Some Antecedents and Effects of using Mobile Apps in Tourism Marketing

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Keywords: Perceived Ubiquity, Perceived Informativeness, Perceived Personalization, Perceived Enjoyment, Mobile App Usefulness.

Abstract: The purpose of this paper is to provide an improved understanding of the effect of Perceived Ubiquity, Perceived Informativeness, Perceived Personalization, and Perceived Enjoyment towards Mobile App Usefulness, as well as Mobile App Usefulness towards Revisit Intention. A quantitative approach has been employed. The gathered data is obtained using questionnaire with itemized rating scale resulting in 100 respondents. For the purpose of data analysis, Structured Equation Model (SEM) method has been adopted. The causal model was validated using Smart-PLS 2.0. The results indicate that Mobile Application is an important antecedent of Revisit Intention and mediates the influence of Perceived Ubiquity, Perceived Informativeness, Perceived Personalization, and Perceived Enjoyment. The study provides a comprehensive framework of the antecedents and outcome of a mobile application's usefulness for tourism marketing. The findings provide insight for marketing managers and governments in developing a successful mobile application for tourism marketing.

1 INTRODUCTION

Indonesia's wide range of natural and cultural attractions is famous throughout the world and has drawn in throngs of foreign tourists. As an invisible export, tourism is playing an increasingly important role in Indonesia's economy. In developing local and international tourism, it is necessary to create appropriate programs that can increase the flow of foreign tourists. These programs can be implemented by increasing the marketing activities and the improvement of various facilities are needed by visitors such as customs services, as well as transportation facilities, banks, hostelries, restaurants, travel bureaus, etc.

During the last five years the number of international visits to Indonesia has soared. In 2017, Indonesia had 14.04 million visitors or an increase of 21.88 percent over the previous year's number of 11.52 million (BPS, 2017). These increasing numbers of tourists require ever-greater information about destinations, available attractions, transportation, souvenirs, and so on. However, getting all this information takes time. Tourists often experience frustration because they do not know where to go and who to ask for information. Information for tourists needs to be presented neatly and structured for easy access. Tourist maps and brochures have been a mainstay in disseminating information on tourist destinations, but these tools have their weakness. A tourist map can indeed help tourists find attractions easily, but not all the desired information can be displayed on a single sheet. Additionally, a brochure typically describes only a single destination attraction. However, these limitations have been overcome by digital technology, which has already transformed the tourism industry in developed markets and is now sweeping through emerging markets.

A survey published by Hootsuite in February 2018 indicates that the number of Internet users in Indonesia in January 2018 reached 132.7 million, with a penetration rate of 50%. From these data, there were 130 million active social media users. Meanwhile, the population of mobile device users is even higher, reaching 177.9 million users, with a penetration rate of 67%. Of these mobile device users, 120 million are active social media users. Therefore, if the popularity of digital technology is high enough, then its benefits will be increasingly realized, especially in the business world.

A mobile app, short for mobile application is

Briliana, V. and Prasetio, A.
Some Antecedents and Effects of using Mobile Apps in Tourism Marketing.
DOI: 10.5220/0008491702700275
In *Proceedings of the 7th International Conference on Entrepreneurship and Business Management (ICEBM Untar 2018)*, pages 270-275
ISBN: 978-989-758-363-6

application software designed to run on smartphones, tablet computers and other mobile devices. Originally, mobile apps were offered for informational and productivity purposes that included email, calendar, contacts, calculator and weather information. With the rapid magnification in the technology and users' prospects, the developer implements expanded into other categories such as GPS, ticket purchases, social media, etc.

Most recently, Loureiro (2017) found that low-cost airlines could not have become such a success without the Internet and easy options for selecting, booking, and paying for flights online. Yet digital technology should not be regarded as a quick and all-inclusive fix for engaging online consumers. Companies still need to recognize and fulfill the demands for a personalised, self-service, end-to-end journey experience.

A research gap was identified within the literature on mobile application features in tourism marketing. Much research has focused on Perceived Ubiquity, Perceived Informativeness, and Perceived Personalization (Okazaki & Mendez, 2013; Kim et al., 2016), but has overlooked how perceived enjoyment could influence perceived benefit for travelers. However, none of these studies reached conclusions which can be applied to all countries—such as in Indonesia. Indonesia has a cultural and economic environment that is markedly different from those countries where research has been previously conducted.

