

# Adoption of Mobile Commerce in Malaysia: A Generation Y Perception

M. Krishna Moorthy, Chan Wai Sann, Chan Yee Ling,

Tee Pei Yin, Wan Kah Yan and Yip Yuin Ee

Department of Commerce and Accounting,

Universiti Tunku Abdul Rahman, Perak Campus, Malaysia

## Abstract

*The usage of mobile commerce in Malaysia is still low compared to other nations. This research aims to identify the factors that influence the behavioural intention to adopt mobile commerce among the Generation Y in Malaysia. In this research, relationship between independent variables (Trust, Perceived Usefulness, Perceived Enjoyment, Social Influence, Perceived Ease of Use, and Compatibility) and dependent variable (Behaviour Intention to adopt mobile commerce) have been analysed. Technology Acceptance Model (TAM) proposed by Davis (1989) has been adapted in this research to examine how each of the above factors would influence Generation Y's intention to adopt mobile commerce. Survey questionnaire has been used to collect data by distributing to 350 respondents at the three largest Generation Y population States in Malaysia, which are Selangor, Johor and Perak. Pearson Correlation Coefficient*

*Analysis and Multiple Regression Analysis have been used in this research to analyse the collected data. The results showed a significant relationship between the above independent variables and the behavioural intention if Gen Y to adopt mobile commerce. This research will help telecommunication industries to have a better understanding about the factors that influence the behaviour intention of Generation Y to adopt mobile commerce in Malaysia.*

Keywords: M-commerce, Generation Y, Technology Acceptance Model, Behaviour Intention, Malaysia

## 1.0 Introduction

New development of mobile devices has expanded the potential of the Internet which created new interest and horizons in business strategy, and provided an opportunity for m-commerce to grow (Sumita & Yoshii, 2010; Haque, 2004). Although m-commerce is growing rapidly,

adoption of m-commerce is still low in Malaysia compared to other nations (Sadi & Noordin, 2011). M-commerce refers to any monetary transaction that is conducted by using a mobile network (Clarke, 2001 and Ngai & Gunasekaran, 2007). Despite the poor economic conditions and difficult geography in an area, mobile network size can be developed faster with lower cost compared to E-commerce (Dholakia & Dholakia, 2004). Through mobile devices, customers can communicate directly with m-commerce at anywhere and anytime (Yu & Buahom, 2013). On the other hand, as compared to using traditional media, m-commerce can help suppliers to send promotional messages and newly available services to their customers (Lee & Mills, 2010). Nowadays, Generation Y consumers segment is considered as an important market segment that need to be understood due to their huge size of segment and future strong purchasing or spending power (Wolburgh & Pokrywczynski, 2001). Besides, Generation Y consumers are generally born between 1980 -1994 and presently known as young adult population (Kim & Hahn, 2012). Due to the high purchasing power and the high usage of mobile devices and services of Generation Y consumers, they have become an essential group of mobile technology-

related industries (Kim & Hahn, 2012). According to Malaysian Communications and Multimedia Commission (MCMC) the total number of mobile phone subscribers in Malaysia in 2011 was around 36.6 million with a penetration rate of 127.7%, and the total number of mobile phone subscribers in the year 2013 rose to around 42.9 million with a penetration rate of 143.7% (MCMC, 2013). The development of convenient usage of pre-paid system influenced the penetration rate tremendously and particularly among young subscribers who occupied more than 30% of the total mobile phone subscribers in Malaysia (Balakrishnan & Raj, 2012). However, Goi and Ng (2011) stated that m-commerce is still relatively an immature technology and still at the early stage in Malaysia. They also found that most of the activities carried out by Generation Y are intended for communication and entertainment purposes rather than transaction purposes.

## 2.0 Research Gap

Generation Y usually uses their mobile phones to make calls and send short messages with an average of 126 messages monthly (Kumar & Lim, 2008). Chung and Holdsworth (2012) stated that aside from

compatibility, observability, relative advantage, triability and complexity, trustworthiness and perceived risk are also important determinants of behavioural intention of Generation Y to adopt m-commerce. But, Davis (1989) found that the fundamental determinants of user acceptance of information technology are perceived usefulness and perceived ease of use. Therefore, the result of the study by Chung and Holdsworth (2012) might not be accurate enough because it did not include these two important factors. Furthermore, this study was conducted in Kazakhstan, Morocco and Singapore but not conducted in Malaysia. Yu and Buahom (2013) conducted a study to investigate the factors that would affect consumer's intention to adopt m-commerce. The factors included mobility, perceived security, perceived enjoyment, perceived cost, compatibility and word of mouth. However, this research was conducted in Taiwan and not conducted in Malaysia. Besides, the target respondents were not focused on Generation Y. Moreover, Islam, Khan, Ramayah and Hossain (2011) found that the factors such as convenience, security, awareness and knowledge, cost and pricing, rich and fast information, self-efficacy and usefulness affect the adoption of m-commerce service among employed users in Bangladesh.

