



USER SATISFACTION OF E-HOMESTAY PORTALS IN MALAYSIA

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ABSTRACT

The Internet has significantly improved the quality of consumers' decision when making online bookings for homestays which is an emerging segment of hospitality in Malaysia. Drawing from DeLone and McLean's Theory of Information System Success, this study examines the effects of information quality, system quality, and electronic service quality on user's satisfaction of e-homestay portals. Data were collected from homestay lodgers ($N=187$) in Malaysia. The study reports that the antecedents of information quality, system quality and electronic service quality positively correlates with user's satisfaction. These results provide better understanding for the service providers to better plan their homestay portals to meet the expectation of potential users. The present study also highlights the significance of homestays lodging for the hospitality and tourism industry in Malaysia. Limitations of the study and future works are noted and discussed.

JEL classification: M150, M300, M310.

Keywords: e-homestay portals; information quality; Malaysia; satisfaction.

1. INTRODUCTION

A majority of homestays in Malaysia offers customers a unique blend of lodging and local culture. However, selecting a suitable homestay via online has not been an easy task for many travellers. The reasons are two-fold. First, information provided by the homestays operators on their websites are written in the local language that may cause difficulty for foreign travellers (Baty & Dold, 1977). Second, travellers face asymmetric information when the critical information such as the type of house, cost, and local rules are not publicized in the operators' websites (Sebastia et al., 2009; Wall & Long, 1996). From the operation standpoint, the homestays are commonly managed by "family-owned business" in which the family that owns the house offers lodging accommodation in return for rental. Four characteristics depict homestays operation: (i) the homestays are managed by family or appointed members of family (Baty & Dold, 1977); (ii) the cost of building and maintaining a homestay is entirely borne by the family; (iii) homestays business commonly contributed as an extra source of income for the family; and (iv) homestays are private ownership that required no

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company registration, and there is no specific law abiding its operation (The Borneo Post, 2012).

The present study aims to develop a model to explain customer's satisfaction of using e-homestay portals. Building on DeLone and McLean's (2003) Theory of Information System Success (ISS), the objective of the present study is to examine the effects of electronic service quality, information quality, and system quality on user's satisfaction of e-homestay portals. We posit that these dimensions affect a patron's emotional assessments, which result in the individual's wellness and intention to share their homestay experiences with others. The Malaysian homestay setting is used for the present study. The country's exponential growth in the homestay and tourism industry offers support in its selection. For instance, the market survey, which was conducted by the Malaysian Rural Tourism Master Plan in 2001, reported that foreign tourists who visited Malaysia spent 15% of their stay in rural areas (Ministry of Tourism, 2001). The recent statistics also describe a significant increase in the number of tourists selecting homestays as their accommodation preference in the country. The Star (2009) reports that there were more than 100 000 visitors with a turnover rate of RM6.5 million who participated in the Malaysian homestay programme in year 2009, as compared with the 40 000 visitors valuing at RM 3.3 million in the previous year.

This research endeavours to provide better insights into the hospitality industry from the theoretical and managerial perspectives. This study would also provide local homestay operators in Malaysia with useful strategies in maintaining the market share by developing cogent e-homestay portals.

2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

The present study builds on DeLone and McLean's Theory of Information System Success (ISS), which has been widely used to study various aspects of the information system. Existing empirical studies provide strong evidence to suggest that the ISS model is appropriate in examining technology usage and continuance. The ISS describes a multi-layered taxonomy consisting of quality measures (i.e., system and information quality), attitudinal outcomes, and performance-related outcomes. The theoretical paradigm of the ISS model posits that there are positive and direct effects of perceived quality on consumer behavioral dispositions (i.e., satisfaction and net benefits). Developed by DeLone and McLean in 1992, the theory consists of "temporal and causal" interdependencies between six categories of the Information System Success model. They made further revision in 2003 and introduced the dimension of service quality into the taxonomy framework. For the present study, we posit that information quality, electronic service quality, and system quality influence satisfaction towards e-homestay portals.

Several earlier studies have used DeLone and McLean's (1992) ISS theoretical model by modification of the concept to reflect their research contexts and objectives. For instance, Molla and Licker's (2011) study on e-commerce acceptance extends the ISS model with two new variables of trust and support. On the same note, a study by Wu and Wang (2006) also extends DeLone and McLean's Theory of Information System Success to Knowledge Management Systems (KMS). Wu and Wang (2006) validated the theoretical model in the context of KMS by making several adjustments. The authors defined information quality as a knowledge quality, the role of 'use' has been changed to "perceived KMS benefits" and combining notion of individual

impact and organizational impact into a more parsimonious KMS construct. The following section discusses the conceptualization of present study and the development of our hypotheses.

