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The factors affecting customer e-Satisfaction towards mobile accommodation booking applications – Case of Da Nang residents in Vietnam

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Abstract: *With the growth of mobile network and the ubiquity of smartphones, the utilisation of mobile tourism applications is projected to boom significantly in the near future. Accordingly, the mobile accommodation booking application (MABA) will become an essential part of tourism activities. This article has partly explained the e-Satisfaction and Use Behaviour of Da Nang residents towards mobile accommodation booking applications. UTAUT2 model has been applied to research into customers' attitudes and behaviour towards MABAs at the first time, in case of Da Nang residents. Furthermore, this article has also examined the validity of UTAUT2 in explaining customer behaviour, as well as the role of each construct in UTAUT2, in case of Da Nang residents. Also, this article has examined effects of e-WOM on customer e-Satisfaction by combining 2 specialised variables MABAs. Result has confirmed Online Reviews crucially affect customer e-Satisfaction, in case of Da Nang residents. Finally, this article has contributed to knowledge about new product adoption and technology usage in the context of MABAs. Outcomes from article can partly strengthen UTAUT2 and shape the future approaches.*

Keywords: *Tourism, MABA, Da Nang residents.*

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I. INTRODUCTION

Tourism is one of the principal sectors that has an enormous impact on the economic development towards countries, along with the numerous sectors it is connected with. Vietnam's economy in the period 2016-2019 has seen the continuous growth of both outbound and inbound tourism. However, the Covid-19 pandemic with many new variables caused a sharp decline in the number of visitors, causing heavy damage to tourism businesses and workers, directly affecting the growth targets, state budget revenue in general and Da Nang city in particular in the next 2 years. In early 2022, Da Nang's tourism industry has offered two recovery and development scenarios and the initial results have shown optimistic signals. Specifically, the total number of tourists visiting and traveling in Da Nang city during the Lunar New Year 2022 is estimated at 35,939, an increase of 16.71% compared to 2021 in which, visitors reached 25,500 visits.

The appearance of new tourism trends (i.e. travel "to change", travel "to show", solo travel) could motivate travellers to use various travel applications, including reservation applications (UNWTO, 2019). With the development of mobile networks and the popularity of smartphones, travelers are gradually tending to book accommodations through mobile apps instead of websites. Therefore, the Mobile Accommodation Booking App (MABA) will become an essential part of travel activities.

There are many researches related to MABAs (Agag & El-Masry, 2016; Lee, 2018; Wang & Wang, 2010). Some researchers have updated new theories to explain why people choose and utilise a particular mobile technology (Kwon et al., 2013; Rita et al., 2018; Tao et al., 2018). Nonetheless, there are only a very few research on customers' attitude and actual use behaviour. As far as author knows, there are no researches into attitudes and behaviour of Danang residents towards mobile tourism applications. The majority of Da Nang residents is young people, who have large demand for travel and are sensitive to technology. With monthly income per capita of 7.32 million VND (Da Nang Statistics Department, 2021), the need for entertainment, especially tourism of Da Nang residents is increasing. Tourists from Da Nang can make a major contribution to tourism industry.

From the above problems, understanding the factors affecting customers' satisfaction towards mobile accommodation booking applications (MABAs) in case of Da Nang will widen knowledge about the attitudes and use towards mobile tourism technology. Furthermore, the results of the study will help marketers, administrators of booking platforms to improve service quality and meet customers' demands, thereby improving customers' experiences, in case of Da Nang residents. Therefore, the author conducted the study as

