Continuance Intention in Mobile Commerce Usage Activities Among Young Malaysian Consumers

Azyanee Luqman¹, Razli Che Razak², Mohammad Ismail², Mohd Afifie Mohd Alwi², Cheam Chai Li⁷

¹Faculty of Business and Management, Universiti Teknologi MARA Cawangan Kelantan, Malaysia
²Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia

Abstract

Recent statistics revealed that mobile commerce usage activities were dominated by young consumers from the age group of 20 to 24 years old. Therefore, in the interest of long-term growth and profitability, mobile commerce application developers and service providers heavily compete with each other to ascertain the continued usage among the target users. However, unlike initial acceptance decision, the research in the context of continuance intention is still in its early stage. Continuance intention is equally important and depends on various factors that affect the individuals’ decision to continue using a particular technology. Hence, grounded by the Expectation-Confirmation Model, this study aims to examine the continuance intention of mobile commerce usage activities among young Malaysian consumers. Data were collected from 632 full-time university students and analysed using Partial Least Squares structural equation modelling technique. The result shows a significant relationship between the entire variable in the study. Perceived usefulness and satisfaction were found to be significantly related to continuance intention, explaining 29.6% of the variance. In detail, satisfaction was found to be the strongest predictor of continuance intention. Thus, to facilitate continuance intention among young consumers, it is suggested that mobile commerce application developers and service providers need to focus on building and providing mobile applications that would satisfy the consumers’ expectations to bring out the positive experiences among the consumers when engaging in mobile commerce usage activities.

Keywords: Continuance intention, Mobile commerce, Young Malaysian consumers, Perceived usefulness, Satisfaction

1.0 Introduction

The rapid increase in the use of mobile devices such as smartphones and tablet computers has made mobile commerce to grow at an explosive rate. Mobile commerce is undeniably one of the fastest-growing technologies after the birth of the Internet. Unlike its predecessor which is electronic commerce, consumers all over the world are no longer restricted to geographical constraints to engage in mobile commerce usage activities. The fact that mobile commerce provides ubiquity, which means that consumers can conduct transactions anytime, anywhere over wireless telecommunications networks, further boost up the number of mobile phone subscribers throughout the world.

Specifically, in Malaysia, mobile commerce is still at a growing stage (Chong, Chan, & Ooi, 2012). According to Malaysian Communications and Multimedia Commission (MCMC), the number of mobile phone subscriptions increased from...
42.4 million in 2018 to 42.9 million in the first quarter of 2019 with a penetration rate of 131.4% (MCMC, 2019). Interestingly, a local study conducted in 2017 revealed that mobile phone users were dominated by young adults from the age group of 20 to 24 years old (MCMC, 2017). In the meantime, based on the 2018 Internet Users Survey, the number of Internet users reached to more than 28.7 million in approximation and majority of them used mobile broadband to go online (MCMC, 2018). Captivatingly, the survey also discovered that the same age group of 20 to 24 years old covered the majority of Internet user base with 4.5 million users out of the total 28.7 million Internet users in Malaysia (MCMC, 2018). The fact that young adults of this age group are most likely the early adopters of many technologies including mobile commerce is undeniable and it is indeed proven in many of previous studies (Kini, 2009; Daud, Awal, Bakar, & Osman, 2011; Lu, 2014; Lazim & Sasitharan, 2014; Omar, Wel, Alam, & Nazri, 2015; Teong & Ang, 2016; Oliveira, Thomas, Baptista, & Campos, 2016).