2.1 Information quality

Information quality refers to the quality of output the information system produces that can be in the form of a report or online screens. The dimensions of information quality are accuracy, completeness, and currency (Seddon & Kiew, 2007). The accuracy dimensions entail agreements with an attribute about the real world entity, a value stored in another database or the result of an arithmetic computation. Completeness describes a specific application and whether all of the data relevant to the application are present. In one interesting study, Filieri and McLeay (2014) extend and offer a more comprehensive conceptualization by proposing six dimensions of information quality. The authors suggest that in addition to the current dimensions of accuracy, completeness, and currency; the notion of information quality is also formed by the information timeliness, understandability, value-added, and relevance. The composite construct of information quality measured in the present study is based on these six dimensions. Gorla et al. (2010) assert that the products' information has a significant effect on consumers' satisfaction as the former meets the latter needs. This also implies one thing in that better quality of information about e-homestay portals is of utmost importance to determine consumers' well-being where, and to a certain extent, level of satisfaction.

Yang (2007) points out that information quality affects the consumers' online satisfaction. The author finds that when consumers are interacting using an online portal, they pay more attention to the quality of information. The extant studies support the notion of information quality as a significant determinant of online satisfaction (Lederer et al., 2000; Tanakinjal et al., 2016; Tshin & Sondoh, 2017). Another study by Molla and Licker (2001) offers further validation on the relationship between information quality and user satisfaction as suggested by DeLone and McLean (1992: 2003). Gorla et al. (2011) also share similar notion by implying that information quality is instrumental in improving one's satisfaction, and we posit that this would also improve one's effectiveness when making final decision pertinent to the homestays lodging. Moreover, a study by Xiang et al. (2015) further suggested that the travelers' sense of satisfaction is triggered by the perception of online information. We posit that because the homestays lodgings are unique and dissimilar from the conventional hotel services, many consumers would then rely on the quality of information before considering making a purchase. For example, potential homestays lodgers that able to acquire details description of homestays services would not only consider the information as invaluable but would also be satisfied; since such information would make them better informed, and assists them in the reservation process. Therefore, the following hypothesis is proposed:

H1: There is a significant relationship between information quality and user satisfaction.

2.2 Electronic service quality

Parasuraman et al. (2005) defines electronic service quality (e-service quality) as phases of customers' interaction that facilitate efficient and effective shopping, purchasing, and delivery. Simply put, electronic service quality is referred as an evaluation of deviation between consumer expectations and performances of online portals. We also consider a study by Collier and Bienstock (2009) that deliberates the significance of technological communication and its quality in improving a fallacy emanated from consumers on the respected service (Chang et al., 2016).

As suggested by Bai et al. (2008), the ability of e-retailers to remain competitive in the market place depends on their acumen in providing successful travel websites to users. We believe that electronic service quality is related to the connectivity and interactivity of the websites provided. There are two specific studies that offer credence for our assertion (see Collier & Bienstock, 2009; Elliot et al., 2013). For instance, Elliot et al. (2013) assert that an improved technology connectivity that comes with interactivity may inspire sense of satisfaction. These findings were further supported by Collier and Bienstock (2009), which also identified strong relationship between electronic service quality and customers' sense of satisfaction.

However, the explication on perceived e-service quality within extant tourism literature has not been sufficiently documented. Yang and Fang (2004) argue that the majority of investigations have failed to look at the broader picture; e-service quality is more than just how a consumer interacts with a website. Correspondingly, Elliot et al. (2013) assert that building these values require e-retailers to fully focus on e-service quality before, during, and after a transaction.

Drawing on DeLone and McLean (2003), this study postulates that the level of support and perception of e-service quality provided by homestays operators would affect satisfaction. More specifically, we posit that consumers would consider the proficiency of homestays operators handling their requests as cues of e-service quality and satisfactory service, such as providing prompt responses or offer assistance as resourceful hosts (e.g., provide tips on transportation rentals and suggestion on local attractions). Accordingly, we suggest the following hypothesis:

H2: There is a significant relationship between e-service quality and user satisfaction.

