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Travel Mobile Applications: the Use of Unified Acceptance Technology Model

Nurzehan Abu Bakar, Nik Alif Amri Nik Hashim, Nor Maizana Mat Nawi, Marlisa Abdul Rahim, Abdullah Muhamed Yusoff, Roslizawati Che Aziz, Ghazali Ahmad

Abstract*: *In the current era of globalisation, the Internet plays a major role in people's lives. It has also altered the style of people travel by providing a cheaper, more convenient and more efficient price. Recognising the broad impact of travel applications on the travel sector, researchers have focused on the study of determinants of travellers' intention to utilise travel apps. In addition, among the consumer behaviour models used to study the tourism sector, is Unified Acceptance and Use of Technology (UTAUT) model which is the common and new models nowadays. Therefore, the existing study is expected at evaluating the local residents' intention to utilise mobile travel applications based on the UTAUT model. The self-administered questionnaire was distributed to 390 of Malaysian millennial which the IBM SPSS 24 version was selected for the data analysis. The study demonstrated that the variables of UTAUT are related to behavioural intention. This study contributes to new perspectives on mobile application usage and preferences, especially in the context of tourism. It also offers practical application implications for mobile application developers for the design of mobile app features, most likely for tourists.

Keywords: Mobile Apps; Unified Acceptance and Use of Technology; Intention; Malaysian; Technology

I. INTRODUCTION

In today's era of globalisation, the Internet plays a major part in people's lives. According to the data from the [14], more than half of the global population uses the Internet on a daily basis. Many facets of people's lives have been transformed by the Internet, and the travel sector is of no exception in which rapid technological developments have changed the operations of the industry mainly in terms of the interactions between businesses and consumers [21]. Mobile technology's rapid growth, deployment, and use has transformed the manner of interactions between travel companies and their clients. Mobile app for travel has changed and changed the way travellers travel today and how travel companies reach their customers.

The impact of the travel mobile app is undeniable among millennials, adventurers, or experimenters alike. However, even though mobile applications offer many advantages and are in trend, [1] reported that the majority of tourists (above 50%) prefer not to use those apps. Only a small percentage of travellers use their mobile phones to book their vacations and purchase flight tickets instead of doing this via the online web site on PC [24].

This is supported by a study conducted by [9], 65% of travellers turn to mobile sites for travel from 58% of apps used for travel activities. The traveller was reluctant to use travel mobile apps via mobile devices as they feel the apps are not useful or take up too much memory [9].

Moreover, the majority of traveller in the market are not frequent traveller, they only travel occasionally thus, they are reluctant to download travel app onto their phone as they only use a booking service at most a few times each year [5]. On the other hand, the type of travellers also influenced the usage of the app, for instance, millennials travellers only opting for the cheapest option such as kayak and Airbnb when making travel arrangement.

They do not prefer high-end apps such as American Airlines, United Airlines, and Marriott as millennials might have limited travel budgets at the moment as they have just started embarking work industry [3].

Looking at the above issues, this research is prompted to explore the determinants of travel mobile applications' usage among travellers.

Furthermore, very few past studies had examined the intention of travellers to utilise mobile travel apps. The majority of the existing literature only looked at the adoption of apps in M-banking [16] and M-commerce [8], while the tourism sector was left largely unexplored.

Therefore, this study is interested to investigate travellers' intention to use mobile travel applications because of the vast opportunity it offers as well as the limited studies done in this area [15]; [17], with a special focus on Malaysian travellers.

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***** Correspondence Author
Nurzehan Abu Bakar, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: nurzehan.ab@umk.edu.my
Nik Alif Amri Nik Hashim*, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: nikalifamri@gmail.com
Nor Maizana Mat Nawi, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: maizana.mn@umk.edu.my
Marlisa Abdul Rahim, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia Email: marlisa@umk.edu.my
Abdullah Muhamed Yusoff, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: abdullah.my@umk.edu.my
Roslizawati Che Aziz, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: roslizawati@umk.edu.my
Ghazali Ahmad, Faculty of Hospitality, Tourism & Wellness, Universiti Malaysia Kelantan, Malaysia. Email: ghazali@umk.edu.my

II. LITERATURE REVIEW

The theory of reasoned action (TRA), technology acceptance model (TAM) as well as theory of planned behaviour (TPB), have been used by past scholars to examine the acceptance and consumer intention to use technology [4];[26]. Yet, [30] combined several different psychological and sociological theories, such as TPB, TAM, TRA, TPB and TAM combined, social cognitive theory (SCT), model of personal computer utilisation (MPCU), motivational model (MM), along with innovation investigation theory (IDT) to propose an introduction to consumers' technology usage and adoption [29].