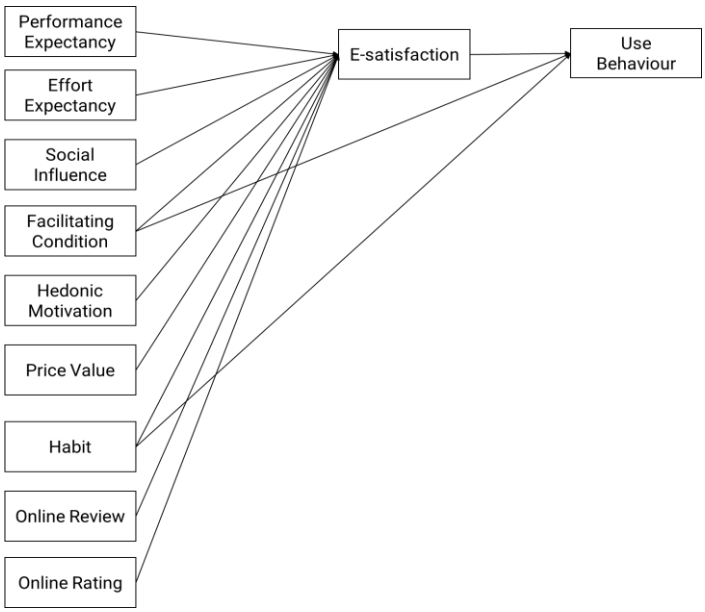
"***The factors affecting customer e-Satisfaction towards mobile accommodation booking applications – Case of Da Nang residents in Vietnam***"

II. PROPOSAL MODEL

From the results of the author's research in the previous article, the author summarizes the proposed research model as follows:

Proposal model was established based on UTAUT2 owing to its capability of extension and adaption to specific context (Venkatesh et al., 2012). Online Review and Online Rating were integrated to examine the role of e-WOM. E-Satisfaction was selected to explain customer's attitude towards e-commerce products.

Fugure 1. Proposal model



2.1. Variables development

2.1.1. Performance Expectancy (PE).

Performance Expectancy is defined as the level which a person thinks about system that functions will bring plus points and utilities while tackling given tasks. PE is developed from different variables relating to perceived usefulness and functional expectation (Venkatesh et al., 2003). By using MABA, customer can locate surrounding rooms and navigate routes more conveniently based on GPS connection (H.-Y. Wang & Wang, 2010). PE is deemed to be the primary predictor of customer behaviour regarding to technology adoption (Venkatesh et al., 2012). Many authors provoked that prediction in tourism field (Escobar-Rodríguez & Carvajal-Trujillo, 2013; Morosan & DeFranco, 2016; No & Kim, 2014; Rita et al., 2018). If customers recognise benefits from using MABA to reserve rooms rather than traditional channels, they will raise the e-satisfaction with apps, and subsequently, the level of continued intention. To sum up, the following hypothesis is established:

Hypothesis 1: Performance Expectancy positively affects e-Satisfaction.

2.1.2. Effort Expectancy (EE)

Effort Expectancy indicates the level of ease associated with the usage of application (Venkatesh et al., 2003). EE is based on one of principal contributions of TAM model, Perceived ease of use. General people prefer systems easy to access without taking much effort to (Davis et al., 1989; Kang, 2014). Mobile features are evolving with smartphone development. Owing to conducting bookings through a few taps, a user-friendly application enhancing customers' experiences will gain their e-satisfaction, then lead to continued intention (Kim et al., 2013). Service app, which helps customer quickly approach, positively affects their e-satisfaction towards utilising it (Satama, 2014). Generally, the easier application is, the more positive attitude user has towards using that app. However, Venkatesh et al (2003) also noted that the more users use an application, the less significant EE shows. If customer maintains MABA usage sustainably, the effect of EE variable will be considered to decrease. Nevertheless, diverse researches have illustrated that EE is still a noteworthy factor to determine users' behaviour towards a tourism technology (Escobar-Rodríguez & Carvajal-Trujillo, 2013; Fong

et al., 2017; Martín & Herrero, 2012; No & Kim, 2014; Wu et al., 2011). Thus, the hypothesis about relationship between Effort Expectancy and e-Satisfaction is put forward:

Hypothesis 2: Effort Expectancy positively affects e-Satisfaction.