Varnali and Toker (2010), as well as Chong (2013b), point out that in spite of tremendous attention on consumers’ behavioural intention and actual usage of mobile commerce, not much research has been done on post-adoption constructs such as satisfaction and continuance intention to use mobile commerce activities. The focus on post-adoption constructs has rarely been studied. Chong (2013b) stresses that understanding the continuance usage intentions is equally important. Continuance intention is regarded as a behavioural intention that signifies loyalty among the consumers to continue using mobile commerce usage activities and it reflects the consumers’ loyalty to the mobile commerce application developers and service providers (Kim & Steinfield, 2004; Lin & Wang, 2006; Cyr, Head, & Ivanov, 2006; Kaur & Soch, 2012; Valvi & West, 2013). It is indeed vital for the companies to master the art of attracting and keeping profitable customers by increasing their satisfaction level as well as gaining their continuance usage. Hence, this paper attempts to empirically validate the Expectation-Confirmation Model (ECM) in the context of mobile commerce usage activities among young Malaysian consumers.

2.0 Literature Review

2.1 Continuance Intention

Continuance intention is the main dependent variable for any IS continuance intention studies. According to Bhattacharjee (2001), continuance intention is defined as the users’ intention to continue using the IS. Continuance intention is a post-acceptance construct that is posited in ECM by Bhattacharjee (2001). As it is a construct measured after the actual usage has taken place, some studies operationalised continuance usage intention as the act of loyalty intention. Many past studies in mobile commerce found significant relationships between perceived usefulness and continuance intention as well as satisfaction and continuance intention (Hong, Thong, & Tam, 2006; Thong, Hong, & Tam, 2006; Kim, Choi, & Kim, 2010; Chen, Meservy, & Gillenson, 2012; Hsiao & Chang, 2013; Chong, 2013b).

2.2 Definition of Mobile Commerce

Some authors and researchers in the previous studies consider mobile commerce as an extension of electronic commerce and are, to a certain extent,
similar to electronic commerce (Chong et al., 2012; Rainer & Cegielski, 2013). The only difference is that mobile commerce transactions are wirelessly conducted with the use of mobile devices. However, Feng, Hoegler, and Stucky (2006) argue that there is much more in mobile commerce than merely an extension of electronic commerce. They claim that mobile commerce has different interactions with users, usage pattern, and value chain, thus offering business models that are not available to electronic commerce. Tiwari and Buse (2007), on the other hand, provide a clear distinction between mobile commerce and electronic commerce by viewing mobile commerce as a mobile business and expanding its scope beyond monetary transactions. They define mobile commerce "as any transaction which involves the transfer of ownership or rights to use goods and services which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic mobile device" (Tiwari & Buse, 2007, p. 33). This study adopts the definition by Tiwari and Buse (2007) as they believe that mobile commerce should not be limited to monetary transactions and it should not neglect other activities such as the after-sales services and sending information to the customers.

2.3 Mobile Commerce Usage Activities

To suit the study context, the term mobile commerce used in this study is conceptualised as mobile commerce usage activities. Mahatanankoon, Wen, and Lim (2005) categorise mobile commerce usage activities as content delivery, transactions, location-based services, emergency purposes, and entertainment purposes. Apart from that, a study by Chong (2013a) divides mobile commerce activities into content delivery, transactions, location-based services, and entertainment. Content delivery deals with using a mobile device to search for and find information on the Internet whereas transactions involve using a mobile device to transfer money between consumers and businesses, while location-based services involve activities such as receiving time-sensitive discount tickets or coupons and receiving personal advertisements (Mahatanankoon et al., 2005). Lastly, entertainment involves using a mobile device for entertainment purposes such as playing games, watching videos, or listening to music (Chong, 2013a). This study embraces the four categories of mobile commerce usage activities empirically validated by Chong (2013a).

