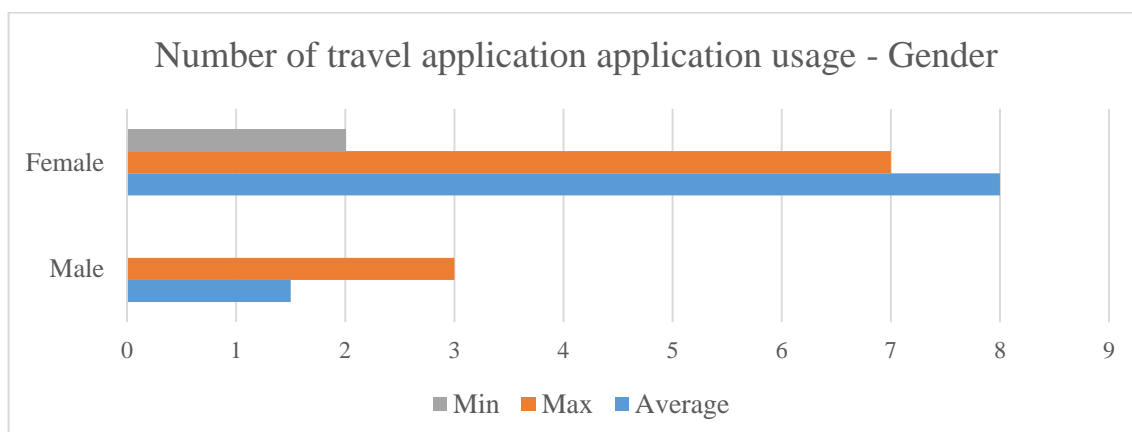
*“I am required to put some info they are looking for in the boxed provides such as city, price, and date in order to finding one matched with their preference. Then finding that just hit the button and what I am looking for appears in just a second.” (Respondent 20).*

*“I use Agoda because it has both flight and hotel for me to reserve it within one application. I know that other application have that too but they are way too complicated to use.”(Respondent 7).*

## **4.2 Findings**

First of all, prior to the interview process the researcher found some difficulties to find men interviewee who are backpacker using travel mobile applications so it took time to accomplish 20 men in participating this research. It implied that men backer tends not to use application much, unlike women that 99% using it.

According to findings mentioned above from 40 respondents, it was clearly that everyone is using travel mobile application in their daily life, just a small number of 5% that use it when having a plan to travel only. If looking into detail of gender and ages, it is dominant that female tends to use travel mobile application more than men. Women have travel mobile applications over 4 applications in their smartphone while men have 3 applications or less. This number implies that men are less rely on travel mobile application. Majority of them said that they prefer spontaneous trip than inflexible travel plan. They prefer exploring things such as local food, and accommodation. In other words, men are easier live than women. Unlike women that prefer safety and make sure everything will follow the plan. This evidence is also supported by the findings about gender differences in risk perception.

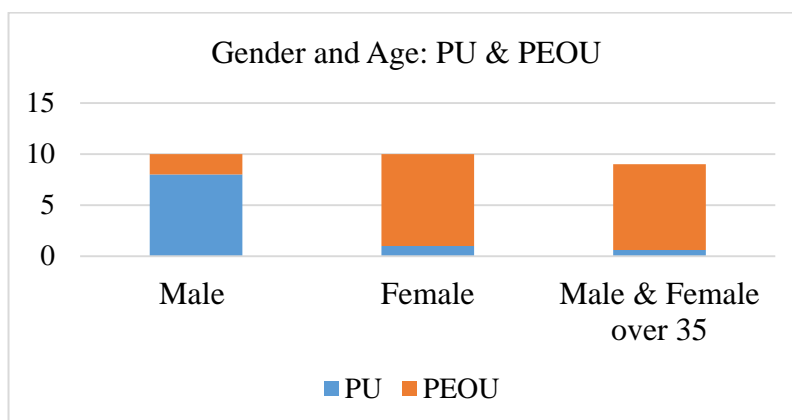


**Figure 4.3 Number of travel application usage with gender**

As Cutter et al. (1992) found out that women risk perception between men and women that they worry the same risk but women are more serious and frighten. His studied stated that the risk that women worried is more about health and family; while men is about economics and job. From this result can be implied that female concern that their life to be safe from unexpected risk while on traveling which often riskier than staying at home.