However, this study was not conducted in Malaysia and the population was not focused on Generation Y. In order to bridge the gap, this study has been conducted in Malaysia with Generation Y.

### 3.0 Review of the Literature

#### 3.1 Trust

Trust is defined as the willingness of a party to be vulnerable to the actions of another party according to the expectation that the other will perform a particular action vital to the trustor, irrespective of the ability to monitor or control the other party (Mayer, Davis & Schoorman, 1995). Chong (2013) carried out a study regarding the understanding and predicting the determinants of m-commerce adoption by a two-staged SEM-neutral approach and found that trust has a positively related m-commerce adoption. Population in this research comprised undergraduate and graduate students from China. The data was collected from users with prior experience in m-commerce from two universities at Zhejiang Province, China. Convenience sample approach was used in this research and a sum of 376 surveys was collected from the m-commerce users. A multi-analytical approach was employed in this research by combining SEM and neutral network. Tanakinjal, Deans and

Gray (2010) conducted a study about the acceptance of mobile marketing in Malaysia perspective and found that trust has a positive relationship with Behavioural Intention (BI). In this study, 670 questionnaires were distributed to mobile phone users in Labuan, Malaysia but only 341 questionnaires have been found usable. SPSS v. 15 and AMOS 7 were used to conduct data analysis. Two types of statistical analysis were conducted for the research which was Factor Analysis Method and Structural Equation Modeling. Based on these studies, the following hypothesis is formed.

H1: Trust is positively related to Behavioural Intention to adopt mobile commerce.

### 3.2 Perceived Usefulness (PU)

PU is defined as the extent to which individuals believe that using a particular system will improve their job performance. A system with high PU, sequentially, is one for which a user believes in the existence of a positive use-performance connection (Davis, 1989). The study by Akturan and Tezcan (2012) about perceptions and intentions of youth markets towards mobile banking acceptance proved that PU positively affects BI. A structured tool was used to

gather data with multi-item measures using a five-point Likert scale. After face-to-face interviews with 435 university students, the data was collected. Exploratory factor analysis was conducted in this study. Khalifa and Shen (2008) conducted a research to explain the adoption of transactional B2C m-commerce. In this research, a cross-sectional study was conducted in Hong Kong. After the survey was established and pre-tested, then distributed to a random sample of mobile service subscribers. 202 questionnaires were collected out of 220 questionnaires. The results showed that PU was positively related to BI. High response rate was obtained from the respondents by giving gift coupons to them. ANOVA analysis was used in this study. The data analysis was completed in a holistic mode with the partial least squares (PLS) method. Based on these studies, the following hypothesis is made.

H2: Perceived Usefulness is positively related to Behavioural Intention to adopt mobile commerce.

### 3.3 Perceived Enjoyment (PE)

Davis, Bagozzi and Warshaw (1992) stated that PE is the action of using the computer which is perceived as enjoyable on its own right and separately from any performance

consequences that may be expected. However, the enjoyment was argued to be more influential than the usefulness of using a device in the determination of attitudes (Bruner & Kumar, 2005). The finding also showed PE was positively contributed to the adoption behaviour in internet devices. In this study, the sample size was 212 undergraduate students in the Midwestern U.S. University. These students were assigned randomly with 3 various conditions which include a single-factor (device), three-level, between-subjects experimental design. In proving the hypothesis, they used confirmatory factor analysis to evaluate the psychometric properties of the multi-item scale. Another study in determinants of consumer acceptance of m-commerce was conducted by Malik, Kumra and Srivastava (2013). This study pointed out that consumers relate adoption of m-commerce to hedonic motivation which their relationship is significant. They designed the study on a web-based survey using structured questionnaires and successfully collected 152 questionnaires from college students and young working professionals. The model was tested using Confirmatory Factor Analysis (CFA) with AMOS 18.0 statistical packages as well as coefficient alpha to assess the reliability of data. These

studies lead to the formation of the following hypothesis.

H3: Perceived Enjoyment is positively related to Behavioural Intention to adopt mobile commerce.