2.4 Expectation-Confirmation Model (ECM)

ECM was proposed and empirically examined by Bhattacherjee (2001) in a study on American online banking users. ECM has been applied extensively to understand consumers’ satisfaction and their post-adoptive behaviour by various researchers. Unlike other technology adoption models, ECM has the ability which allows a comparison of users' pre-adoptive and post-adoptive perceptions and their satisfaction with their current information system (IS) usage (Chong, 2013b). Bhattacherjee posits that consumers' intention to continue there IS usage is based on three factors which are the users' satisfaction with the IS, the extent of their confirmation, and their post-adoptive behaviour which is measured by perceived usefulness (Chong, 2013b). As mobile commerce is a type of IS, many past researchers employ ECM in their continuance intention studies. Figure 1 illustrates the ECM.
Figure 1: Expectation-Confirmation Model (ECM) (Bhattacherjee, 2001; Chong, 2013b)

2.5 Satisfaction

Satisfaction is defined as the users’ effect with feelings about prior IS use (Bhattacherjee, 2001). Hsiao and Chang (2013) further explain in their study that satisfaction is the positive emotional state resulting from a consumer’s use of mobile advertising. ECM posits that user satisfaction is determined by two constructs; expectation of the information system and confirmation of expectation following actual use. Expectation provides the baseline level, against which confirmation is assessed by users to determine their evaluative response or satisfaction (Bhattacherjee, 2001). Many former studies verify the positive direct relationships between satisfaction and continuance intention (Lee, 2010; Kim et al., 2010; Hsiao & Chang, 2013; Chong, 2013b; Thominathan & Ramayah, 2014; Suki, Mentoh, & Suki, 2018). Therefore, this study proposes the following hypothesis:

H1: Satisfaction is positively associated with continuance intention

2.6 Confirmation

Bhattacherjee (2001) defines confirmation as the users’ perception of the congruence between the expectation of information system use and its actual performance. Bhattacherjee (2001) further concurs that confirmation is positively related to satisfaction with information system use because it implies the realisation of the expected benefits of information system use while disconfirmation (perceived performance lagging expectation) denotes failure to achieve expectation. Bhattacherjee (2001) also notes that consumers’ confirmation after using online banking has a positive relationship with satisfaction and perceived usefulness. Additionally, according to Chong (2013b), the extent of confirmation will reinforce and positively affect the level of user satisfaction and perceived usefulness of mobile commerce service. Hence, this study puts forward the following hypotheses:

H2: Confirmation is positively associated with satisfaction

H3: Confirmation is positively associated with perceived usefulness
2.7 Perceived Usefulness

Perceived usefulness is defined by Bhattacherjee as the users’ perception of the expected benefits of the information system. Perceived usefulness represents the post-expectation aspect of the original ECM. Bhattacherjee (2001) believes that perceived usefulness is an adequate expectation in the information system continuance context because it is the only belief that is demonstrated to consistently influence user intention across temporal stages of information system use. Perceived usefulness has been subjected to widespread study by previous researchers who certify the significance path between perceived usefulness and satisfaction (Hsiao, Chang, & Tang, 2016; Oghuma, Libaque-Saenz, Wong, & Chang, 2016; Oghuma, Chang, Libaque-Saenz, Park, & Rho, 2015; Mouakket, 2015; Thominathan & Ramayah, 2014; Chong, 2013b; Hsiao & Chang, 2013) as well as between perceived usefulness and continuance intention (Oghuma et al., 2016; Oghuma et al., 2015; Lu, 2014; Thominathan & Ramayah, 2014; Chong, 2013b; Hsiao & Chang, 2013). Thus, this study proposes the following hypotheses:

H4: Perceived usefulness is positively associated with satisfaction

H5: Perceived usefulness is positively associated with continuance intention

3.0 Methodology

3.1 Subjects

Subjects of this research were individuals who used mobile commerce activities as being discussed in the Literature Review. Questionnaires were administered to undergraduate and postgraduate students from six public universities in Malaysia. The university students chosen as the subjects in this study are deemed appropriate for several reasons. Firstly, a handphone users survey conducted by MCMC revealed that handphone users are dominated by young adults from the age group of 20 to 24 with 18.4% users, and in terms of schooling status, 55.8% of them are university students (MCMC, 2017). Secondly, past studies conducted by Ooi, Sim, Yew, and Lin (2011), Sim, Tan, Wong, Ooi, and Hew (2013), Tan, Ooi, Leong, and Lin (2014), and Wong, Tan, Tan, and Ooi (2015) among university students in Malaysia found that university students are the early adopters of new technologies which include mobile commerce. Thirdly, university students reflect the composition of the general population in Malaysia which are made up of multi-racial, multi-religion, and multi-culture, thus can be proposed to signify a general population of diverse groups with different characteristics (Sim et al., 2013; Tan et al., 2014; Wong et al., 2015; Hashim, Chong, & Che, 2018).