This research was conducted in the province of Banten, which is a popular tourist destination. At one time an exotic and little-known corner of the world, Banten has since become famous for its natural beauty, as well as its rich local history and religious wisdom. Ujung Kulon National Park in Banten has been designated as one of the Seven Wonders of Indonesia.

The main objective of this research is to examine the impact of Perceived Ubiquity, Perceived Informativeness, Perceived Personalization, and Perceived Enjoyment towards Mobile App Usefulness, as well as Mobile App Usefulness towards Revisit Intention.

2 LITERATURE REVIEW

2.1 Perceived Ubiquity

Perceived Ubiquity is a person's perception of a product or service being available for use (Okazaki and Mendez,2013; Kim et al., 2016). "Ubiquity" simply means being everywhere (Subhadip Roy, 2017). The existence of "anywhere, anytime" benefits enhances the usefulness of mobile features, leading to positive attitudes towards them (Okazaki and Molina, 2012).

H1. Perceived Ubiquity influences Mobile App Usefulness.

2.2 Perceived Informativeness

Kim et al., (2013) point out that apps with informative features are more likely to be used. Studies have investigated how the informative features of mobile apps increase consumer attitudes toward brands and purchase intention (Bellman et al., 2011).

H2. Perceived informativeness influences Mobile App Usefulness.

2.3 Perceived Personalization

Personalized services based on location directly influence task performance and enhance perceived usefulness (Ho, 2012). Previous studies indicate that the informativeness of mobile apps provides enjoyable experiences to consumers. According to Yang and Jun (2002), personalization is an important determinant of service quality for internet buyers. It is also of high perceived value for users of mobile shopping applications.

H3. Perceived personalization influences Mobile App Usefulness.

2.4 Perceived Enjoyment

Wen et al., (2011) stated that enjoyment is a holistic sensation as people are totally involved in a certain activity. Online shopping enjoyment is just as important as enjoyment in a physical shop and can influence a customer's intentions and behavior. Perceived enjoyment is the extent to which a person can feel happy about something they get (Indah and Briliana, 2017). An earlier study by Rajalie and Briliana (2014) showed that the higher the perceived pleasure, the greater the intention to repurchase.

H4. Perceived enjoyment influences Mobile App Usefulness.

2.5 Mobile App Usefulness

Mobile applications now allow transactions from any location in real time. Because of this convenience, sellers must provide interfaces that

allow buyers to conduct their transactions anytime and anywhere, thereby providing opportunities for consumers to enjoy the services offered without restrictions on time or place (Mallat et al., 2009).

H5. Mobile App Usefulness influences revisit intention.

2.6 Revisit Intention

According to a study by Moez Ltifi (2018), more and more cell phone users have a good experience when using a mobile application. By doing so, their use of m-service operations is increased. Meskaran et al., (2013) note that online purchase intention refers to a situation where a consumer is willing to make an online transaction. In this context, customers are willing to find, select, and purchase products via mobile apps. Revisit intention relates to consumers' behavior and their intentions to use information technologies after their initial adoption (Chang, 2013). However, research on the determinants of the Revisit Intention of mobile applications in the tourism context remains limited.

3 RESEARCH METHODOLOGY

PLS analysis was selected because it can assess all paths simultaneously for model prediction. The SmartPLS 2.0 software package was used to assess the model in two stages, which fulfilled the criteria suggested by Anderson and Gerbing (1988). Perceived Ubiquity, Perceived informativeness, Perceived personalization, and Perceived Enjoyment were proposed as antecedents of Mobile App Usefulness in the first stage of the model, covering H1, H2, H3 and H4. The second stage of the model was used to study the influence of Mobile App Usefulness in the proposed Revisit Intention, covering H5. The figure below shows the conceptual framework used for this research.