### 3.4 Social Influence (SI)

SI can be known as subjective norm. According to Fishbein and Ajzen (1975), it had been defined as the perception that individual is desired by the major referents to act or not to act a certain behaviour (Davis, Bagozzi & Warshaw, 1989). Lu, Yao and Yu (2005) found that SI has a significant influence on the perception of usefulness and ease of use of an individual. They studied about the intention of an individual to adopt wireless mobile technology and the relationships between the adoption behaviour, SI and personal innovativeness. Surveys were conducted with 357 respondents. Ultimately, they found that there was a causal relationship between SI and adoption of mobile technology. The hypotheses were examined and results were analysed using the path analysis. Kim and Han (2009) studied about factors that determine consumer behaviour in wireless pay-per-use service based on the aspect of value. Questionnaires were distributed and collected from 287 target respondents. It

was resulted that the dominant behaviour decision values are the utilitarian and social value. The measurements of the model were examined by using a confirmatory factor analysis with partial least squares (PLS) via the PLS Graph Version 3.0. Hence the following hypothesis is derived.

H4: Social Influence is positively related to Behavioural Intention to adopt mobile commerce.

### 3.5 Perceived Ease of Use (PEOU)

PEOU is also defined as “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989). Dai and Palvia (2009) have conducted a research about the adoption of m-commerce in China and United States. The researchers used a seven-likert scale survey and there were 190 usable responses for data analysis. Exploratory and confirmatory factor analyses were performed to test the data in this research. Structural equation modelling (SEM) was used to further analyse the data. The researchers found that PEOU has a significant impact on consumer’s intention to use m-commerce. Wu and Wang (2005) have conducted an empirical study that involved perceived risk and cost in original TAM theory to find out the factors that

affect the m-commerce adoption. There were 310 sample data used for analysis. The target respondents for this research are those who had involved one of the general online transactions. The reliability and validity of the constructs were analysed by LISREL software. The causal model was evaluated by structural equation modelling technique. In this study the researchers concluded that PEOU influences BI through PU.

H5: Perceived Ease of Use is positively related to Behavioural Intention to adopt mobile commerce.

### 3.6 Compatibility

Compatibility is defined as the degree to which an innovation is perceived to be consistent with the existing value, previous experiences, and needs of adopters (Sonnenwald, Maglaughlin & Whitton, 2001). A study about the adoption of mobile marketing in Malaysian perspective found that compatibility was positively related to BI. Structural equation modelling (SEM) and factor analysis were used in this research. The study used survey questionnaire method and disseminated the questionnaires to the mobile phone users who were located in Labuan. There were 341 usable questionnaires. The researchers rewarded



RM5 to each of the respondent who participated in the survey (Tanakinjal, Deans & Gray, 2010). Furthermore, Wu and Wang (2005) have investigated on the determinants of the user's acceptance in m-commerce. This study showed that Compatibility has a direct effect on BI. The target respondents for this research were users who should have involved in one of the online transactions. The reliability and validity of the constructs were examined by LISREL software. The causal model was evaluated by structural equation modelling (SEM) technique. The data was collected through online and sent to the target respondents through companies' customer services department. A total of 310 questionnaires have been used for this study.

H6: Compatibility is positively related to Behavioural Intention to adopt mobile commerce.

### **3.7 Technology Acceptance Model (TAM)**

Technology Acceptance Model (TAM) proposed by Davis (1989) has been widely cited in the studies on adoption of m-commerce as a research model for user adoption and usage in information systems field (Li, Dong, & Chen, 2012). TAM explains the reasons of users to accept or

reject information technology (Davis, Bagozzi & Warshaw, 1989). TAM model is derived from the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen to predict and explain human behaviour in various situations (Fishbein & Ajzen, 1975). The main dependent variable of TAM is the users' intention to use the system, which is determined by the users' willingness to try and how much effort they plan to place in performing the behaviour of adapting to the new information systems (Grandon, Nasco & Mykytyn, 2011). Intentions are the motivated factors that determine the users' behaviour patterns and willingness to comply with the behaviour (Lee & Mills, 2010). The original theory of TAM stated that PEOU and PU were the two key determinants of information system adoption (Davis, 1989). If the new technology gives a distinct advantage compared with the existing technologies, users are more willingly to adopt the new technology (Schierz, Schilke & Wirtz, 2010). In general, decision of users to adopt information system is examined by using TAM, but m-commerce is not similar with other information system in previous studies (Chong, Nathan, Ooi & Lin, 2010). M-commerce is a novel way to conduct business (Bhatti, 2007), and also provides entertainment such as using

mobile to play music and games. Hence, user's intention to adopt m-commerce may determine by perceived enjoyment (Chong, 2013). In order to provide a stronger TAM model, many researchers suggested that additional variables are needed (Legris, Ingham, & Colletette, 2003). According to Venkatesh and Davis (2000) who used TAM as the base point, TAM2 is the expansion of TAM with additional of

social influence processes (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability, and PEOU). Therefore, this study has developed a research model with six independent variables which are Trust, PU, PE, SI, PEOU and Compatibility based on TAM theory.