2.3 System quality

Borrowing from Gorla et al. (2010), system quality refers to the collection of business processes that focus on the information system processing in order to simultaneously achieve quality standards and objectives. Nelson et al. (2005) adds that perceived system quality describes an individual's evaluation of the system performance features based on the user's experience of system usage.

In the cyber world, large amount of information is being posted every day; thus, information overload is bound to occur (Xiang et al., 2015; Chang et al., 2013). For that reason, effective navigational tools are crucial to facilitate users' searching process (Zheng et al., 2013). The users' sense of security has also been suggested to be an important component of system quality (DeLone & McLean, 2003). Because a majority of sites only exist in the virtual world, users are concerned about the disclosure of their personal information to the public. As such, it is critical for virtual sites to maintain and protect users' privacy and make them feel safe and comfortable when participating in the website. The impact of system quality on user satisfaction

has also been empirically tested in previous information system studies (Bai et al., 2008; Seddon & Kiew, 2007).

We postulate that perception of system quality for homestays customers does not significantly deviate in comparison from other forms of tourism products and services, such as website system for hotels selection, resorts or travel destinations. Specifically, the present study assumes that consumers would be satisfied when they sense a familiarity in the system characteristics during browsing or navigating with the homestays websites (e.g., system flexibility, content of database, and visual attractiveness). Based on the preceding discussion, we therefore hypothesize that:

H3: There is a significant relationship between system quality and user satisfaction.

3. METHODOLOGY

Figure 1 depicts the model framework for the present study. The model postulates that the three dimensions of e-service quality, system quality, and quality of information have a direct and significant influence on consumers' satisfactory evaluation of their homestay experiences.

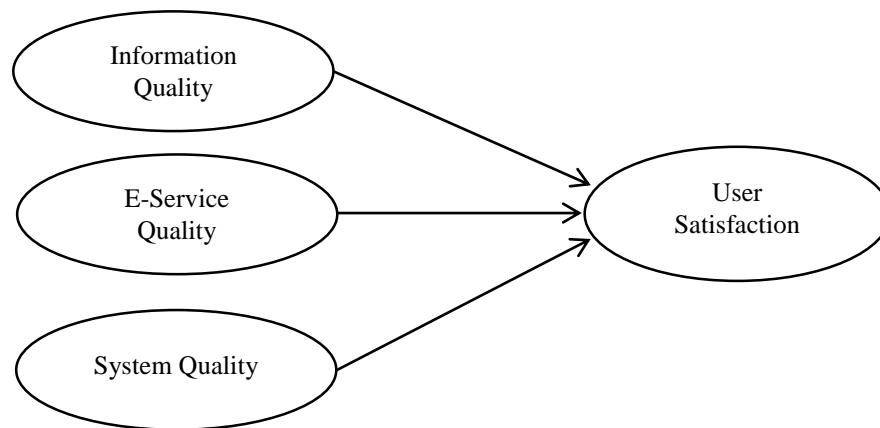


Figure 1: Conceptual model.

3.1 Subject

The purposive sampling is employed in the present study. The procedure for estimating the number of respondents follows Brown and Jayakody (2008). This approach also corroborates with Molla and Licker (2001) who recommend collecting between five to ten respondents for each measurement items. Based on these suggestions, a total of 200 surveys is distributed and collected for the present study. This sample size is considered sufficient to reflect good measurement for the 12 items.

The fieldwork was conducted from April 2016 to June 2017. For the study, three regional areas in Malaysia are selected for data collection. The state of Langkawi represents the northern region, Kuala Lumpur and Selangor for the central region, while Kota Kinabalu and Kuching represent the eastern region of Malaysia. Two main reasons offer support for the selection of these locations: first, as suggested by Sidin et al. (2004), these locations reflect an overview of Malaysia's consumers market, and second, these states show exponential growth in homestay lodging. Similarly, these locations are popular among the local and foreign tourists (Pusiran & Xiao, 2013).

The list of homestays is drawn from the database endorsed by the Ministry of Tourism Malaysia (i.e., www.go2homestay.com).

After obtaining permission from homestays operators, the survey questionnaires are distributed to homestays lodgers and are informed to leave the completed surveys. They book the homestays based on telephone call, SMS and WhatsApp. The sampling validity is further improved by selecting only respondents who meet the following criteria: (i) they have previously experienced homestay services within the past 1 year, (ii) they have searched for information about the current homestays via electronic medium, and (iii) they have made comments or reviews related to lodging services via electronic medium within the past 1 year.