However, UTAUT possesses superior predictive capabilities due to its integrated method. [29] found that about 70% of the acceptance and technology application can be explained by UTAUT. The key UTAUT variables, which are social influence, performance expectancy, and facilitating conditions, were found to be important determinants of consumer acceptance and intention of using technology [23].

A. Performance expectancy

Performance expectancy (PE) refers to the extent that people have the belief that the performance of a particular system would be enhanced [22]. In context of this study, PE refers to the degree to which customers believe that it is easy and hassle-free to use a mobile app for the purpose of travelling. According to [7], the features of PE are comparable to those of other models, which are outcome expectations (SCT), relative advantage (IDT), extrinsic motivation (MM), perceived usefulness (TAM), as well as job-fit (MPCU).

Many literature works discovered PE as a key behavioural intention factor in using technology in a variety of contexts, for instance, mobile payments [27], application mapping for tourists [10], travel mobile applications [11], as well as budget airlines' websites [6].

B. Facilitating Conditions

Facilitating conditions (FC) refers to the extent that one has the belief in the existence of technical and organisational infrastructure that facilitates the system's [30]. This kind of situation may underline the determinants of a person's tendency to use the system [20]. Similar to social influence, FC is not incorporated into key theories like TPB and TAM as the factors that influence consumers' acceptance and intention to adopt new technologies. In example, according to [12], FC is not a major factor for travellers in purchasing or booking directly through rural accommodation websites. However, in contrast to the previous scholarly works, the findings by [10] show that FC is a main source of tourist behavioural intention to use mapping applications when travelling.

C. Social Influence

Social influence (SI) refers to the extent that a person has the belief that the relevant individual believes she/he needs to use a system [30] SI also refers to a situation where an individual's use of a system is influenced by the suggestions and views of the public [7]. SI has been considered a key predictor of technology usage in a number of research contexts. For instance, [13] conducted a study on consumers' intentions to buy in-app, and they discovered public opinion has an impact on consumers' in-app purchases. Furthermore, many studies found evidence of a positive and significant relationship between social influence and individuals' behavioural intention [2]. Currently, the extensive use of smartphones and related applications has allowed users to use a wide variety of applications catered for tourism and travel.

D. Behavioural Intentions

As stated by [28], behavioural intention refers to a person's inclination to participate in a certain behaviour. People are inclined to adopt a certain behaviour when they have a favourable intention for the behaviour. In addition, according to [18], mobile service acceptance and usage behaviour is predicted by behavioural intention. To achieve and sustain the desired business performance, travel companies need to gain an understanding of their clients and know the constituents of the clients' intentions to buy products online [25].

III. METHODOLOGY

This study was applying the quantitative method as it is more objective in nature, in which it explores and understands the relationship that each of the independent variables (social influence, performance expectancy, and facilitating conditions) has with the dependent variable (behavioural intentions). The Malaysian millennials who intended to utilise mobile travel applications were chosen as the target population in this research. Since the population size was unknown, convenience sampling was adopted to select the sample size. This sampling method is in line with the approach taken by past research on technology adoption, namely, [7] and [6].

The respondents were recruited from five states of Malaysia namely Kuala Lumpur, Johor, Negeri Sembilan, Penang and Selangor due to its high mobile internet penetration [19]. During data collection, a self-administrated method was applied. The reason for using the self-administrated questionnaire distribution approach was it enabled the researchers to get involved directly in the procedure of data collection for this research. The number of questionnaires distributed to the Malaysian millennial was 390, focusing on five major cities, which are Kuala Lumpur city area, Shah Alam, Seremban, Georgetown, and Johor Bharu. After gathering the data, IBM SPSS version 24 was used to analyse all the collected data.

IV. RESULT AND DISCUSSION

Table 1 depicts the respondents' profiles comprising gender, race, education background, age, as well as income. The table confirm that the highest number of the respondents are female, representing 68.5% and 31% are male. About 321 respondents are Malay, followed by Chinese representing thirty-three respondents and India with twenty-eight respondents and others with nine respondents. Furthermore, more than 50 percent of the respondents are aged among 18 and 23 years old (57.2%).

The minority of the respondents are aged more than 36 years old representing 4.9%. With regard to the education background, most of the respondents are a degree holder with 58.2% followed by diploma holder representing 21.3%. The least respondent is a SPM holder with representing 9.2%. In term of their income, most of the respondents earn less than RM 1,000.00 per month representing 48.2% of the total of respondents followed by (24.1%) income from RM 1,001 to RM 5,000 monthly representing 24.1%.

The lowest income earn by the respondent is above RM 15,001 monthly representing 2.8%.