### 3.8 Proposed Research Framework

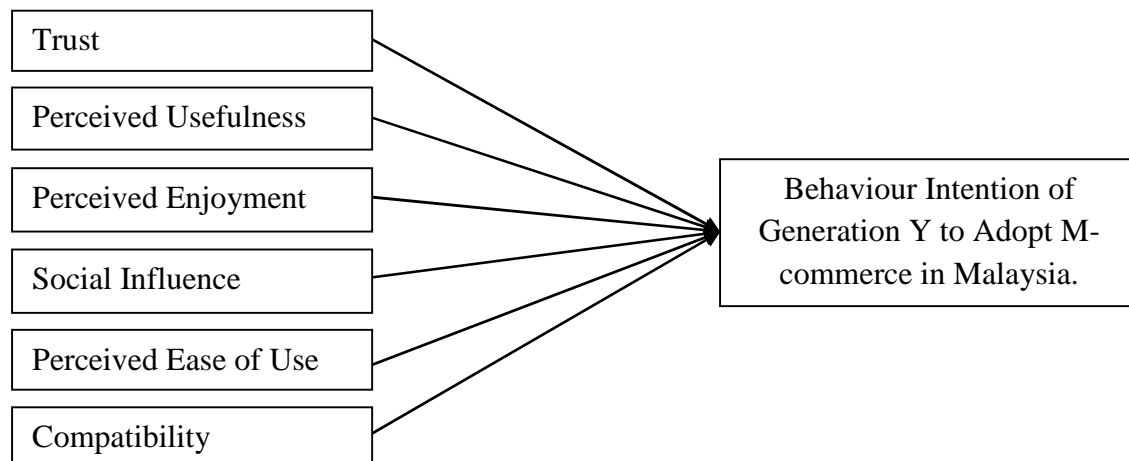


Figure 1: Research Framework

Adapted from: Dai and Palvia (2009); Kim and Han (2009); Gu, Lee and Suh (2009).

## 4.0 METHODOLOGY

Malaysian States Selangor, Johor and Perak were selected as target location since these three States contain the largest population and also of Generation Y population in peninsular Malaysia (Department of Statistics Malaysia) Sabah and Sarawak States were not included

because of time and budget constraints. The Generation Y who own a mobile phone were the target respondents in this study. Generation Y is technology savvy, early adopters of new technologies and always willing to try new things (Goi & Ng, 2011). Compared to the Generation X, they generally have higher usage and familiarity with wireless communications,



media and digital technologies (Junco & Mastrodicasa, 2007). Thus, this is the reason why Generation Y is selected as the population for this study. The unit of analysis for this research is individuals in Generation Y in Malaysia who own a mobile phone. Convenience sampling technique has been used in this study as there was no sampling frame. All items were measured by using five point likert scale except for demographics information. This scale will be ranging from 1 (strongly disagree) to 5 (strongly agree). Five point likert scale is used in this study because it is widely used in constructing survey research. Total of 350 sets of survey

questionnaires were distributed to the respondents; however, only 253 sets of usable questionnaires were tested by using SAS Analysis. The incomplete survey questionnaires were discarded to ensure the data are reliable and accurate.

## 5.0 Results

### 5.1 Demographic Profile of the Respondents

Respondents' demographic profile has been analysed in terms of gender, age group, marital status, highest education completed, career, own mobile phone, monetary transactions, m-commerce usage rate, and States. All these details will be displayed in Table 4.1:

Table 1: Demographic Profile of the Respondents

		Frequency	Percentage (%)
Gender	Male	96	38
	Female	157	62
Age	19-22 years old	124	49
	23-26 years old	76	30
	27-30 years old	40	16
	31-33 years old	13	5
Marital Status	Single	202	80
	Married	48	19
	Divorced	3	1
Education	Primary	3	1
	Secondary	71	28
	Diploma	68	27
	Degree	88	35
	Master	13	5
	Other (STPM)	10	4

Career	Student	126	50
	Employed	119	47
	Unemployed	5	2
	Others ( Self Employed)	3	1
Own Mobile Phone	Yes	100	100
	No	-	-
Monetary Transactions	Yes	74	29.3
	No	179	70.7
M-commerce Usage Rate	None	179	70.7
	< 5 times	50	20
	5 to 10 times	23	9
	>10 times	1	0.3
State	Perak	71	28.1
	Johor	85	33.6
	Selangor	97	38.3

Source: Developed for the research

In this research, 100% of the respondents own at least a mobile phone. Majority of the respondents do not use mobile phone

for monetary transaction purposes and their usage rate for mobile commerce is also low, which is 29.3%.