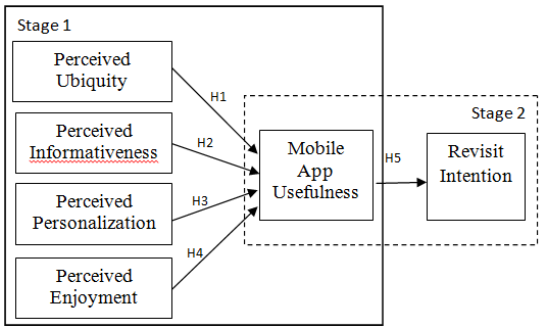

Figure 1: Conceptual framework.

Hair et al., (2017) explain that analysis using PLS-SEM consists of two sub-models. The first is the measurement model (or outer models), which shows how latent variables represent the observed variables to be measured. The second is the structural model (or inner models), which shows the estimated strength between latent variables or constructs. All constructs were deemed highly reliable and consistent due to their Cronbach's α and composite reliability scores, all of which exceeded 0.8 (Malhotra, 2011). Convergent validity was measured through an assessment of the average variance extracted (AVE) values for each construct, with all clearing the prescribed minimum of 0.5 (Hair et al., 2017). This study used a self-administrated questionnaire with closed-ended questions. The questionnaire was distributed using non-probability purposive sampling. The object of this study was the Banten Province tourism app. Respondents in the study were people who toured Banten with the following additional criteria: had obtained at least one reference from the Banten Province tourism portal; possessed the Banten Province tourism app; were present at the Banten Province Tourism Festival held on 17–18 February 2018; were over 17 years of age.

4 RESULTS AND DISCUSSIONS

From the respondents' given profiles, the majority (51%) were between 26 and 30 years of age and held bachelor degrees (53%). Most (58%) stated that they had previously been to Banten in the last 6 months, while a significant percentage said they had visited Banten more than 4 times (15%).

Tabel 1: Summary result of the measurement model and convergent validity.

	Loading		AVE	α	CR
Perceived Personalization	PP1	.645	.527	.777	.847
	PP2	.792			
	PP3	.829			
	PP4	.671			
	PP5	.678			
Perceived Ubiquity	PU4	.875	.627	.420	.769
	PU6	.699			
Perceived Informativeness	PI1	.930	.876	.859	.934
	PI2	.942			
Perceived Enjoyment	PE2	.766	.541	.151	.701
	PE4	.703			
Mobile App Usefulness	MAU1	.844	.721	.807	.886
	MAU2	.860			
	MAU3	.844			

Tabel 1: Summary result of the measurement model and convergent validity. (cont.)

	Loading		AVE	α	CR
Revisit Intention	RI1	.823	.718	.804	.884
	RI2	.858			
	RI3	.862			

Composite Reliability (CR) = (square of the summation of the factor loadings)/{square of the summation of the factor loadings} + (square of the summation of the error variances)}.
Average Variance Extracted (AVE) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}.

To confirm the reliability and validity of the model, convergent and discriminant validity was assessed. As Table 1 shows, all measures were robust in terms of their reliability, as all standardized loadings were statistically significant – that is, greater than the minimal threshold of 0.50 (Hair et al., 2017). Cronbach's α for all constructs exceeded the minimal threshold of 0.70 (Hair et al., 2017), and the composite reliabilities ranging from 0.701 to 0.934 also exceeded the recommended threshold value of 0.70 (Gefen et al.,2003). Finally, AVE for each construct was greater than 0.5 (Fornell and Larcker, 1981), in the range of 0.527 - 0.876. These results indicated that the convergent validity of the model was adequate.

Table 2: Discriminant Validity.

	MAU	PE	PI	PP	PU	RI
MAU	**.849**					
PE	.408	**.736**				
PI	.417	.199	**.936**			
PP	.509	.320	.213	**.727**		
PU	.167	.399	.036	.167	**.792**	
RI	.982	.434	.429	.511	.162	**.847**

Diagonal entries (in bold) represent the square root of the average variance extracted (AVE) while the other entries represent the squared correlations. Note : AA = Authenticity Atmospherics, AF= Authenticity Food, SW= Social eWOM, PV= Perceived Value, BI= Behavioral Intentions

Table 2 represents the correlations between the constructs along with the AVE on the diagonal. Using Shiue et al.'s (2010) recommendation, all of the diagonal values exceed the inter-construct correlations—thus indicating adequate discriminant validity. This also explains how the constructs were retained for further analysis of data.

