

EXTENDED UTAUT2 MODEL ON FACTORS INFLUENCING OF MOBILE COMMERCE ACCEPTANCE IN YANGON, MYANMAR

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ABSTRACT: Today, wireless telecommunication is well designed and there is significant evidence on the critical growth of wireless technologies in developing countries including Myanmar. However, the usage of mobile services and transactions such as mobile payment, mobile wallet, electronic business are still low in Myanmar. This research attempts to investigate the factors influencing Mobile Commerce acceptance in Yangon, Myanmar and examines the differences in acceptance level among three generation groups (Generation X, Generation Y and Generation Z). A conceptual framework was developed based on an extended Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) for M-Commerce, and two additional variables such as disturbance concerns and perceived trust on behavior intention on use of M-commerce. A survey data was collected from 405 the respondents who owned the mobile phone with M-Commerce knowledge in Yangon, Myanmar by using judgmental, quota and convenience sampling methods. The Simple and Multiple Linear Regression and One-Way ANOVA were used. Findings indicated that the five independent factors such as performance expectancy, social influence, facilitating conditions, price/value, habit from technology acceptance theory positively significantly influence the behavioral intention towards M-Commerce acceptance. The two extended variables such as disturbance concerns negatively significantly, and perceived trust positively significantly influence the behavioral intention towards M-Commerce acceptance. Among significant factors, habit is the most influencing on M-Commerce acceptance and Generations such as X and Y are sensitive on trust while using M-Commerce.

Keywords: M-Commerce, Unified Theory of Acceptance and Using Technology 2, multiple linear regression, disturbance concerns, perceived trust, behavior intention

Introduction

Wireless communication is formed

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by two technologies such as wireless technologies and the internet. The connectivity through wireless communications is the enabler of Digital Economy, and at the same time, Electronic Commerce (E-Commerce), Mobile Commerce (M-Commerce), Location Based Commerce (L-Commerce) has been developed widely. Since 2007, the emergence of modern smartphone technologies is significantly improved from fixed line phone to cellular and mobile phone. At the same time, the market orientation has started to change from traditional to mobile business. Mobile

service has been emerging in Myanmar since 2014. Since then there are also significant investments in telecommunications industry by companies such as Telenor, Ooredoo, MPT and Mytel (Windsor, 2015). Though the mobile coverage has rapidly increased in the country, people are just started using the voice communications system, and only a few has started using the mobile service. It is also found that both government and private sector in Myanmar are left behind in the traditional economy, and a few are trying to change the conventional to digital business through mobile communication (Windsor, 2015). Thus, the problem statement of the study is “Why M-Commerce usage is low while mobile penetration is high in Yangon, Myanmar?”

The term Mobile Commerce (hereafter M-Commerce) was coined by Kevin Duffey in 1997 (Tapscott, 2014). M-Commerce means by using wireless technology, the capabilities of electronic commerce can directly deliver into customer mobile phone anywhere. M-commerce is a retail shop in consumer’s mobile phone.

There are some bottlenecks that hinder the use of digital services like M-commerce in Myanmar. There are some people who know how to use the digital services, but they couldn’t use these services because there were lack of payment services such as Visa, Master card and PayPal service for past few years. Electricity infrastructure and Information and Communication Technology (ICT) infrastructure such as bandwidth, connection failure, in the country also added barriers for doing business digitally in Myanmar (Nam, Cham, & Halili, 2015). In addition, some online shops such as Amazon and eBay do not ship products to

Myanmar (Cunningham, 2014). Thus, when the buyers from Myanmar buy the products from these sites, products have to be sent to a freight forwarder in one of the ASEAN countries such as Singapore or Thailand. These difficulties make the acceptance of M-Commerce stagnant and the habit of using M-Commerce is low in Myanmar.

Service sources of M-Commerce including banks, and some financial institutions are eager to invest massively in this industry as they know that Digital Economy is coming (Cunningham, 2014). The tradeoff they are facing is, even they invest heavily in M-commerce business, the use of mobile services and transactions such as mobile payment, mobile wallet, electronic business are still low.

Therefore, the objective of this research is to investigate the factors affecting M-Commerce acceptance in Yangon, Myanmar. In addition, there are many problems and issues to use M-Commerce smoothly in the country. Therefore, the second objective of this study focuses on the role of disturbance concerns and perceived trust in M-commerce acceptance in the new digital economy.

Literature Review

In early 1980, along with the development of Internet Protocol (IP), the use of internet in business firms and public was widely spread out leading digital revolution and becoming digital era (Peter, 2004).

In the early stage of using computing technology, there are several issues regarding acceptance of the computing technology in workplace (Rondan-Cataluna, Arenas-Gai, & Ramirez-Correa, 2015). Many research has

been done and many theories have been developed in the area of technology acceptance such as Technology Acceptance Model including Innovation Diffusion Theory (IDT) adopted from Diffusion of Innovations (Rogers, 1962), Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) and Theory of Planned Behavior (TPB) (Ajzen, 1985) Technology Acceptance Model (TAM) was derived from TRA and TRA is also based on the IDT. Moreover, The Technology Acceptance Model (TAM) is an extension of TRA (Davis F. A., 1989). Therefore, TAM is the more broadly used in explaining about technology acceptance literature lately. However, the limitation of TAM is it explains the technology acceptance in general but not on technology acceptance of mobile technology (Kuciapski, 2017).