## 5.2 Central Tendencies Measurement of Constructs

Mean and standard deviation of the constructs were computed as in Table 4.2.

Table 2: Summary of Central Tendencies

Variables	Item	Mean	Standard Deviation
Trust	T1	2.39526	0.93536
	T2	2.31621	0.95266
	T3	2.26482	1.05269
	T4	2.31225	1.13097
Perceived Usefulness	PU1	4.00395	0.98197
	PU2	3.99209	0.92579
	PU3	4.06719	0.98371

	PU4	4.04348	0.88757
Perceived Enjoyment	PE1	4.00791	0.82612
	PE2	4.04348	0.82260
	PE3	4.21739	0.60107
	PE4	4.01186	0.84272
Social Influence	SI1	4.01186	0.98191
	SI2	3.94071	0.94304
	SI3	3.76285	0.90363
	SI4	3.74308	0.98460
	SI5	3.70751	0.97662
Perceived Ease of Use	PEOU1	4.14229	0.64512
	PEOU2	4.01186	0.62031
	PEOU3	4.13044	0.63837
	PEOU4	4.09486	0.62273
Compatibility	C1	3.58103	0.94615
	C2	3.53360	0.98191
	C3	3.56127	0.93923
	C4	3.54455	0.94434
Behavioural Intention	BI1	3.98024	0.85194
	BI2	4.06324	0.78424
	BI3	3.94466	0.84333
	BI4	3.54941	0.74171
	BI5	2.96047	1.04579

Source: Developed for the research

All the constructs' average mean values are within the range of 3.5000 to 4.1000 as well as standard deviation with less than 1. However, there is only Trust has the average mean of 2.3221 and standard deviation is 1.0179. This has shown that all the variables are more to agree and strongly agree but only one variable deviates to disagree.

### 5.3 Normality Test

Skewness and kurtosis analysis has been used to test the normality of the survey data. If the Skewness and Kurtosis values are within the range of + 1.0 and -1.0, it shows that the data is normally distributed (Miles & Shevlin, 2001). The normality

test for the data is computed as below in Table 4.3:

**Table 3: Skewness Measurement of Items**

Variables	Items	N	Skewness	Kurtosis
Trust	T1	253	0.80621	-0.53875
	T2	253	0.85610	-0.37066
	T3	253	0.87243	-0.04207
	T4	253	0.80558	-0.24383
Perceived Usefulness	PU1	253	-0.86969	-0.17665
	PU2	253	-0.98233	0.315115
	PU3	253	-0.99262	0.044688
	PU4	253	-0.97772	0.489999
Perceived Enjoyment	PE1	253	-0.95121	0.80447
	PE2	253	-0.94323	0.79712
	PE3	253	-0.34951	0.61042
	PE4	253	-0.86461	0.48502
Social Influence	SI1	253	-0.68295	-0.57710
	SI2	253	-0.73965	-0.12013
	SI3	253	-0.55416	-0.08127
	SI4	253	-0.54650	-0.36757
	SI5	253	-0.75044	0.14594
Perceived Ease of Use	PEOU1	253	-0.1415070	-0.6296773
	PEOU2	253	-0.2086359	0.29916488
	PEOU3	253	-0.1191064	-0.5771530
	PEOU4	253	-0.0666935	-0.4355297
Compatibility	C1	253	-0.9437713	-0.2282226
	C2	253	-0.6015351	-0.9231800
	C3	253	-0.9319352	-0.1423321
	C4	253	-0.9442029	0.02066028

Source: Developed for the research

The measure of skewness and kurtosis tests for all the data are within the range of 0.87243 to -0.99262. Since all the items are within the range of +1.00000 to -1.00000, it is therefore assumed that the data for this research are normal distributed.

### 5.4 Reliability Test

The reliability of each variable is measured using Cronbach’s Alpha. Table 4.4 shows that the Cronbach’s Alpha values for all the constructs are higher than 0.7. Therefore, it shows that the data is reliable.

**Table 4: Reliability Statistics for Constructs**

Construct	Number of Item	Cronbach’s Alpha
Trust (IV1)	4	0.952614
Perceived Usefulness (IV2)	4	0.890859
Perceived Enjoyment (IV3)	4	0.798530
Social Influence (IV4)	5	0.873733
Perceived Ease Of Use (IV5)	4	0.767311
Compatibility (IV6)	4	0.936411
Behaviour Intention (DV)	5	0.839966

Source: Developed for the research

### 4.5 Pearson Correlation Analysis

The correlation coefficient values between the variable are shown in Table 4.4.