Table 1: Demographics of consumer

Respondent Profile	Classification	Frequency n=390	Percentage (%)
Gender	Male	121	31
	Female	267	68.3
Race	Malay	321	82.3
	Chinese	33	8.5
	Indian	28	7.2
	Others	9	2.3
Age	18-23	223	57.2
	24-29	74	19.0
	30-35	74	19.0
	36 and above	19	4.9
Education Background	SPM	36	9.2
	Diploma	83	21.3
	Degree	227	58.2
	Postgraduate	44	11.3
Monthly income (RM)	Less than 1,000	188	48.2
	1,000 - 5,000	94	24.1
	5,001 – 10,000	76	19.5
	10,001 – 15,000	21	5.4
	15,001 and above	11	2.8

Table 2 signified that the result of all the relationships between the model variables. Using the IBM SPSS version 23, it is revealed that the entire hypothesis H1, H2, and H3, is supported. For every 1 unit increase of performance, the behaviour score will increase by 0.23 (β: 0.23; p-value < 0.001). Facilitating condition is significantly and positively related to behaviour where for every 1 unit increase in facilitating condition, the behaviour score will increase by 0.29 (β: 0.29; p-value < 0.001). Furthermore, social influence is significantly and positively related to behaviour where for every 1 unit increase in social influence, the behaviour score will increase by 0.12 (β: 0.12; p-value < 0.001).

Table 2: Results of Hypothesis

Hypothesis	Relationship	Beta Value (β)	Significance Level	Outcomes
H_1	PE =>BHI	0.23	0.05	Accepted
H_2	SI =>BHI	0.29	0.05	Accepted
H_3	FC =>BHI	0.12	0.05	Accepted

Note: PE= Performance Expectancy; SI= Social Influence; FC= Facilitating Conditions; BHI= Behavioural Intention

V. CONCLUSION

This study's findings demonstrate the importance of understanding the determinants of tourists' usage of mobile travel applications. The current study looked at only three dimensions, which are performance expectancy, social influences, and facilitating conditions, as suggested by the previous researchers. This study's findings on facilitating conditions provide important theoretical and managerial contributions including contribution to the extant literature on application usage and mobile technology, especially for the area of travel and tourism. In addition, the current study is beneficial to the industry players including developers of mobile travel applications, tourism and travel companies, and decision-makers by giving them an understanding of travellers' preferences and utilisation of mobile travel applications.

The findings of this study may be used to develop and improve novel travel apps that can attract travellers to visit the country as well as generating more revenue to the country. In improving the generalisability of the results, replicated studies are proposed in future studies, where this study can be carried out with similar model studies between different settings. In addition, future research may require more work to develop and test a scale that may apply to a specific type of travel mobile apps. Hence, future studies also suggested to look at the necessity to build a universal or uniform multi-dimensional measure that can measure a variety of product categories. In conclusion, the current study has confirmed the existence of a positive relationship among the usage of mobile travel applications and each of performance expectancy, social impact, and facilitating conditions.

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AUTHORS PROFILE

Nurzehan Abu Bakar is an academician at Department of Tourism, Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. Her research focuses are mainly in Hospitality and Tourism area. She holds a Master Degree from the Universiti Teknologi MARA, Malaysia and currently pursuing his PhD in Tourism area.

Nik Alif Amri Bin Nik Hashimis a lecturer in the Department of Tourism Management, Faculty of Hospitality, Tourism and Wellness, University Malaysia Kelantan, Malaysia. He has been involved in research plans and published several articles nationally and internationally. His expertise area include Tourism and Hospitality Management, Travel Risk Perceptions, Destination Image, Travel and Tours, Tourism Technology, Tourism Event Management and Crisis & Disaster Management. He is now taking a Doctor of Philosophy (PhD) focusing on Tourism & Hospitality at the University of Queensland, Australia

Nor Maizana Mat Nawi is a lecturer in the Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. Her research focuses are mainly in Hospitality and Management area. She holds a Master Degree from the Universiti Teknologi MARA, Malaysia and currently pursuing his PhD in Hospitality area.

Marlisa Abdul Rahim a senior lecturer in the Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. Her research contribution is mostly on Human Resource, Tourism Management, and Management. She holds a Doctor of Philosophy (PhD) from the Universiti Sultan Zainal Abidin, Terengganu, Malaysia.

Abdullah Muhammed Yusoff, is a lecturer in the Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. His research focuses are mainly in Hospitality and gastronomy area. He holds a Master Degree from the Universiti Teknologi MARA, Malaysia and currently pursuing his PhD in gastronomy and entrepreneurship.

Roslizawati Che Aziz is a senior lecturer in the Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. Her research contribution is mostly on Tourism Development, Tourism Management, Sustainable Tourism, Recreation, and Appreciative Inquiry. She holds a Doctor of Philosophy (PhD) in Tourism Management from the Universiti Putra Malaysia.

Ghazali Ahmad is an Associate Professor in the Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. His research contribution is mostly on Hospitality & Tourism Management and Entrepeneurship. He holds a Doctor of Philosophy (PhD) in from the University of Strathclyde, Glasgow, UK.