In this study, disproportionate stratified random sampling was utilised based on the respondents’ current study programmes, namely Diploma, Bachelor’s Degree, Master, and PhD. It is the most suitable sampling technique when some strata are too small or too large, such as tertiary study programmes (Sekaran & Bougie, 2013). All respondents had prior experience with mobile commerce usage activities. A total of 800 surveys were distributed for the study. Incomplete surveys were discarded, leaving only 632 usable samples. The overall response rate for this study is 79%. Of the 632 respondents, 587 were undergraduate students while 45 were postgraduate
students. There were 476 female and 156 male respondents.

3.2 Measurement Items

Four constructs were measured in this research; perceived usefulness, confirmation, satisfaction, and continuance intention. The measurement items were adopted from different sources to suit the study. Items for continuance intention were adapted from Bhattacharjee (2001), Lee (2010), and Chong (2013b), whereas confirmation was adapted from Bhattacharjee (2001), Bhattacharjee, Perols, and Sanford (2008), and Chong (2013b). Measurement items for satisfaction were adapted from Bhattacharjee (2001) and Chong (2013b), whilst items for perceived usefulness were adapted from Pedersen (2005) and Chong (2013b). All items were measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

4.0 Data Analysis and Results

Partial least squares structural equation modelling (PLS-SEM), a variance-based structural equation modelling (SEM), was employed to analyse the hypotheses generated. This technique was chosen due to the basis of this study was categorised as prediction-oriented modelling. Hair, Hult, Ringle, and Sarstedt (2017) assert that PLS-SEM is the most appropriate approach if the researcher focuses on predictive and/or development of the theory (Lowry & Gaskin, 2014). The two-step analytical procedure suggested by Anderson and Gerbing (1988) was adopted to analyse data whereby the measurement model was evaluated first and then followed by the structural model.

4.1 Assessment of Measurement Model

The measurement model was analysed by using confirmatory factor analysis (CFA) to assess the goodness of measure. According to Hair et al. (2017), two major criteria used for evaluating the goodness of measure are reliability and validity. In measuring the reliability, the main criterion is to evaluate the internal consistency reliability. This can be done by assessing the composite reliability (CR) values for each construct. As for the validity measurement, construct validity of a proposed measurement theory needs to be assessed before proceeding further analysis. Construct validity is made up of two important components; convergent validity and discriminant validity (Hair, Black, Babin, & Anderson, 2010). Both of the components need to be analysed. Convergent validity is the extent to which indicators of a specific construct converge or share a high proportion of variance in common (Hair et al., 2010). To ascertain convergent validity, the outer loadings of the indicators in addition to the average variance extracted (AVE) should be considered (Hair et al., 2017). Hair et al. (2010) assert that factor loadings and AVE of more than 0.50 and CR value of 0.70 or above are deemed to be acceptable.