**Table 5: Partial Correlation Summary**

Control Variables		T (IV1)	PU (IV2)	PE (IV3)	SI (IV4)	PEOU (IV5)	C (IV6)
BI (DV)	T (IV1)	1.0000					
	PU (IV2)	0.3214 <.0001	1.0000				
	PE (IV3)	0.2702 <.0001	0.4750 <.0001	1.0000			
	SI(IV4)	0.3497	0.6370	0.4921	1.0000		

		<.0001	<.0001	<.0001			
	PEOU(I V5)	0.2695 <.0001	0.4680 <.0001	0.2719 <.0001	0.4899 <.0001	1.0000	
	C(IV6)	0.3739 <.0001	0.7370 <.0001	0.5368 <.0001	0.6721 <.0001	0.4339 <.0001	1.0000

Source: Developed for the research

As the correlation coefficient is not more than 0.9 among the variables, there is no multicollinearity problem in this research.

### 5.6 Multiple Regression Analysis

Table 6: Model Summary

Model	R	R square	Adjusted R Square	Std. Error of The Estimate	Mean Square	F Value	Pr>F
1	0.80405	0.6465	0.6378	0.25029	12.23652	74.97	<.0001

Source: Developed for the research

Table 7: Summary of Regression Coefficients

Model	Parameter	Parameter				Tolerance	Variance inflation
		Beta	Standard Error	t	Pr>F		
1	(Constant)	0.35382					
	T (IV1)	0.07471	0.02920	2.56	0.0111	0.83224	1.20158
	PU (IV2)	0.14910	0.04877	3.06	0.0025	0.40428	2.47354
	PE (IV3)	0.12255	0.05043	2.43	0.0158	0.67250	1.48699
	SI (IV4)	0.16869	0.04836	3.49	0.0006	0.45463	2.19958
	PEOU (IV5)	0.12779	0.06223	2.05	0.0411	0.71160	1.40529
	C (IV6)	0.25405	0.04858	5.23	<.0001	0.35976	2.77959

Source: Developed for the research

#### Multiple Regression Analysis Equation:

$$BI = 0.3538 + 0.07471 T + 0.1491 PU + 0.1226 PE + 0.1687 SI + 0.1278 PEOU + 0.2541 C$$



## 6.0 Discussion

Based on the results from data analysis it could be seen that, the p-value for all the variables are less than 0.05, and this shows that trust, perceived usefulness, perceived enjoyment, social influence, perceived ease of use and compatibility have a significant relationship with Behaviour Intention to adopt mobile commerce.

### 6.1 Implications of the Study

This research will help financial service industries such as banks to understand better on behaviour intention of Generation Y in Malaysia to adopt m-commerce. Since Generation Y consumers are recognized as new technology early adopters and Internet heavy users (Kim & Hahn, 2012), mobile device has become an essential part in their lifestyle (McGuigan, 2005). Hence, the findings will help the financial service industries to attract and retain Generation Y users to use m-commerce. Financial service industries can improve on services that they provided according to generation Y's expectations so that it can satisfy their needs and wants. This research is also important to telecommunications industries. According to Barnes (2002), m-commerce is

monetary transaction implemented through wireless telecommunication network. In order to attract users to use m-commerce, telecommunication service providers should take into account of the needs and wants from the users so that they can provide better services for them (Pedersen & Methlie, 2002). Telecommunication companies may provide lower service charges for wireless telecommunication network so that users are able to afford the charges. As a result, it will attract more new users and at the same time increases the profits of their companies. This research also contributes to retail or service industries. Companies can understand better on the factors that influence and encourage this group of users to use m-commerce. As a result, this will help companies to explore and expand their business market. By expanding the companies' market to enabling customers to make orders at anytime and anywhere, it will increase the profits of the companies. This study also provided one more literature to support the TAM theory by providing support for all hypotheses.

### 6.2 Limitations of the study

This study is only conducted in Peninsular Malaysia in top three States with the largest population as the target locations of this study and the 253 sample size may not be large enough to represent all the generation Y in Malaysia. Besides, this study is only focused on generation Y. If the population is expanded in this study by including Generation X, then it may affect the outcome of behaviour intention to adopt m-commerce.

## 7 Recommendation for Future research

For further research, it is suggested that the surveys are to be conducted on the other States in Malaysia. It is also suggested that future research should draw a bigger sample size to generate more accuracy in representing the population. As recommended by Suki and Suki (2007), to have more respondents for a broader and worldwide perspective in findings. Concentration on generation Y may limit our study on BI to adopt m-commerce. Hence, future studies can concentrate on more population such as Generation X and Z. Increase the population in terms of ages in order to check the influences towards behaviour intention by different age group (Chong, Nathan, Ooi & Lin, 2010). This is

because of the perception of individuals in different ages may vary to each other.