The collected responses are later screened and examined for incomplete responses and credibility. This initial procedure has resulted in the removal of 13 incomplete or unreliable responses (i.e., out of 200), thus leaving a total of 187 usable responses throughout the three regional locations. Concerning the sample size, this study considers Hair et al.'s (2010) rule who suggest that the minimum requirement for sample size is to have at least five participants per item. This indicates that the minimum sample size needed for the current study is 12 items x 5 = 60 respondents. Our usable sample of 187 is deemed meeting the minimum requirement. The fieldwork methods of specifying criteria for the study have significantly improved the collection from the respondents, as the results yield a 93.5% response rate. Table 1 presents the profile of respondents for the present study. The breakdown of the respondents comprising three regions is also reported in the table.

Table 1: Demographic profile.

Demographic	N	Percentile
<i>Gender</i>		
Male	80	42.8
Female	107	57.2
<i>Age (years)</i>		
20-24	17	9.1
25-29	27	14.4
30-34	82	43.9
Above 35	61	32.6
<i>Continuous use of e-homestay portals</i>		
Yes	187	100
No	0	0

3.2 Measurement

Three measurement items are developed for each of the proposed constructs. Three battery items for “information quality” is adapted from Brown and Jayakody (2008), Cao et al. (2005), and DeLone and McLean (2003). These items require respondents to answer about the quality of information provided by the homestays websites. The study measures e-service quality using three battery items from Cao et al. (2005) and Parasuraman et al. (1993). As for system quality, three battery items are adapted and modified from Chen et al. (2013) and Zheng et al. (2013). Three measurement scales for user satisfaction are adapted from Casaló et al. (2008) and Zheng et al. (2013). These measurement items are measured using 5-point Likert scale (i.e., anchored at 1 = strongly disagree, 2=disagree, 3=slightly agree, 4=agree, and 5 = strongly agree). Prior to the actual survey, the 12 battery items are sent out for the pilot test. The results

suggested minor modification on the items, and we included these modified scales for actual survey.

3.3 Data analysis

The data obtained are analyzed using Ringle et al.'s (2005) SmartPLS 2.0, which has received numerous empirical supports from various studies in Malaysia (e.g. Amin et al., 2013; Ramayah et al., 2011; Rizal et al., 2018). The PLS allows an extension for both large and small samples without concern on the normality of data. Hui and Wold (1982) argue that PLS estimates improved and their average absolute error rates diminished as sample sizes increased. Marcoulides and Saunders (2006) have proven that PLS does not impose sample size restrictions for the underlying data. The latest empirical works by Gholami et al. (2013) and Lee and Kozar (2008) have proven that a large sample can produce improved estimates for hypotheses under consideration. Following Hair et al. (2016), PLS offers a benefit from high efficiency in parameter estimation that manifests in the method's statistical power and is more likely to render a specific relationship significant when it is, in fact, significant in the population.

4. EMPIRICAL RESULTS

The present study uses Anderson and Gerbing's (1988) two-stage approach for analyzing the data; the first stage involves the measurement model, while the second stage is an analysis of the structural model. The discussion provided by Chin (2010) offers strong support to confirm the proposed approach as valid in the case of partial least squares analysis.

4.1 Measurement model

Following Anderson and Gerbing's (1988), the first stage of PLS analysis is the measurement level, or measurement model analysis that leverages the construct validity. The construct validity comprises two components of convergent and discriminant validity. Convergent validity analysis consists of factor loadings, average variance extracted (AVE) and composite reliability (CR). Based on Table 2, the factor loadings for the constructs' items are higher than the threshold value of 0.70, suggesting acceptable items validity. At this stage, all items proposed are valid, and we retained for further analysis.

The reliability coefficient of factor structures is measured using the Cronbach's Alpha. Following Hair et al. (2010), the coefficient alpha values for the constructs under consideration meet the threshold value of .70, demonstrating high internal consistency and strong reliability of each dimension. The constructs' validity is further examined using the convergent analysis. The average variance extracted (AVE) values for the constructs fulfill the recommended value of .50 (Fornell & Larcker, 1981). Similarly, the reported CR also exceeds the recommended value of 0.7 (Hair et al., 2012). These results suggest soundness of scale structures.