If looking into TAM, male tends to decide on using technology depending on their perception of its usefulness (PU) as the priority. They will continue to use the particular app whenever they found it helpful such as providing correct info, keep updating information/content, and saving their time; in other words, they are looking for the functional. In contrast, female backpacker are strongly driven by the perception of ease of use (PEOU).

Refer to the figure 4.5 below, it shows that male are looking for travel mobile applications that provide them the best of its useful while women give better score on PEOU of travel mobile application. Interestingly, both female and male aged over 35 said in the same direction that they prefer application that easy to use more than its usefulness because they claimed that there are already a lot of application that offer the same content and service such as airlines, hotel reservation, and recommended places but how to use it still a major pitfall needed to be fixed.



**Figure 4.4 Number of PU and PEOU by gender and age**

To support more on the analysis, Venkatesh (2000) studied the user's role and behavior, social influence, and gender in technology acceptance which also found that male users were strongly impacted by the perceptions of usefulness (PU) whereas woman users were more impacted by ease of use (PEOU).

#### 4.2.1 Perceived Usefulness (PU)

##### Perceived Usefulness (PU)

(A1) Increase my travel productivity

(B1) Allow me having more convenient travel

(C1) Enhance my travel quality which worth paying

From the interview of 40 participants, they all said that travel mobile applications are useful for them more or less. They said it at least could help them to travel more convenient due to its real-time searching wherever there is an internet connection. There are three variables that have set to investigate whether having influence travelers to perceive the usefulness of application; (A1) Increase my travel productivity, (B1) Allow me having more convenient travel, and (C1) Enhance my travel quality which worth paying.

As a result, after discussing about usefulness of travel mobile application, they mentioned that it helps them travel much more convenient because of its ability to search updated and real-time information faster than a map which is quite uneasy to understand the sign and direction of the road depending on experiences of each person.



In addition, they said that they can save time and money that application help comparing the best price or most valuable package reference to their interests. If the ranking between these three variables is required, the first rank will be (B1), (C1), and (A1) respectively following the interviews. The example of each variable that the participant mentioned will be underneath;

(A1) Increase my travel productivity

*“Travel application allows me to explore wonderful things beyond my expectation such as it can recommend a-must-going places or activities in the particular area which always impress me.” (Participant 9).*

*“It did help me whenever I have no idea what to do or where to go, at least it makes me not to waste precious time on my vacation.” (Participant 16).*

(B1) Allow me having more convenient travel

*“I am able to connect to the world of information in just a few clicks then I got all info I want, that is great, isn't it?” (Participant 20).*

*“I hate when uncle asks me to searching on the map, I really have no idea what is in there. Thanks for today's world having such a cool technology that enable us to find travel info in various application.” (Participant 1).*

(C1) Enhance my travel quality which worth paying

*“The app is automatically calculate the best deal for me such as plane ticket and accommodation according to my preferences.” (Participant 11).*

*“I love travel mobile app because I always get discount and special promotion recommended for me which I can save my budget to my next vacation.” (Participant 19).*

Therefore, for all these 3 variables are what participant perceived that travel mobile application is useful for them which drive them to continue using and consider it important for their traveling.

#### 4.2.2 Perceived Ease of Use (PEOU)

##### Perceived Ease of Use (PEOU)

(D2) Procedures to use is not complicated

(E2) Easy to learn how to use

(F2) Able to use it proficiently

At the beginning three factors were set in order to test participant's perception on ease of use which are (D2) Procedures to use is not complicated, (E2) Easy to learn how to use, and (F2) Able to use it proficiently. The results came out that (D2) and (E2) were mentioned by participant while no one stated about (F2) or able to use it proficiently. However, it does not mean that it is not important but 40 participants do not see it as the factor which they consider choosing when accept the app. Normally, travel mobile applications, in term of content, are not that significantly different due to the world nowadays information is everywhere. People can find whatever they want in just a few second on search engine. Therefore, what matters more than the completion of app content is its ease of use (EOU).