## 8 Conclusion

In conclusion, this study has successfully showed that TAM theory is able to predict the Behaviour Intention of Generation Y in Malaysia to adopt m-commerce. This research concluded that all six independent variables, Trust, PU, PE, SI, PEOU and Compatibility have positive effect on Behaviour Intention of Generation Y to adopt m-commerce. This research is also able to conclude that among all these six independent variables, the most significant determinant of Generation Y's Behaviour Intention to adopt m-commerce is Compatibility.

## References

- [1] Akturan, U., and Tezcan, N. (2012). Mobile banking adoption of the youth market perceptions and intentions. *Marketing Intelligence & Planning*, 30(4), 444-459.
- [2] Balakrishnan, V., and Raj, R. G. (2012). Exploring the relationship between urbanized Malaysian youth and their mobile phones: A quantitative approach. *Telematics and Informatics*, 29(3), 263-272.
- [3] Barnes, S. J. (2002). The mobile commerce value chain: analysis

- and future developments. *International Journal of Information Management*, 22(2), 91-108.
- [4] Bhatti, T. (2007). Exploring factors influencing the adoption of mobile commerce. *Journal of Internet Banking and Commerce*, 12(3), 1-13.
- [5] Bruner, G., and Kumar, A. (2005). Explaining consumer acceptance of handheld internet devices. *Journal of Business Research*, 58(5), 553-558.
- [6] Chong, A. Y. L. (2013). A two-staged SEM-neural network approach for understanding and predicting the determinants of m-commerce adoption. *Expert Systems with Applications*, 40, 1240-1247.
- [7] Chong, A. Y. L., Nathan, D., Ooi, K. B., and Lin, B. (2010). Adoption of 3G services among Malaysian consumers: An empirical analysis. *International Journal of Mobile Communications*, 8(2), 129-149.
- [8] Chung, K. C., and Holdsworth, D. K. (2012). Culture and behavioural intent to adopt mobile commerce among y generation: Comparative analyses between Kazakhstan, Morocco and Singapore. *Young Consumers*, 13(3), 224-240.
- [9] Clarke III, I. (2001). Emerging value propositions for m-commerce. *Journal Business Strategies*, 18(2), 133-148.
- [10] Dai, H., and Palvia, P. C. (2009). Mobile commerce adoption in China and the United States: A cross-cultural study. *The Data Base for Advances in Information Systems*, 40(4), 43-61.
- [11] Dai, H., and Palvia, P. C. (2009). Mobile commerce adoption in China and the United States: A cross-cultural study. *The Data Base for Advances in Information Systems*, 40(4), 43-61.
- [12] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Management Information Systems Research Center, University of Minnesota*, 13(3), 319-340.
- [13] Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.

- [14] Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace 1. *Journal of Applied Social Psychology*, 22(14), 1111-1132.
- [15] Dholakia, R. R., and Dholakia, N. (2004). Mobility and markets: Emerging outlines of m commerce. *Journal of Business Research*, 57(12), 1391-1396.
- [16] Fishbein, M., and Ajzen, I. (1975). *Belief, attitude, intention, and behaviour: an introduction to theory and research*. Reading, MA: Addison-Wesley.
- [17] Goi, C. L., and Ng, P. (2011). Perception of young consumers on mobile phone applications in Malaysia. *World Applied Sciences Journal*, 15(1), 47-55.
- [18] Grandon, E. E., Nasco, S. A., and Mykytyn Jr, P. P. (2011). Comparing theories to explain e-commerce adoption. *Journal of Business Research*, 64(3), 292-298.
- [19] Gu, J., Lee, S., and Suh, Y. (2009). Determinants of behavioural intention to mobile banking. *Expert Systems with Applications*, 36(9), 11605-11616.
- [20] Haque, A. (2004). Mobile commerce: Customer perception and it's prospect on business operation in Malaysia. *The Journal of American Academy of Business*, 4(1&2), 257-262.
- [21] Islam, M. A., Khan, M. A., Ramayah, T., and Hossain, M. M. (2011). The adoption of mobile commerce service among employed mobile phone users in Bangladesh: Self efficacy as a moderator. *International Business Research*, 4(2), 80-89.
- [22] Junco, R. and Mastrodicasa, J.M. (2007). Junco, R. &Mastrodicasa, J. (2007). *Connecting to the Net.Generation: What higher education professionals need to know about today's students*. Washington, DC: NASPA.
- [23] Khalifa, M., and Shen, K. N. (2008). Drivers For Transitional B2C M-Commerce Adoption: Extended Theory for Planned Behaviour. *The Journal of Computer Information Systems*, 48(3), 111-117
- [24] Kim, B., and Han, I. (2009). What drives the adoption of mobile data services? An approach from a value perspective. *Journal of*