Table 3 presents the results of the correlation between the constructs with the square root range of the average variance extracted (AVE). The diagonal values are found to be superior compared with the inter-construct correlations, meeting the discriminant validity testing (Fornell & Larcker, 1981). The results depict that the values in diagonal exceeding the threshold value of 0.70, demonstrating adequate discriminant validity.

The current study conducts the Harmon one-factor to examine the self-reported nature of data. Our result suggests that the un-rotated factor analysis for the first factor accounted only 39.42%. Following Podsakoff and Organ (1986), no single factor accounts for more than 50% of the variance in the data; thus, minimizing the common method bias and validity of the findings.

Table 2: Factor loadings.

Item	Information Quality	User Satisfaction	e-Service Quality	System Quality
IQ1	0.948			
IQ2	0.901			
IQ3	0.928			
USAT1		0.867		
USAT2		0.908		
USAT3		0.911		
ESQ1			0.910	
ESQ2			0.900	
ESQ3			0.778	
SYQ1				0.728
SYQ2				0.710
SYQ6				0.829

*Notes: IQ (Information Quality), ESQ (Electronic Service Quality), SYQ (System Quality), USAT (User Satisfaction).

Table 3: Discriminant validity.

Item	Information Quality	System Quality	User Satisfaction	e-Service Quality
IQ	0.926			
SYQ	0.394	0.758		
USAT	0.602	0.453	0.895	
EST	0.596	0.379	0.646	0.865

4.2 Structural analysis

The hypotheses are tested by analyzing the corresponding path coefficients and percentile of the confidence interval, which we analyzed using the SmartPLS 2.0 bootstrapping sample (Hair et al., 2012). Table 3 and Figure 2 show the results of the hypotheses relationships. The analysis suggests a strong support for our posited hypotheses.

These results also confirm the appropriateness of the DeLone and McLean's Theory of Information System Success to explain user satisfaction towards e-homestay portals. The three exogenous variables are found to be significant at 1%. Specifically, information was significantly related to user satisfaction ($\beta=.44$, $p<0.01$). System quality was significantly associated with user satisfaction ($\beta=.18$, $p<0.01$). Likewise, the e-service quality was also identified to significantly influence user satisfaction ($\beta=.27$, $p<0.01$). Put it all together, these results imply that the proposed model of user satisfaction of e-homestay portals is valid, given the significant outcomes of the proposed hypotheses.

Table 4: Path analysis.

Pathway	Estimate (β)	Standard deviation	<i>t</i> -value	Supported
IQ --> USAT	0.444	0.071	6.278	Yes
SYQ --> USAT	0.176	0.066	2.660	Yes
ESQ --> USAT	0.270	0.062	4.347	Yes

*Notes: IQ (Information Quality), ESQ (Electronic Service Quality), SYQ (System Quality), USAT (User Satisfaction).

Figure 2 shows the model consisting of one endogenous variable (i.e., user satisfaction) and three endogenous variables. The R2 value for user satisfaction is 0.566, implying that 56.6% of the variation in satisfaction is explained by information quality, e-service quality and system quality. Following Hair et al. (2011), the R2 value meets the threshold value of 0.2 or 20% in the consumers’ research, suggesting that the current model is statistically rigorous.

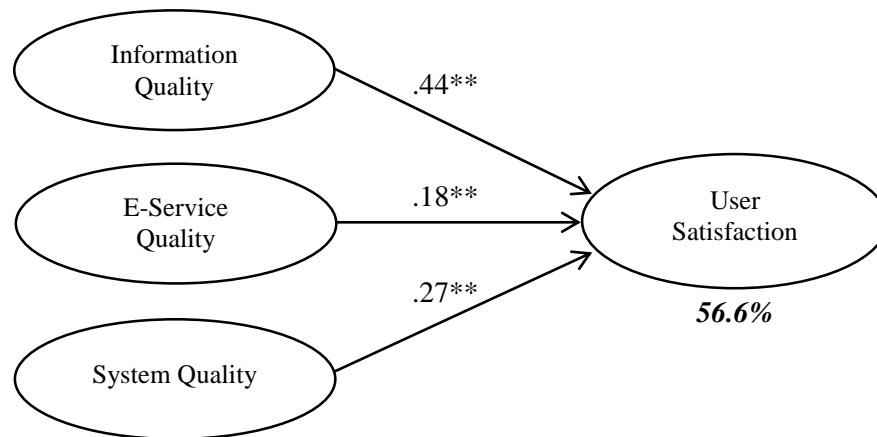


Figure 2: Model analysis.