In order to rank these three variables of PEOU, (D2) Procedures to use is not complicated is the first and (E2) Easy to learn how to use is the second. As the third one was not mentioned, it will be omitted in the PEOU. The quote below are the examples from participants taking about ease of use.

(D2) Procedures to use is not complicated

*"It does not required any skills to use a travel application. It is quite simple just as the website on the PC but more convenient."* (Participant 28).

(E2) Easy to learn how to use

*"The steps to use the app is easy. Just click the menu of what I am looking for then follow its processes."* (Participant 6).

#### 4.3 Theme

The result of this study can be generated in 2 main themes considering 'Gender' and 'Perceptions' dimensions.

### 4.3.1 Theme 1: Risk Seeking and Risk Averse

First, types of backpacker, separated in gender. There are two major types of backpacker reference to this study which are Risk seeker and Risk averse. Risk taker is those who are not so much afraid of risk. They see risks as a challenge to take which most of studies found that men are kind of risk seeking person. On the other hand, women tries to avoid risk that can happen, so-called risk averse (Mike, 2012)

“Risk Seeking”	“Risk Averse”
<ul style="list-style-type: none"> <li>- More than 90% of men do not rely much on technological devices</li> <li>- They have 3 or less application in their smart phones</li> <li>- Prefer spontaneous trip, unplanned</li> </ul>	<ul style="list-style-type: none"> <li>- Almost 100% of women said they feel relieved to having as much as travel application as possible</li> <li>- They have more than 4 travel applications in their smartphones</li> <li>- Prefer planned trip</li> </ul>

**Table 4.2 Theme 1: Risk acceptance.**

From the table 4.6 of theme 1, the differences between men as risk seeking and women as risk averse are quite dominant. Therefore, the characteristic of travel mobile application that will be able to serve the needs of two groups is not the same. It is now the capability of travel mobile application provider that which company can develop some kind of application that matched.

### 4.3.2 Theme 2: Functional and Emotional Seekers

Second is functional and emotional needs. This theme can be separated with gender as theme 1. Functional seekers refers to men and emotional seekers are women. Functional seeker is a person who is looking for simple thing that will just satisfy their basic needs such as drinking any water label when thirsty; whereas, women or emotional seekers are looking for things beyond the basic needs such as buying mineral water from Switzerland with trendy label, Kat (2010).

“Functional Seeker”	“Emotional Seeker”
<ul style="list-style-type: none"> <li>- Men’s characteristic prefers its functions</li> <li>- Use it whenever in need</li> <li>- Looking for practical travel application i.e. able to find what he wants</li> <li>- Don’t care much about its popularity, not completely follow the trends</li> <li>- Influenced by themselves to download</li> </ul>	<ul style="list-style-type: none"> <li>- Women’s characteristic uses emotion</li> <li>- Always use it since planning the trip till review after the trip</li> <li>- Looking for good-looking travel application i.e. beautiful platform, design.</li> <li>- Like to catch up any trends</li> <li>- Easily influenced by others i.e. friends, trend setters</li> </ul>

**Table 4.3 Theme 2: Usage intention.**

From the figure 4.7 of theme2 shows that men will use travel mobile application only when in need. They do not like to plan much in advance as the first theme indicated that men are risk taker, ready to encounter new experiences whether positive or negative. The app that functional seeker like is the one that provide them a real functional benefit and it does not need to be a popular or suggested by friends because they would like to try it themselves then they will choose the one they like most. On the contrary, women put the design and good-looking app at the first glance. Emotional seekers like to follow trendy or recommended application by friends or trend setters which could make them feel proud and satisfy with being in trend.

To sum up two themes, they can be merge together into a chart as the following figure 4.8, the blue quadrants on top is theme1 under risk acceptance, and on the bottom is theme2 under usage intention.