The measurement model yielded results as in Figure 2. As Table 1 displays, all loadings and AVE are above 0.50 and the CR values are more than 0.70. Therefore, it can be concluded that the measurement in this study is reliable and the convergent validity has been established.
Afterwards, discriminant validity was assessed. Discriminant validity is the extent to which a construct is truly distinct from the other constructs (Hair et al., 2010). This can be established by the low correlations between all the measure of the interest and the measure of other constructs. To address discriminant validity, the square root of the AVE is compared against the correlations of the other constructs. Table 2 displays that discriminant validity has been established since the AVE extracted is greater than its correlations with all the other constructs (Fornell & Larcker, 1981). Nevertheless, the Fornell–Larcker criterion does not perform satisfactorily if construct indicator loadings differ marginally (Harun, Prybutok, & Prybutok, 2018). Therefore, the heterotrait–monotrait ratio of correlations (HTMT) procedure was implemented (Hair et al., 2017). Table 3 demonstrates that the HTMT
results are below the 0.90 cutoff value, thus substantiating discriminant validity (Hair et al., 2017). Furthermore, a bootstrapping procedure was used to assess the distribution corresponding to the HTMT statistics. The confidence interval calculated from 5,000 bootstrap samples corroborates the fact that HTMT values differ significantly from one, thus supporting discriminant validity. Hence, it can be considered that the constructs used in this study are empirically distinct, as illustrated in Table 4.

Table 2: Discriminant validity of constructs (Fornell-Larcker Criterion)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Confirmation</th>
<th>Continuance Intention</th>
<th>Perceived Usefulness</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmation</td>
<td>0.776</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuance</td>
<td>0.496</td>
<td>0.800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td></td>
<td></td>
<td>0.513</td>
<td>0.824</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.539</td>
<td>0.483</td>
<td>0.455</td>
<td>0.824</td>
</tr>
</tbody>
</table>

Note: Diagonal represents the square root of Average Variance Extracted (AVE) while the other entries represent squared correlations.

Table 3: Discriminant validity of constructs (HTMT Criterion)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Confirmation</th>
<th>Continuance Intention</th>
<th>Perceived Usefulness</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmation</td>
<td>0.622</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuance</td>
<td></td>
<td>0.526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td></td>
<td></td>
<td>0.514</td>
<td></td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.646</td>
<td>0.569</td>
<td>0.514</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Discriminant validity of constructs (HTMT Confidence Interval)

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Bias Corrected 97.5% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuance Intention → Confirmation</td>
<td>[0.538, 0.700]</td>
</tr>
<tr>
<td>Perceived Usefulness → Confirmation</td>
<td>[0.542, 0.681]</td>
</tr>
<tr>
<td>Perceived Usefulness → Continuance Intention</td>
<td>[0.444, 0.600]</td>
</tr>
<tr>
<td>Satisfaction → Confirmation</td>
<td>[0.568, 0.713]</td>
</tr>
<tr>
<td>Satisfaction → Continuance Intention</td>
<td>[0.479, 0.650]</td>
</tr>
<tr>
<td>Satisfaction → Perceived Usefulness</td>
<td>[0.441, 0.584]</td>
</tr>
</tbody>
</table>

4.2 Assessment of Structural Model

The structural model represents the relationship between constructs or latent variables that were hypothesised in the research model. Correspondingly, following the suggestion of Hair et al. (2017), the bootstrapping method (5,000 subsamples) was done to determine the significant level of loadings, weights, and path
coefficients. Figure 3 and Table 5 demonstrate the results of the structural model from the PLS output. Satisfaction was found to be significantly related to continuance intention ($\beta = 0.236$, p<0.01), thus supporting H1. Confirmation was found to be significantly related to satisfaction ($\beta = 0.414$, p<0.01) and perceived usefulness ($\beta = 0.512$, p<0.01), so supporting H2 and H3 of this study. Perceived usefulness was found in this study to be significantly related to satisfaction ($\beta = 0.243$, p<0.01) and continuance intention ($\beta = 0.191$, p<0.01), hence supporting H4 and H5.