5. DISCUSSIONS

Building from DeLone and McLean’s (2003) Information System Success model, this research develops a theoretical model of user satisfaction in the homestays lodging industry; emphasizing on the e-homestay portals. A better understanding of consumers’ satisfaction of e-homestay portals offers critical information about how people may feel with the services offered by the homestays operators, which may lead to the continuous use of the portals, which in turn, provides direction to homestays owners to strengthen their delivery of services.

The results from 187 homestays consumers provide strong support for our hypothesized relationships and the present work offers important implications. The analysis indicates that significant relationships exist for all of our proposed constructs-information quality, e-service quality and system quality on respondents’ emotional assessment of satisfaction. The present findings offer critical support for previous tourism and hospitality studies. For instance, the significance path correlation between information quality and satisfaction share similar positive results with Filieri and McLeay (2014). The results further corroborate with Xiang et al.’s (2015) earlier assertion on the effect of having good informative content of travel website on consumers’ perceived satisfaction (Trakulmaykee et al., 2013). Consistently, the

findings also in accordance with Au et al. (2008), who argue that the content development is a critical determinant of satisfactory-dissatisfactory evaluation that prompts users from staying or leaving the providers' online store. Most notably, these findings appear to suggest that the better the quality of information that is able to be retrieved by the consumers, the more the consumers will be satisfied with the homestays website; for such information would help them to make better judgments on reservation decisions.

Our results on the effect of system quality and user satisfaction also consistent with Filieri and McLeay (2014), which also discovered that the quality of website (i.e., customized search functions and privacy) as strong driver of user satisfaction. Our findings corresponded with Bai et al. (2008), who suggested that the web quality of functionality and usability as variables that determine user satisfaction. We discovered that most of the homestays operators offer simplicity and informative portals, and these attributes may have led to better experience; this is further illustrated by the favorable response of our respondents towards the e-homestay portals. For example, asking for simple registration and making reservation easier would suffice for a homestays website. Our results however contrast with Chen et al. (2013) that reported insignificant direct linkage between system quality and satisfaction.

6. CONCLUSION

This study has demonstrated the significant effects of information quality, e-service quality and system quality on improving consumers' sense of satisfaction. More importantly, the study offers a new perspective of investigation for the e-homestay portals.

This study also offers several implications for the success of the homestay lodging industry. The results show that homestay operators should focus on enhancing information quality to raise consumers' satisfaction. For this reason, managers may intend to maximize their online presence by providing accurate and plentiful of information. For instance, homestay operators may want to consider providing attractive photos, directions to the location, as well as nearby attractions. The findings indicate that e-service quality played a key role in driving satisfactory assessment. The significance of e-service quality implies that improving the quality of service as perceived by homestays lodgers may enhance user satisfaction. For example, offering more personalized services such as real-time chat and prompt email response may further enhance the attributes of e-service quality. Finally, the overall results urge managers to provide a holistic approach in managing customers' satisfaction. Our results show that satisfaction is depended on information quality, e-service quality and system quality, which may explain why information richness, interactivity, high personalization, and great ubiquity of IS become crucial evaluations for customers when declaring their satisfaction towards homestays. Taken it all together, these findings recommend the adoption of information system technology in order to enhance the high density of quality perceived by homestays customers.

We acknowledge several limitations stemmed from present study. The current study recognised the geographical constraints that may also limit the generalization of our study. The results are confined to specific geographical locations in Malaysia, which may impact their applicability to other settings. Therefore, future works may consider testing the present model on other settings, in which a comparative study with other countries may extend the validity and reliability of our findings. The future

works may also want to consider extending and testing other factors, which are of relevance to the e-homestay portals. We would also suggest that upcoming research to incorporate cultural-based and Islamic notion of services to capture the growing market of Muslim tourists.

Our study has simplified and extended DeLone and McLean's Model of Information Systems Success. However, the extant studies have also suggested that consumers may also become greatly satisfied after encountering and understanding the net benefits of satisfaction. Thus, examining this linkage for homestays would present another avenue for future research. Extending other consumer theories to understand the satisfaction may also worth consideration to enrich the current findings. Most notably, this study provides new perspectives of user satisfaction where e-homestay portals come into play.

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