Characteristics	
<b>RISK ACCEPTANCE</b>	
<b>Theme 1: Risk Seeking and Risk Averse</b>	
<ul style="list-style-type: none"> <li>• More than 90% of men do not rely much on technological devices</li> <li>• They have 3 or less applications in their smartphone</li> <li>• Prefer spontaneous/ unplanned trip</li> </ul>	<ul style="list-style-type: none"> <li>• Almost 100% of women said they feel relieved to have as much travel application as possible</li> <li>• They have more than 4 travel applications in their smartphone</li> <li>• Prefer planned trip</li> </ul>
<b>RISK SEEKING</b>	<b>RISK AVERSE</b>
<b>FUNCTION SEEKER</b>	<b>EMOTIONAL SEEKER</b>
<ul style="list-style-type: none"> <li>• Men's characteristic prefers its functions</li> <li>• Use it whenever in need</li> <li>• Looking for practical travel application i.e. able to find what he wants</li> <li>• Don't care much about its popularity, not completely follow the trends</li> </ul>	<ul style="list-style-type: none"> <li>• Women's characteristic uses emotion</li> <li>• Always use it since planning the trip till review after the trip</li> <li>• Looking for good-looking travel application i.e. beautiful platform and design</li> <li>• Like to catch up new trends</li> </ul>
<b>Theme 2: Functional and Emotional Seekers</b>	
<b>USAGE INTENTION</b>	

**Figure 4.5 Risk acceptance and Usage intention.**



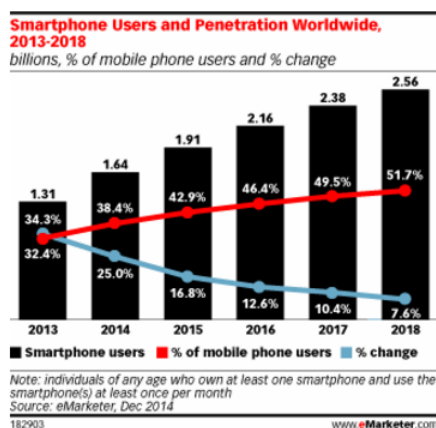
## CHAPTER V

### CONCLUSION AND RECOMMENDATIONS

According to the research question whether “Travel Mobile Applications have an impact toward Travelers’ Perception”. The core of this study is to find out the backpacker’s perception of the travel mobile application which using Technology Acceptance Model or TAM as the main theory, PU and PEOU are two variables that used to test. In this part, the summary of all dominant and interesting issues from the research finding will be shown. Then the recommendation and implication for the theory itself and the travel mobile application developer will be discussed respectively. At the end, the limitation and suggestions of the further research paper related to this topic will be identified.

#### 5.1 Conclusion

The mobile application is widely used around the world. Nowadays, it is the golden period of the technology which is the fastest growing in this decade, the smartphone is one of them. The number of users worldwide was 1.31 billion in 2013 and this year 2016 is approximately 2.16 billion. By 2018, there will be over 2.5 billion users across the globe as the figure 5.1 below (emarketer, 2014).



**Figure 5.1 Smartphone users worldwide 2013-2018.**

Because of inexpensive of the smartphone price, people are now able to access to the internet more than in the past. Together with the quickly develop of the smartphone system, it make the mobile phone as one of the center of information source which is convenient and useful for user more or less. However, many sources and researches found out that technological devices have played a vital role in the hospitality industry. Therefore, for the tourism, it is important for the travel mobile app developer to understand the user's behavior and their perceptions toward the application so that they will be able to initiate the app that impress the user and the best is to convince others to use by word-of-mouth.

In this study, therefore, the researcher picked the TAM in order to discover the user's perception on the travel mobile application. Most of the previous researcher who uses TAM theory in their research focused on various variables such as external factors, behavior, PU, PEOU, and attitude and mostly topic is about the application of technology in workplace which used TAM to test their level of acceptance; while this research only focused on two main variables which are PU and PEOU.

## **5.2 Implication**

The research gives an understanding of the insight of the backpacker such as their perception and attitude towards travel mobile application in widely aspects. The results of the study can be the guidance for the travel mobile application developers, hospitality businesses providers, marketers, and any entrepreneurs who are currently studying about the traveler's behavior of application usage in order to achieve their goals and stay competitive in the market. They should make their best to meet the customer's want and need to impress them and turn into loyal customers which is the most crucial for every business. Therefore, it is important to put themselves in the customer place to really understand what are they thinking and looking for from the travel mobile application then will know how to develop the best one which matching with the customer's value.