Venkatesh, Morris, B.Davis, & D.Davis (2003) combined eight prominent technology acceptance models to one and named Unified Theory of Acceptance and Use of Technology (UTAUT). The eight prominent models are 1. Innovation Diffusion Theory (IDT), adopted by (Rogers, 1962), 2. Theory of Reasoned Action (TRA) by (Fishbein and Ajzen, 1975), 3. Theory of Planned Behavior (TPB) by (Ajzen, 1985), 4. Technology Acceptance Model (TAM) by (Davis, 1989), 5. Model of PC Utilization (MPCU) by (Thompson, Higgins, & Howell, 1991), 6. Motivational Model (MM) by (Davis, Bagozzi, & Warshaw, 1992), 7. Model combining TAM and TPB by (Taylor & Todd, 1995), 8. Social Cognitive Theory (SCT) by (Compeau & Higgins, 1995). In UTAUT model, there are five main components such as performance expectancy, effort expectancy, social influence, facilitating conditions as

independence variables and behavioral intention that affect the technology as dependent variable. The Performance Expectancy (PE) is the degree of individual belief that using M-Commerce will support the user to achieve improvements in job performance (Venkatesh et al., 2003). The Effort Expectancy (EE) is the degree of easiness to use the M-Commerce (Venkatesh et al., 2003). The Social Influence (SI) is the degree of individual perceives that influence other believe to users and should use the M-Commerce (Venkatesh et al., 2003). The Facilitating Conditions (FC) is the degree of individual believes that an organizational and technical infrastructure exists to provide use of M-Commerce (Venkatesh et al., 2003). Technology acceptance means accepting the new technology by user and it is not only in computing technology and information system, it can be any new technology introduced to anyone in anywhere.

The purpose of developing original UTAUT model was to analyze an organizational environment where technology was used and acceptance level of an employee who needs to use the computer technology or information system mandatorily. Therefore, this model does not fit for consumer sector because most of the consumer behaviors are entirely in voluntary. The UTAUT2 is the extension of UTAUT by Venkatesh et al., (2003) which added three key determinants such as hedonic motivation, price value and habit (Tak & Panwar, 2017). These three determinants represent consumers' behavior in the use of technologies context. The Hedonic Motivation (HM) is the fun or pleasure that derived from using M-Commerce and it has been stand in major role to determine use and acceptance of M-

Commerce is called hedonic motivation (Brown & Venkatesh, 2005). The price value is the cognitive tradeoff between the perceived benefits of the applications and the financial cost for using them (Dodds, Monroe, & Grewal, 1991). Habit is because of learning, the individual incline to execute behaviors automatically (Limayem, Hirt, & Cheung, 2007) while comparing habit with automaticity (Kim & Malhotra, 2005).

As mentioned, there are many problems and issues relating to use M-Commerce smoothly in the country. Studies found that the disturbance concern (D. Lai, I. Lai, & Jordan, 2009) and perceived trust (Saleh & Mashhour, 2014) were also affecting the behavior intention to accept technology. Therefore, the role of disturbance concerns and perceived trust was added to the model. Disturbance is an activity that is a malfunction, intrusion, or interruption. Perceived trust is a personal intelligence that raises to a sensitivity of reliability, trust and security (Schoorman, Mayer, & Davis, 2007). Trust refers to the perceived security of the technology and its trustworthiness, while (Chong, 2013) refers to it as the feelings of privacy associated with making transactions through the technology (Chong, 2013a).

Conceptual Framework

The conceptual framework of this study is based on the UTAUT2 as a main theoretical model to study user acceptance in terms of behavior intention to use M-Commerce. In addition, the research framework is extended by adding two more variables such as disturbance concerns and perceived trust in UTAUT2 model. The figure 1 shows the research framework used in this research.

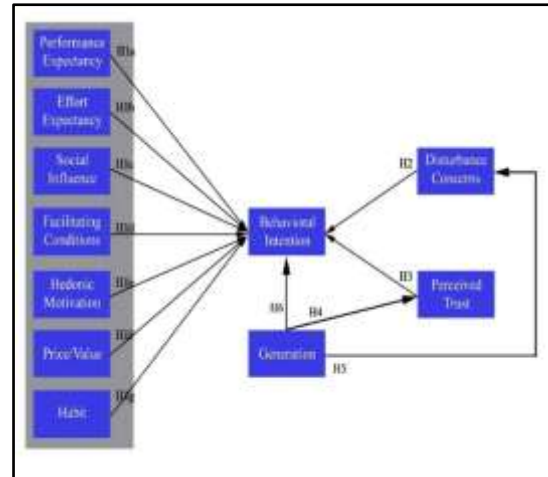


Figure 1: Research Framework

The primary independent variables of this study are performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit and price value from UTAUT2 model. Also, as an extension of UTAUT2 model, this study adds the disturbance concerns and perceived trust to use M-Commerce as independent variables. The dependent variable of this study is behavioral intention to use M-Commerce.