2.1.3. Social Influence (SI)

Social Influence reflects degrees of customers' awareness that important person or close crowd (e.g., family, relatives and friends) advise them to try a specific technology (Venkatesh et al., 2003). SI, as a direct determinant towards behavioural intention, is remarkably similar to Subjective Norm in TRA, TAM2 and other extension versions of TAM. According to Ajzen (1991), if a particular behaviour is accepted by ones' close group, that person seems to form intentions to engage in thereof. Previous studies have confirmed SI to act a significant role in persuading general users' new technology acceptance. Morosan & DeFranco (2016) found positive effect of SI upon customers' decision to adopt NFC payment method. To consolidate these confirmations, in an extended TRA model, Lee et al. (2007) influences from familiar society acted a major role affecting Korean customers intensions to purchase travel online. In contrast Gupta & Dogra (2017) claimed that SI did not significantly affect customers' attitudes and behaviours towards mapping apps usage on journeys. These differences have been already forecast by Venkatesh et al. (2003) in their article. SI seems to have significant effect on in the very first times when user utilises new apps. Its effect is thought to be weakening over time and eventually becoming nonsignificant with sustainable usage. Despite their development recently, these MABAs are quite novel for Viet Nam market, SI could be argued to play a strong role in their adoption. There are still possibilities that people having close contacts with MABAs users could adopt these apps too. Hence, the hypothesis about relationship between SI and e-Satisfaction is represented:

Hypothesis 3: Social Influence positively affects e-Satisfaction.

2.1.4. Facilitating Conditions (FCs)

Facilitating Conditions variable is the level to which customers perceive that there are existing resources and usage supports to help them perform a behaviour. This variable not only is based on perceived behavioural control from TAM model, but also captures the compatibility level of the technology with the existing values, experience and demands of the customer (Venkatesh et al., 2003). In case of MABA, the usage of app includes mobile device (e.g., smartphone), internet connection, foremost knowledge, experiences and skills related to general internet use such as browsing, navigating, making reservations and payments via e-banking system. Obviously, to fully utilise MABA, it is necessary for customers to have technological conditions and skills to use that services via its mobile platform. Facilitating conditions can thus be expected to be especially important in the attitude and behaviour towards MABA. This variable, however, is supposed to vary more than others as customers differ greatly in the resources, skills and support they have available. While existing literatures argue whether facilitating conditions affect user intention or real experiences of technology (Gupta & Dogra, 2017; Martín & Herrero, 2012), Venkatesh et al. (2003) claimed that FCs as customers perception either limit or encourage their utilisation of technology. Nevertheless, significant effect of FCs on users' attitude and behaviour has been verifies among diverse tourism research fields, for example, location-based social media (Chong & Ngai, 2013), online airline purchase (Escobar-Rodríguez & Carvajal-Trujillo, 2013), booking reservations via mobile apps (Fong et al., 2017). Therefore, relationships between FCs, e-Satisfaction and Use Behaviour are hypothesised:

Hypothesis 4a: Facilitating Conditions positively affects e-Satisfaction.

Hypothesis 4b: Facilitating Conditions positively affects Use Behaviour.

2.1.5. Hedonic Motivation (HM)

Hedonic motivation is established as level of fun, entertainment, playfulness, enjoyment or pleasure customers derive from experiences with technology (Venkatesh et al., 2012). In customers context, they will use technology if they recognise enjoyment, pleasure or fun from its usage. Besides the clear role of extrinsic motivations (e.g. PE, EE), HM has been illustrated to be one of primary factors of technology acceptance and usage behaviour regarding to intrinsic motivations (Brown & Venkatesh, 2005; Venkatesh et al., 2012). From a hedonic viewpoint, customers perceive entertainment and consider the purchase process as an enjoyable experience where finishing transaction is not compulsory (e.g. not acknowledging booking) (Anderson et al., 2014). Nowadays, apps are designed not only to help customer complete tasks, but also to relax. In case of accommodation booking apps, user will interact with various accommodation aspect suggestions, including beautiful room images, additional services, convincing advertisements and others' comments. These aspects, for instance, images of a specific service (e.g. destination, food, room), may affect their apps adoption intention regardless of whether these apps compatible with customers' lifestyle (Law et al., 2018; Lu et al., 2015; Ozturk et al., 2016, 2017). Via MABAs, customers can leave reviews and ratings as well after finishing journey (See-To & Ho, 2014). By making feedbacks, they will perceive their important role for both hoteliers and customers

themselves, which will raise pleasure feelings. Researching into HM, several authors have indicated the significant effect of this variable on many tourism segments, for example, location-based service (Chong & Ngai, 2013), Air BnB app (Satama, 2014), NFC mobile purchase method (Morosan & DeFranco, 2016), mapping app (Gupta & Dogra, 2017). Customers will satisfy with their MABAs experiences, if they aware of positively emotional motivation within these platforms. Consequently, the following hypothesis is put forward:

Hypothesis 5: Hedonic Motivation positively affects e-Satisfaction.