- Information Technology*, 24(1), 35-45.
- [25] Kim, J., and Hahn, K. H. Y. (2012). Effects of personal traits on generation y consumers' attitudes toward the use of mobile devices for communication and commerce. *Human Technology*, 8 (2), 133-156.
- [26] Kumar, A., and Lim, H. (2008). Age differences in mobile service perceptions: comparison of generation y and baby boomers, *Journal of Services Marketing*, 22 (7), 568-77.
- [27] Lee, J. K., and Mills, J. E. (2010). Exploring tourist satisfaction with mobile experience technology. *International Management Review*, 6(1), 92-102.
- [28] Legris, P., Ingham J., and Collette P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, 40(3), 191-204.
- [29] Li, M., Dong, Z. Y., and Chen, X. (2012). Factors influencing consumption experience of mobile commerce: A study from experiential view. *Internet Research*, 22(2), 120-141.
- [30] Lu, J., Yao, J. E., and Yu, C. S. (2005). Personal innovativeness, social influences and adoption of wireless internet services via mobile technology. *The Journal of Strategic Information Systems*, 14(3), 245-268.
- [31] Malaysian Communications and Multimedia Commission. (2011). Retrieved February 15, 2014, from <http://www.mcmc.gov.my/skmmgovmy/media/General/pdf/Q4-2011-C-M-Pocket-Book-of-Statistics.pdf>
- [32] Malaysian Communications and Multimedia Commission. (2013). Retrieved February 15, 2014, from [http://www.mcmc.gov.my/skmmgovmy/media/General/pdf/CM\\_Q4\\_2013\\_%20ENG.pdf](http://www.mcmc.gov.my/skmmgovmy/media/General/pdf/CM_Q4_2013_%20ENG.pdf)
- [33] Malik, A., Kumra, R., and Srivastava, V. (2013). Determinants of consumer acceptance of M-commerce. *South Asian Journal of Management*, 20(2), 102-126. Retrieved from <http://search.proquest.com/docview/1429384077?accountid=50207>
- [34] Mayer, R.C., Davis, J.H., and Schoorman, F.D. (1995). An integrative model of organizational

- trust. *The Academy of Management Review*, 20(3), 709-734.
- [35] McGuigan, J. (2005). Towards a sociology of the mobile phone. *An Interdisciplinary Journal on Humans in ICT Environments*, 1(1), 45-57.
- [36] Miles, J., and Shevlin, M. (2001). *Applying regression & correlation: a guide for students and researchers*. London: Sage Publications.
- [37] Ngai, E. W. T., and Gunasekaran, A. (2007). A review for mobile commerce research and applications. *Decision Support System*, 43(1), 3-15.
- [38] Pedersen, P. E., and Methlie, L. B. (2002). Understanding Mobile Commerce End-User Adoption: A Triangulation Perspective and Suggestion for an Exploratory Service Evaluation Framework. *HICSS*.
- [39] Sadi, A. S., and Noordin, M. F. (2011). Factors influencing the adoption of m-commerce: An exploratory Analysis. *Proceedings of the 2011 International Conference on Industrial Engineering and Operations Management*, 492-499.
- [40] Schierz, P. G., Schilke, O., and Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, 9(3), 209-216.
- [41] Sonnenwald, D., Maglaughlin, K., and Whitton, M. (2001). Using innovation diffusion theory to guide collaboration technology evaluation: Work in progress, 114-119.
- [42] Suki, N. M., and Suki, N. M. (2007). Online buying innovatives: Effects of perceived value, perceived risk and perceived enjoyment. *International Journal of Business and Society*, 8(2), 81-93.
- [43] Sumita, U., and Yoshii, J. (2010). Enhancement of e-commerce via mobile accesses to the internet. *Electronic Commerce Research and Applications*, 9(3), 217-227.
- [44] Tanakinjal, G. H., Deans, K. R., and Gray, B. J. (2010). Third screen communication and the adoption of mobile marketing. *International Journal of Marketing Studies*, 2(1).



- [45] Venkatesh V., and Davis D.F. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186-204.
- [46] Wolburg, J. M., and Pokrywczynski, J. (2001). A psychographic analysis of generation y college students. *Journal of Advertising Research*, 41(5), 33-53
- [47] Wu, J., and Wang, S. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management*, 42, 719-729.
- [48] Yu, Y., and Buahom, K., (2013). Exploring factors influencing consumer adoption on mobile commerce services. *The Business Review, Cambridge*, 21(1), 258-265.