Backpackers, references to this study, are looking for the ease of use of an application more than its usefulness because the application now is widely available everywhere and full of content but not the quality of usage. Most of the users still have

some difficulties to use an app such as the hard-to-read font size, unstable internet connection, and lack of update information for some application.

### **5.2.1 Implication to the Theory**

Most of previous studies set the framework of Technology Acceptance Model (TAM) that PEOU has directly influences on PU which then has an impact on user's behavior and intention to use. Davis (1989) said that TAM can explain the behavior of technology users and PU and PEOU have big influence to drive users to accept the particular IT device. However, the influence of the variable is vary depending on the evidence, sample group, and topic.

For this research, the researcher found that none of it is not completely influence another variables. PEOU did not have direct impact on PU. It depends on traveler's experiences and perceptions toward travel mobile applications. However, from the result it came out that PEOU has more influence for them to choose which travel application that they are looking for and will continue using it longer. Due to nowadays technology is already fully developed which means that information is everywhere and everyone can find it easily, unlike ease of use of the technology. Most of users claimed they have found some obstacles while using a travel application such as unstable internet connection, complicated to use, and out-of-date information. Therefore, it can be summarize that PEOU has more influence.

Moreover, other factors are significant for this research too. Many researches used other factors both internal and external factors brought together with PU and PEOU in order to discuss about their topics such as age, education, income, believes, and etc. The demographic of this study quite dominant, especially age and gender which the result was clearly different between men and women. Men is more kind of functional and risk seekers. Refer to studies about traits and characteristic of men showing that they tends to be less serious and afraid of an unexpected incidences than women which carefully with their safety.

### **5.2.2 Implication to the Travel Mobile Application Developers**

As mentioned before that PEOU needed to be concerned more than PU so it implies that the app developer and other related party, such as marketer, hospitality



business, and entrepreneurs who are now interested in this business, should take it in the first place. There are three main (general) issues from 40 participants that they would like travel mobile application to have which will make them more satisfy with.

First is an 'offline mode'. The phone signal and internet connection can be represented as a bridge across the river, without it we cannot go further. To connect with an app requires good internet connection. If in the city areas, there is no problem but for backpacker, mostly traveling to outer areas, the internet connection matters due to there is not much public internet poles so it is considered as the major problem when they would like to use application while traveling. Consequently, it will be a grate suggestion to the developer that they need to make an app work when offline from the internet connection.

Secondly, keep 'update the information'. The users found that the info of some app is quite old such as opening-closing time, the location, the road condition, and review. Most of them have experienced the place they went is not the same as the review or even worse there is no longer exist anymore. These information is quite important for them, especially women who like to plan.

The last is a design of application, including font size, menu bar, and compatible with every devices such as iPad, tablet, and smartphone at all size. Some of travel applications are only just bring the website version and put into the application which is 100 percent not working due to the technical problems. In addition, the mobile app design or UI is one of the attractive outlook that could drive users to try and download. Font size and style is also the main issue for elderly. Many application used very small font which is hard to read and so do the font style which some of app used so-called cutie font but mostly difficult to read and found it annoying.

In order to suggest more deeply into detail for the app developer, they need to be able to build a platform of travel application which meet the preferences of each group according to figure5.2,