2.1.6. Price Value (PV)

Price value is developed as the cognitive trade-off between the noticeable benefits that apps bring to and the monetary cost spending for them. PV was installed to UTAUT2 model for the reason that the customers are sensitive to prices due to the fact that they are forced to purchase monetary cost during utilisation process by themselves (Venkatesh et al., 2012). Monetary cost includes Internet connection cost, price given by hotelier and service fee from apps. PV has a positive effect as long as benefits are perceived to exceed monetary cost. However, many of these apps do not represent total monetary cost for customers (Kim et al., 2008). Bigné et al. (2010) show that PV refer to benefits (price saving) customer will receive instead of mention the additional cost. Customers while shopping online search for beneficial deals (Jensen, 2012). In case of MABAs, values are created through the fact that MABAs take over intermediary role between hoteliers and customers, eradicate the traditional middlemen like tour agencies as well. PV could be a strong motivation for customers as highly competitive price from MABAs in most cases. Therefore, the relationship between PV and e-Satisfaction is established:

Hypothesis 6: Price Value positively affects e-Satisfaction.

2.1.7. Habit (HT)

Habit is established to be the state that human might repeat behaviours initially owing to previous studying or using a particular technology product (Limayem et al., 2007). Indeed, it is a factor reflecting the results of prior experiences. Ajzen & Fishbein (2005) noted that prior experiences will influence various creeds and predict behaviour later consequently. Customers engaging e-commerce environment experience a series of repetitive steps, which could allow habit to form (Venkatesh et al., 2012). In the context of tourist service industry, it is possible that customers have maintained the habit of seeking information from accommodation places before and during journeys, which can be considered to develop the habit of using MABAs even when they don't have any plan yet. Habit could reinforce customers' attitude and actual usage and many existing articles have claimed that (Chong & Ngai, 2013; Morosan & DeFranco, 2016; Rita et al., 2018). However, Escobar-Rodríguez & Carvajal-Trujillo (2013) Gupta & Dogra (2017) have illustrated the role of habit on real experiences of technological tourist service, instead of intention. Therefore, relationships between Habit, E-Satisfaction and Use Behaviour are hypothesised:

Hypothesis 7a: Habit positively affects e-Satisfaction.

Hypothesis 7b: Habit positively affects Use Behaviour.

2.1.8. Online Reviews (ORs)

Online Reviews (ORs), which are the virtual version of crowd opinions, refer to any compliment, criticism or neutral feedback about consumption experiences via online platforms by potential, former, or current customers (Filieri, 2015; Filieri & McLeay, 2013). ORs function, which is the bridge between customers and suppliers, not only represent customer emotional evaluations with the experiences but also offer useful source of knowledge for following customer to give decisions (Bissell, 2011; Schuckert et al., 2015; Xiang & Gretzel, 2010). Among all features of a mobile accommodation booking application, "ratings & reviews" is perceived to be the most important and positive factors (Chong & Ngai, 2013; Senecal & Nantel, 2014; D. Wang et al., 2015). Customers' decisions often rely on others' experiences owing to its reducing uncertainty (Cheng et al., 2019). Guo et al. (2017) showed that accommodation experience and service quality information is identified as major factors influencing customer attitudes. Based upon satisfaction with what they have read, customers will establish a reservation via apps later (Chaw & Tang, 2019; Sparks & Browning, 2011). In the alternative evaluation process, customers have increasingly considered such reviews as a means of information (Filieri, 2015). As long as these reviews are recognised as comprehensive, reliable, up-to-date and relevant, customers tend to raise satisfaction towards platforms (Cheung et al., 2008; Filieri, 2015; Kaplan & Haenlein, 2010; Li & Hitt, 2008; Sparks & Browning, 2011). Therefore, hypothesis is established as below:

Hypothesis 8: Online Reviews positively affects e-Satisfaction.