Using a bootstrapping technique, path loadings and t-statistics for hypothesized relationships were calculated. The PLS analysis results are shown in Table 3. In marketing, researchers usually assume a significance level of 5%. Hypotheses with a t-value above 1.96 will be accepted and a hypothesis will be rejected when its t-value is found to be less than 1.96 for significance level = 5% (Hair et al., 2017). The results of which appear in Figure 2.

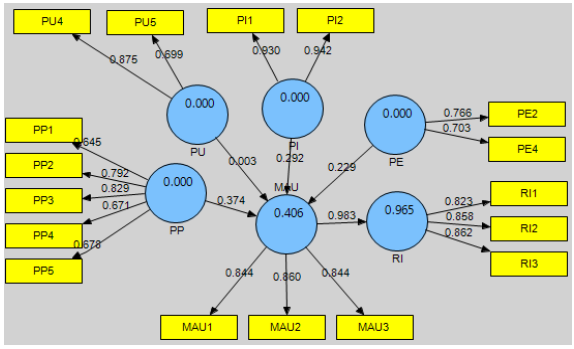

Figure 2: Structural Model.

Table 3: PLS results of path coefficients and hypothesis testing.

H	Path	β	SE	t-value	Decision
1	PP → MAU	.371	.027	13.9***	Yes
2	PU → MAU	.002	.038	1.97*	Yes
3	PI → MAU	.291	.027	10.7***	Yes
4	PE → MAU	.228	.042	5.4***	Yes
5	MAU → RI	.982	.003	294.8***	Yes

Note: significance at **p < 0.05. ***p < 0.01

Mobile App Usefulness was predicted by Perceived Personalization (β=0.374, p<0.001), Perceived Ubiquity (β=0.003,p<0.05), Perceived informativeness (β=0.292,p<0.001), and Perceived enjoyment (β=0.229, p< 0.001). This includes 40.6% of Mobile App Usefulness variance. Hence, H1, H2, H3, and H4 found support.

H5 examines the effects of Mobile App Usefulness on Revisit Intention. Mobile App Usefulness is significantly related to Revisit Intention with a *t*-value of 294.8 and a path coefficient of 0.98. Therefore, H5 is accepted at the one percent significance level, and it may be concluded that Mobile App Usefulness influences Revisit Intention.

The study found Perceived Personalization, Perceived Ubiquity, Perceived informativeness, and Perceived enjoyment to be positively related to Mobile App Usefulness in tourism marketing. These conclusions are consistent with previous studies, such as those by Okazaki and Mendez, (2013); Seeun Kim et al., (2016).

The influence of Mobile App Usefulness is particularly strong when tourists need as much information as they can get on destinations they have not yet seen. For example, if they want information about Ujung Kulon National Park, they also want to know the best route to get there, the

locations of suitable restaurants and lodgings together with offerings and price information, the various tour packages, and the real-time conditions such as weather. The technology must also provide information that is dependable and which meets the needs of its users.

Studies have investigated how mobile technology assists the customization of travel experience, eases information search activities and facilitates interaction between the customer and the company (Buhalis and Amaranggana, 2014; Seeun Kim, 2016). Mobile apps that broaden the scale of the tourism industry with real time information platforms serve to integrate the roles of tourism service providers and local communities and social media, because they are the most useful for promoting, improving, and managing tourism services.

5 CONCLUSIONS

For tourists, Perceived Personalization, Perceived Ubiquity, Perceived Informativeness, and Perceived Enjoyment were characterized as antecedents of mobile apps usefulness. In addition, Revisit Intention was proposed as a consequence of mobile app usefulness in tourism marketing.

Tourism depends on infrastructure. If the access is good, then the tour will be good. Indonesia has the opportunity to grow, but it still faces challenges in creating the infrastructure for fast internet access. The challenge is Indonesia's geography which consists of thousands of mountainous islands. The biggest need now is support from the government so that Indonesia's digital network can overcome its historic backwardness. Internet penetration must be improved. It should not just focus on Java, but must be available in all parts of the nation.

ACKNOWLEDGEMENTS

The authors would like to express gratitude and appreciation to Banten Provincial Tourism Office for supporting data.

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