RISK ACCEPTANCE	
Theme 1: Risk Seeking and Risk Averse	
<ul style="list-style-type: none"> <li>• Emphasize usefulness and function.</li> <li>• Create an application that potential for them while on traveling such as navigator, map, and emergency aid tools.</li> <li>• Make sure that application can be used in every area even no internet connection and phone signal.</li> </ul>	<ul style="list-style-type: none"> <li>• Emphasize design and function.</li> <li>• Provide complete content and service covered in one such as entire itinerary for 4-day trip.</li> <li>• Reliable and updated information.</li> <li>• The design should be good-looking.</li> </ul>
<b>RISK SEEKING</b>	<b>RISK AVERSE</b>
<b>FUNCTION SEEKER</b>	<b>EMOTIONAL SEEKER</b>
<ul style="list-style-type: none"> <li>• Emphasize useful and function.</li> <li>• Provide an informative content that consistency.</li> <li>• Real functionality is the most needed.</li> <li>• Not too complicated to use.</li> <li>• No need to be much beautiful, professional look.</li> </ul>	<ul style="list-style-type: none"> <li>• Emphasize ease of use and design.</li> <li>• Provide fashionable platform which is attractive.</li> <li>• Inform them ahead when there is new updated.</li> <li>• Try to impress them as much as possible in order convince others.</li> </ul>
Theme 2: Functional and Emotional Seekers	
USAGE INTENTION	

**Figure 5.2 Recommendations for each group.**

To conclude, in order to satisfy the backpacker as the travel mobile application user, the application developers should address their needs and preferences. After all, the new strategies will be applied and then the provider will gain more sales and worth their money for investing.

### 5.3 Limitations

The research was limited by the number of participant and certain characteristic. The sample size are just 40 people who living in the Bangkok area; therefore, geographical area is limited.

Even though backpacker is currently one of the most popular traveling style, it will be better for future research that be able to capture a variety traveler group.

The research did not specify the specific app, just travel application in general, so it is the challenge task for app developers to get information of their target group.

Time constraint is another point which this research only took 7 weeks to generate a limited number of sample group.

#### **5.4 Future Research**

More variables should be included in order to test the participant on other aspects. Maybe the researchers will find some more interesting point such as psychology, environment, background, and so on to obtain more insight which can be beneficial for travel application developer and other related in improving and developing the better one for their value customers.



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## Appendix A: INTERVIEW QUESTIONS

No.	Interview Questions	Purpose of the Questions	Framework (TAM)
1	When was your last time that you traveled? Where was it?	To examine their attitude on travel mobile application.	(G)
2	Please describe yourself on your personal traveling style?	To lead the participants to describe their usage of application and tell in which activities that they use for.	(A) (B) (C) (D) (E) (F) (G)
3	Have you ever experienced travel mobile application?	To investigate their comparison between travel mobile application and other tools in searching tourist info.	(G)
4	How often do you use travel mobile application? What are the purposes?	To investigate does travel mobile application influence their traveling style and how.	(G)
5	Could you please identify what travel mobile application that you usually use? (specify name and type)	To investigate what factor that leads them to download the travel application and what key points that they perceive it is useful so that the developer will know what they should include in the app.	(G)

6	<p>As the present travel mobile application is widely used, does it have any influences on your traveling style? Please identify how?</p>	<p>To examine their perception on travel mobile applications' ease of use and whether they found any obstacles.</p>	(G)
7	<p>From your experiences what are the benefits that you have gained from travel mobile application? How it helps you? (which aspects)</p> <p>What feature do you like most</p>	<p>To acknowledge their aspects on travel mobile applications on both positive and negative view depending on their experience and personal preferences.</p>	(A) (B) (C)
8	<p>Compare to other travel sources (website, books, maps, etc.), is travel mobile application more convenient than those? How?</p> <p>Have you found any difficulties?</p>	<p>To examine the key points that they consider it useful and should be possessed in travel application.</p>	(D) (E) (F)
9	<p>Please explain the reasons of what drives you to download travel mobile application?</p> <p>What are the criteria that you are looking for from it?</p>	<p>To acknowledge what kind of travel mobile application that is favorable for them and what can be the further improvement/development they expect?</p>	(A) (B) (C) (D) (E) (F)



10	<p>After all, are you going to use travel mobile application for your next/prospect trip? Why?</p> <p>What are your opinion/attitude on it? (overall)</p>	<p>To know whether they are going to continue using the travel mobile application and what are their opinion about it.</p>	(G)
11	<p>Are there any recommendations to improve/develop travel mobile applications? (for travel mobile app developer) Please explain.</p>	<p>To gain information for future improvement in order to develop the better one later on.</p>	(G)