2.1.9. Online Ratings (ORTs)

A factor directly related with Online Reviews is Online Ratings. Online Ratings is defined as a type of E-WOM which indicates reviewers' average evaluation of the different features (e.g., room quality, price,

location) of a product or service as numerical or visual forms (Filieri, 2015; Filieri & McLeay, 2013). Different platforms adopt different ORTs scales which are graphically illustrated using level of stars or points. For example, Airbnb applies a five-stars scale from 1 star (worst) to 5 stars (best) to rating accommodation. On Booking.com, customers could rate qualities via a ten-point scale from 1 (bad) to 10 (exceptional). ORTs may offer customers a panoramic view about the quality of an accommodation place as they conclude prior users' evaluations of the main features (Filieri, 2015). Due to vast numbers of accommodation, customers might prefer to adopt information shortcuts to reduce time and efforts for choice process. And instead of reading long linguistic paragraphs, they may use summary data such as visual and numerical ratings to understand the proportion of negative and positive review for a particular accommodation. ORTs emerged as the determining factor in customers' adoption of information from E-WOM (Filieri & McLeay, 2013). Similarly, Aicher et al. (2016) also pointed that online ratings significantly affect customers' behaviour, while the role of ORs was doubt still doubt by half of participant. Customers regard ORTs as a primary means of information in lodging decision process, which can lead to a raise in accommodation bookings (Ye et al., 2011). Based on the above features, ORTs factor could uplift customers' attitude towards efficiency and performance of MABAs. Therefore, the connection between Online Ratings and e-Satisfaction is hypothesised:

Hypothesis 9: Online Ratings positively affects e-Satisfaction.

2.1.10. E-Satisfaction (e-SA)

E-Satisfaction is developed as the level of pleasure that people perceive form their previous transaction with a particular electronic commerce company (Anderson & Srinivasan, 2003). Along with this definition, if the results from MABAs experiences equal or exceed customers' expectations, customers will feel satisfied, and perhaps have positive behaviours towards such apps. According to Ajzen & Fishbein (2005), the outcomes of people' past experience and interaction could affect their awareness and attitudes and then forecast what they expect to behave in the same conditions. E-Satisfaction was claimed to have a link with repurchase intention (Christodoulides & Michaelidou, 2010; Uzun & Poturak, 2014). The more E-Satisfaction customers feel, the more positively they behave, especially profitable re-visitation (Ting et al., 2013). Therefore, the hypothesis about E-Satisfaction and Use Behaviour is made:

Hypothesis 10: E-Satisfaction positively affects Use Behaviour

2.2. Items development

To measure functional system perception, Venkatesh et al. (2003) suggested four items (PE1-PE4) relating to the importance and usefulness of system, based on previous TAM model. On the other hand, Kim et al. (2019) used similar items revised for accommodation apps (U1-U4). Consistent with this study, Performance Expectancy of MABAs is measured by four items PE1, PE2, PE3, PE4.

Regarding to the level of ease while using system, Davis (1989) once developed six items from PEOU1 to PEOU6. After that, Venkatesh et al. (2003) adjusted down to four items which are considered to be meaningful and gather answers faster. Therefore, four (EE1, EE2, EE3, EE4) are adapted to measure Effort Expectancy. With the same reason, items of Facilitating Conditions are modified from five down to four items (SI1, SI2, SI3, SI4), which are easier for respondents to accept.

Fishbein & Ajzen (1975) suggested two items SN1 and SN2 to examine crowd effects. Adapting this idea, Venkatesh et al. (2003) also noted the role of opinion form people are appreciated by respondents. Therefore, Social Influence will use three items SI1, SI2 and SI3.

Venkatesh et al. (2012) once specialised three items to measure the level of entertainment towards technology experiences. Consistent with this study, similar items (EN1, EN2, EN3) were adapted in the context of hospitality applications (Kwon et al., 2013; Kim et al., 2019). Consequently, Hedonic Motivation will be examined by HM1, HM2 and HM3.

Items for Price Value (PV1, PV2, PV3), Habit (HT1, HT2, HT3, HT4) and Use Behaviour (UB1, UB2, UB3) were modified to fit customer context. After considering the suitability for Da Nang residents, all items are selected.

According to crowd opinions, Kim et al. (2017) used three items (Review 1, Review 2, Review 3) in a negative approach to measure Online Reviews. However, it didn't cover all aspects of crowd opinion, for examples, the sufficient of depth and breadth. Furthermore, it seems that Filieri's items have been the most suitable items for this segment up to now. Therefore, e-WOM items in this thesis are OR1, OR2, OR3, OR4, OR5, OR6, OR7, ORT1, ORT2, ORT3.