Table 5: Results of Hypotheses Testing for H1 – H5

<table>
<thead>
<tr>
<th>Path</th>
<th>Hypotheses</th>
<th>Path Coefficient</th>
<th>Bias Corrected 97.5% Confidence Interval</th>
<th>t value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction $\rightarrow$ Continuance Intention</td>
<td>H1</td>
<td>0.356</td>
<td>[0.273, 0.432]</td>
<td>8.860</td>
<td>Supported</td>
</tr>
<tr>
<td>Confirmation $\rightarrow$ Satisfaction</td>
<td>H2</td>
<td>0.414</td>
<td>[0.336, 0.487]</td>
<td>10.700</td>
<td>Supported</td>
</tr>
<tr>
<td>Confirmation $\rightarrow$ Perceived Usefulness</td>
<td>H3</td>
<td>0.513</td>
<td>[0.446, 0.568]</td>
<td>16.453</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived Usefulness $\rightarrow$ Satisfaction</td>
<td>H4</td>
<td>0.243</td>
<td>[0.165, 0.320]</td>
<td>6.234</td>
<td>Supported</td>
</tr>
<tr>
<td>Perceived Usefulness $\rightarrow$ Continuance Intention</td>
<td>H5</td>
<td>0.281</td>
<td>[0.207, 0.354]</td>
<td>7.463</td>
<td>Supported</td>
</tr>
</tbody>
</table>

The goodness of the structural model is established by the variance explained ($R^2$) and the predictive relevance of the endogenous constructs ($Q^2$) (Hair et al., 2017). The $R^2$ value is a measure of the model's predictive accuracy and is calculated as the squared correlation between a specific endogenous construct’s actual and predicted values (Hair et al., 2017). Referring to Table 6, the final endogenous construct, continuance intention, has an $R^2$ of 0.296, suggesting that 29.6% of the variance in the extent of continuance intention can be explained by satisfaction and perceived usefulness. The $R^2$ values can be reflected as high since $R^2$ values of more than 0.20 are considered high in consumer behaviour discipline (Hair et al., 2017). Apart from assessing the magnitude of the $R^2$ value, Hair et al. (2017) also suggest that Stone-Geisser’s $Q^2$ value (Geisser, 1974; Stone, 1974) be
examined as a criterion of predictive accuracy. The $Q^2$ value is a measure of predictive relevance that represents how well the observed values are reproduced by the model and its estimating parameters (Hair et al., 2017). A $Q^2$ value larger than zero for a certain reflective endogenous construct specifies the path model’s predictive relevance for that particular construct (Hair et al., 2017).

In analysing the predictive relevance, blindfolding procedure was carried out using omission distance $D = 7$ as recommended by Hair, Sarstedt, Ringle, and Mena (2012), who indicate that the omission distance value between 5 and 10 are feasible in most applications. Blindfolding is a sample reuse technique that omits part of the data matrix and uses the model estimates to predict the omitted part (Henseler, Ringle, & Sinkovics, 2009). On the other hand, omission distance determines which data points are deleted when applying the blindfolding procedure (Hair et al., 2017). The calculation of $Q^2$ values is based on the cross-validated redundancy approach that fits PLS-SEM analysis perfectly (Hair et al., 2017). The results are presented in Table 6. As can be seen, all $Q^2$ values are considerably above zero. Thus, providing the support that the model in this study has predictive relevance for all its endogenous constructs.

Table 6: Variance explained and predictive relevance

<table>
<thead>
<tr>
<th>Endogenous Construct</th>
<th>Variance Explained ($R^2$)</th>
<th>Predictive Relevance ($Q^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td>0.263</td>
<td>0.159</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.334</td>
<td>0.221</td>
</tr>
<tr>
<td>Continuance Intention</td>
<td>0.296</td>
<td>0.182</td>
</tr>
</tbody>
</table>

5.0 Discussion

The purpose of this study was to test the ECM among young Malaysian mobile commerce consumers by examining the relationships among confirmation, perceived usefulness, and satisfaction and the impact of perceived usefulness and satisfaction on continuance intention of mobile commerce usage activities.