E-Satisfaction items (SA1, SA2, SA3) from Anderson & Srinivasan (2003) are also selected due to their suitability for the characteristics of Da Nang residents. And finally, all above mentioned items are listed in Appendix 1.

III. RESULTS AND DISCUSSIONS

3.1. Sample description

3.1.1. MABAs awareness

The population for sampling is Da Nang residents who are 18 years old or above and have experienced reserving hotels or accommodation in Vietnam or overseas via mobile accommodation booking applications at least once. From 8th to 15th January 2022 there were 220 people agreed to participate in the survey. Among them, the number of people who really enjoyed, stopped using and had never used are 129 (58.6%), 37 (16.8%) and 54 (24.5%) respectively. After filtering out unnecessary and error questionnaire, 160 questionnaires (72.7%) continued to be used for deep research. Whether using or not, almost respondents (99.5%) agreed that they had known and recognised applications available at the time of the survey, which is presented in table.

Booking.com was the most popular MABAs according to Da Nang residents, followed by Agoda and Traveloka. Meanwhile, domestic apps like Vntrip, Mytour and Luxstay were recognised by less than 30% participants. This result also reflects the judgment of VECOM (2021) about Vietnam online tourism market with the domain roles of foreign apps.

3.1.2. Demographic characteristics statistics

Among 160 participants, females accounted for 75.6%, 18-29 years old was the most common age with 89.4%. University level occupied for 90.6%, whereas college level was 2.5%. Most of respondents received less than 5 million VND per month.

3.2. Evaluation of the Structural Model result

3.2.1. Collinearity Indication

It can be illustrated from table 4.4.1 that all *VIF* are greater than 0.20 (lower than 5) as recommendation. According to *VIF values*, it is multicollinearity that below the critical levels. Therefore, it can be claimed that all variables in proposal model are definitely separable form each other.

	PE	**EE**	**SI**	**FCs**	**HM**	**PV**	**HT**	**ORs**	**ORTs**	**e-SA**	**UB**
e-SA	1.95	1.96	1.56	2.41	1.53	2.15	1.81	1.76	1.96		
UB				1.18			1.34			1.36	

Table 0. VIF values of variables.

3.2.2. Coefficients of Determination

It can be shown from table 4.4.2.a that determination coefficients are supported by a remarkable amount of R^2_{adj} accounted for *e-Satisfaction* (0.49) and *Use Behaviour* (0.58), similar to the finding of Venkatesh (2012). This result confirms the validity of proposal model to moderately explain Da Nang residents' satisfaction and actual use towards *MABAs*.

	E-Satisfaction	**Use Behaviour**
R^2	0.52	0.59
R^2_{adj}	0.49	0.58

Table 0.a. R^2 value

Furthermore, the f^2 *size effect* is also calculated to verify the role of each independent variable towards *e-Satisfaction* and *Use Behaviour*. Result of f^2 *size effect* is illustrated in table 4.4.2.b. Towards *e-SA*, *ORs* can be considered to have medium effect with f^2 *value* close to 0.15. Towards *UB*, *e-SA* may have a moderate impact with value 0.11. *FCs* also moderately affects *UB* with f^2 *value* of 0.15. Remarkably, with f^2 *value* of 0.39, it can be concluded that *HT* have a large effect on *UB*. The remain cases have weak effects on dependent variables.

	E-Satisfaction	**Use Behaviour**
PE	0.04	
EE	0.02	
SI	0.02	
FCs	0.01	0.15
HM	0.08	

PV	0.02	
HT	0.01	0.39
ORs	0.12	
ORTs	0.00	
e-SA		0.11

Table 0.b. f^2 size effect

3.2.3. Predictive Relevance

The *Blindfolding* process is used to explore the predictive relevance of model. As result is shown in table 4.4.3.a, Q^2 values of both *e-SA* (0.35) and *UB* (0.42) are larger than recommended value. This result confirms the validity of proposal model.

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
e-SA	480	310.27	0.35
UB	480	278.83	0.42

Table 0.a. Q^2 value

Calculation on *the q^2 size effect* are also brought out to explore whether the disappearance of independent variables can affect model's predictive relevance. In table 4.4.3.b, *FCs* can be considered to have a medium effect on *UB* relevance with q^2 value of 0.09. By contrast, *HT* surely affect *UB* with q^2 value of 0.19. The rest effects are insignificant.

	e-SA	**UB**
PE	0.02	
EE	0.00	
SI	0.00	
FCs	0.00	0.09
HM	0.03	
PV	0.00	
HT	0.00	0.19
ORs	0.06	
ORTs	0.00	
e-SA		0.00

Table 0.b. q^2 size effect

3.2.4. Structural Model Path Coefficients

The Bootstrapping routine is applied with 5000 subsamples at significance level of 5% (table 3.4). The result of path coefficients related to hypotheses are presented in detail as follows:

H#	Hypothesised Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
H1	PE -> e-SA	0.19	0.20	0.08	2.35	0.02
H2	EE -> e-SA	0.14	0.14	0.09	**1.50**	**0.13**
H3	SI -> e-SA	-0.11	-0.10	0.09	**1.24**	**0.22**
H4a	FCs -> e-SA	-0.10	-0.10	0.09	**1.12**	**0.26**

H4b	FCs -> UB	0.27	0.27	0.06	4.34	0.00
H5	HM -> e-SA	0.24	0.24	0.07	3.72	0.00
H6	PV -> e-SA	0.14	0.14	0.09	**1.64**	**0.10**
H7a	HT -> e-SA	0.08	0.07	0.09	**0.82**	**0.41**
H7b	HT -> UB	0.46	0.46	0.07	6.58	0.00
H8	ORs -> e-SA	0.32	0.33	0.08	4.21	0.00
H9	ORTs -> e-SA	0.03	0.03	0.09	**0.37**	**0.71**
H10	E-SA -> UB	0.25	0.25	0.07	3.39	0.00

Table 0. Path Coefficients result

Hypothesis 1: Performance Expectancy positively affects *e-Satisfaction.*

Result points that the relationship between *PE* and *e-SA* has a value of 0.19 with *t-value* = 2.35 and *ρ-value* = 0.02 at significant level of 5%, therefore H1 is supported. Thus, *Performance Expectancy* is a factor affecting customer *e-Satisfaction* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, there more benefits people perceive, the higher their *e-Satisfaction* towards *MABAs* will be.

Hypothesis 2: Effort Expectancy positively affects e-Satisfaction.

Result shows that the relationship between *EE* and *e-SA* has a value of 0.14, but *t-value* = 1.50 and *ρ-value* = 0.13 don't meet requirements at significant level of 5%. Therefore, H2 is not supported.

Hypothesis 3: Social Influence positively affects e-Satisfaction.

Result illustrates that the relationship between *SI* and *e-SA* has a value of -0.11, but *t-value* = 1.24 and *ρ-value* = 0.22 don't meet requirements at significant level of 5%. Therefore, H3 is not supported.

Hypothesis 4a: Facilitating Conditions positively affects *e-Satisfaction.*

Result illustrates that the relationship between *FCs* and *e-SA* has a value of -0.10, but *t-value* = 1.12 and *ρ-value* = 0.26 don't meet suggested requirements at significant level of 5%. Therefore, H4a is not supported.

Hypothesis 4b: Facilitating Conditions positively affects Use Behaviour.

Result points that the relationship between *FCs* and *UB* has a value of 0.27 with *t-value* = 4.34 and *ρ-value* = 0.00 at significant level of 5%, therefore H4b is supported. Thus, *Facilitating Conditions* is a factor affecting customer *Use Behaviour* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, the more technology and skills conditions they have, the more positively they behave towards *MABAs*.

Hypothesis 5: Hedonic Motivation positively affects e-Satisfaction.

Result shows that the relationship between *HM* and *e-SA* has a value of 0.24 with *t-value* = 3.72 and *ρ-value* = 0.00 at significant level of 5%, therefore H5 is supported. Thus, *Hedonic Motivation* is a factor affecting customer *e-Satisfaction* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, the more enjoyable and satisfied they feel, the higher their *e-Satisfaction* will be.

Hypothesis 6: Price Value positively affects e-Satisfaction.