5.1 Satisfaction and Continuance Intention

According to the findings, satisfaction is significantly and positively associated with continuance intention ($\beta = 0.356$, $p<0.01$). The result of this study is similar to the study by Kim et al. (2010), Hsiao and Chang (2013) and Chong (2013b) where all the three studies found significant relationships between satisfaction and continuance intention in mobile commerce usage. Besides, the findings of the study are also consistent with previous researches on the other information system continuance usage intention. Thominathan and Ramayah (2014) found a significant relationship between satisfaction and continuance intention in a study on electronic tax filing continuance usage intention. Another study by Lee (2010) has also established a strong positive effect of satisfaction on the continuance usage of electronic learning which further corroborates the findings of this study.

5.2 Confirmation, Perceived Usefulness, and Satisfaction

Based on the results, confirmation is significantly and positively associated with perceived usefulness ($\beta = 0.513$, $p<0.01$) and satisfaction ($\beta = 0.414$, $p<0.01$).
The significant results are congruent with mainstream prior empirical studies, for example, Oghuma et al. (2016), Oghuma et al. (2015), and Bhattacharjee (2001). Also, confirmation was found to be the strongest predictor of consumers' satisfaction. This strongly indicates that the fulfilment of consumers' expectation on the performance of mobile commerce usage activities is much more important to their satisfaction which may indirectly affect the continuance usage of mobile commerce activities. This is proven by previous studies on mobile commerce in China and Taiwan which declare that confirming the expectation of the users will influence their satisfaction which will further boost the possibility of them to continuously use mobile commerce (Chong, 2013b; Hung, Hwang, & Hsieh, 2007).

5.3 Perceived Usefulness, Satisfaction, and Continuance Intention

Unsurprisingly, perceived usefulness is significantly and positively associated with satisfaction (β = 0.243, p<0.01) and continuance intention (β = 0.281, p<0.01). The result of this study is in line with previous studies that certified the significance path between perceived usefulness, satisfaction, and continuance intention (Oghuma et al., 2016; Oghuma et al., 2015; Bhattacharjee, 2001). The results of this study also reveal perceived usefulness is secondary to confirmation in determining satisfaction as well as secondary to satisfaction in determining continuance intention. This result confirms many of the findings of the earlier studies (Oghuma et al., 2016; Bhattacharjee, 2001). This weaker influence of perceived usefulness on users' satisfaction and continuance intention can be interpreted that Malaysian consumers view the realisation of their expectation and satisfaction is more important than the perceived usefulness of mobile commerce usage activities informing their level of satisfaction and in facilitating their continuance intention, respectively.

6.0 Limitations and Recommendations

The study tested ECM on continuance intention of mobile commerce usage activities among young consumers in Malaysia. Regardless of the useful findings of this study, several limitations need to be acknowledged. First, there is a possibility that additional adoption factors have not been included in this study. Second, the findings cannot be generalised extensively in Malaysia as the scope of the study is only limited to university students. As such, caution needs to be taken when generalising to the population of the whole country. For that reason, this research can be improved further in the future by integrating other relevant variables based on the latest literature suggestions and collecting data from general mobile commerce users.

7.0 Conclusion

Theoretically, this study adds to the growing body of literature that focuses on the post-adoption environment, which is continuance intention. It also contributes to the evidence in support for the determinants of continuance intention in mobile commerce usage activities, especially in the Malaysian context. Practically, mobile commerce application developers and service providers need to focus on building and providing mobile applications that would satisfy the consumers’ expectations to bring out the positive experiences among the consumers when engaging in mobile commerce.
commerce usage activities. Examples of the possible consumers’ expectations would be the usefulness, the compatibility, and the ease of use of the mobile commerce usage activity. Other than that, mobile commerce industry players must emphasise on improving the satisfaction of the consumers which can be achieved by maintaining connectivity, connection speed, privacy, security, and confidentiality of the data transmitted wirelessly, to name just a few. Once a consumer is satisfied in using a mobile application, his or her continued usage can be assured of. This is especially important because gaining consumers’ satisfaction is the very first step towards inducing and facilitating continuance intention among consumers.

References