Result points that the relationship between *PV* and *e-SA* has a value of 0.14, but *t-value* = 1.64 and *ρ-value* = 0.10 don't meet suggested requirements at significant level of 5%. Therefore, H6 is not supported.

Hypothesis 7a: Habit positively affects e-Satisfaction.

Result illustrate that the relationship between *HT* and *e-SA* has a value of 0.08, but *t-value* =0.08 and *ρ-value* = 0.41 don't meet suggested requirements at significant level of 5%. Therefore, H7a is not supported.

Hypothesis 7b: Habit positively affects Use Behaviour.

Result shows that the relationship between *HT* and *UB* has a value of 0.46 with *t-value* = 6.58 and *ρ-value* = 0.00 at significant level of 5%, therefore H7b is supported. Thus, *Habit* is a factor affecting customer *Use Behaviour* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, the more they use, the more positively they behave towards *MABAs*

Hypothesis 8: Online Reviews positively affects e-Satisfaction.

Result points that the relationship between *ORs* and *e-SA* has a value of 0.32 with *t-value* = 4.21 and *ρ-value* = 0.00 at significant level of5%, therefore H8 is supported. Thus, *Online Reviews* is a factor affecting customer *e-Satisfaction* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, the more satisfied they feel about reviews posted on platforms, the higher *e-Satisfaction* they perceive toward *MABAs*.

Hypothesis 9: Online Ratings positively affects e-Satisfaction.

Result shows that the relationship between *ORTs* and *e-SA* has a value of 0.03, but *t-value* = 0.37 and *ρ-value* = 0.71 don't meet suggested requirements at significant level of 5%. Therefore, H9 is not supported.

Hypothesis 10: E-Satisfaction positively affects Use Behaviour

Result illustrates that the relationship between *e-SA* and *UB* has a value of 0.25 with *t-value* = 3.39 and *ρ-value* = 0.00 at significant level of 5%, therefore H10 is supported. Thus, *e-Satisfaction* is a factor affecting actual *Use Behaviour* towards *mobile accommodation booking applications*, in case of Da Nang residents. Indeed, the more *e-Satisfaction* they perceive, the more positive their behaviour will be towards *MABAs*.

IV. CONCLUSION

Findings from this article implicate some aspects of *MABAs* which marketers and platform designers should concentrate on.

First of all, the primary purpose of all mobile applications, including *MABAs*, is to help people complete their task quickly. Thus, apps developers should improve interface and interaction of *MABAs*. Features, such as navigating locations, searching and delivering suitable room deals, are essential and needed to run smoothly. User-friendly interface and diverse rooms suggestion should be displayed clearly and in harmony on smartphone screen. Booking process should be optimised to cut off waiting time. Consequently, customers will feel satisfied with *MABAs* which are convenient, flexible and professional.

Marketer and app designers should consider that using *MABAs*, as for customers, is a way to entertain. Making the use of *MABAs* fun and enjoyable is key to success. Each room suggestion needs to include vast numbers photographs of nice rooms, picturesque surrounding attractions. Moreover, interesting contents and pictures of tourists' activities should be attached too. Exciting and creative advertisements should be presented appropriately so as not to disturb customers. A visually attractive *MABAs* will be highly evaluated.

Online Reviews is the main determinant of customer satisfaction towards *MABAs*, in case of this thesis. Marketer and app designers should encourage tourist to give feedbacks about their experiences as long as they are reliable, detailed and extensive. As an important source of information, marketers should usually check the reliability of reviews and verification of users.

Habitual behaviour towards *MABAs* can motivate customer to use these apps in the future. Marketers and app designers should encourage customers to merge the search for accommodation information with the use of *MABAs* and turn it into a habit. In addition, *MABAs* need to add pop-up notification feature to remind customers about use habit.

Whether customers have necessary knowledge and skills or not, supports from developers are always a mandatory condition. Customer care is a key factor to keep customers engaged. Companies should increase their direct interaction with customers not only through apps but also via Facebook, Zalo, Skype and even telephone calls. If customers feel being cared and supported whenever they face problems, they will keep using MABAS.

Finally, attitudes take an important role in persuading customers to use *MABAs*. Above features, when run smoothly, will create overall *e-Satisfaction*. If *MABAs* make customers satisfied with their experiences, customers are likely to stick with.

Conflict of interest

There is no conflict to disclose.

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