The followings hypotheses were developed for this study.

Hypothesis (H1a):

Performance expectancy (PE) has a relationship on behavioral intention towards adopting M-Commerce.

Hypothesis (H1b):

Effort expectancy (EE) has a relationship on behavioral intention towards adopting M-Commerce.

Hypothesis (H1c):

Social influence (SC) has a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H1d):

Facilitating conditions (FC) has a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H1e):

Hedonic motivation (HM) has a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H1f) states that price value (PV) has a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H1g):

Habit (HT) has a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H2):

Disturbance concerns (DC) have a relationship on behavioral intention towards adopting m-commerce.

Hypothesis (H3):

Perceived Trust (T) has a relationship on behavioral intention towards accepting M-Commerce.

In addition, this study also investigates the mean differences among three generations (generation X, generation Y and generation Z) towards behavioral intention, disturbance concerns and perceived trust dimensions. and the following hypotheses were developed.

Hypothesis (H4):

There are differences on perceived trust towards M-Commerce acceptance among generations.

Hypothesis (H5):

There are differences on Disturbance Concerns towards M-Commerce acceptance among generations.

Hypothesis (H6):

There are differences on Behavioral Intention towards M-Commerce among generations.

Research Methodology

The respondents of this research are anyone who owns the mobile phone in Yangon, Myanmar and also having M-Commerce knowledge. The population in

Yangon is 7,360,703 as of March, 2014 (Department of Population, 2015). The mobile phone penetration in Yangon is 964,579 (Department of Population, 2015). Based on 95% confidence level, the sample size is 405 out of Yangon population. The sample size is calculated based on the sample size determination equation (Yamane, 1967).

The context of the study is Yangon, Myanmar as Yangon is the commercial center of Myanmar and Yangon has the high penetration of mobile phones, internet services and available wi-fi access (Zainudeen & Galpaya, 2015). Furthermore, the researchers collect the data from three different shopping centers which are among the biggest shopping centers in Yangon by using questionnaire. Data were also collected from the respondents who are working at ICT company and students from some private colleges in Myanmar ICT park. Thus, judgmental convenience sampling was used. Moreover, quota sampling was also used as the researchers examine three generations (Generation X, Generation Y and Generation Z) with equal number of respondents in each group.

A survey questionnaire with five-level Likert scale were adopted from Lai et al., (2009), Saleh & Mashhour (2014) and (Venkatesh, Thong, & Xu, 2012).

Data Reliability and Validity

The reliability and validity test were applied to ten construct variables: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, disturbance concern, perceived trust and behavioral intention. The Reliability test with Cronbach Alpha of greater than 0.6 is used to analyze of the

internal consistency of variables. Table 1 summarizes the results of reliability test and validity test also confirms the respective item questions are valid questions for a single variable.

Table 1: Reliability test (N=50)

Sr.	Variables	Cronbach's Alpha
1	Performance Expectancy	0.747
2	Effort Expectancy	0.854
3	Social Influence	0.710
4	Facilitating Conditions	0.703
5	Hedonic Motivation	0.805
6	Price Value	0.704
7	Habit	0.795
8	Disturbance Concerns	0.734
9	Perceived Trust	0.711
10	Behavioral Intention	0.716

Results and Discussion

Data used in this study were collected from those who owns a mobile phone and has M-commerce knowledge. Data were equally distributed and collected from three generations groups. Table 2 summarizes the demographic information of 405 respondents.

Table 2: Demographic Information of Respondents (N=405)

Demographic Factors	Frequency	Percentage
Mobile Phone Knowledge	0	0
• Very Poor	29	7.2

• Poor	81	20.0
• Moderate	193	47.7
• Good	102	25.2
• Very Good	0	0
Using Internet		
• Don't use	0	0
• less than 1 yr	0	0
• 1-2 yrs	0	0
• More than 2 yrs	405	100
Using M-Commerce		
• Don't use	41	10.1
• Frequent	42	10.4
• Almost Daily	322	79.5
• Seldom		
Gender		
• Male	237	58.5
• Female	168	41.5
Generation		
• Born between 1965-1976 (Generation X)	135	33.3
• Born between 1977-1995 (Generation Y)	135	33.3
• Born in 1996 or onwards (Generation Z)	135	33.3
Education		
• University Student	94	23.2
• Diploma	24	5.9
• Bachelor	257	63.5
• Master's degree	30	7.4
• Other	0	0
Employment		
• Not working	28	6.9

• Employee	270	66.7
• Employer	71	17.5
• Freelance	36	8.9
• Other	0	0

Multiple Linear Regression (MLR) was used to test hypotheses H1a, H1b, H1c, H1d, H1e, H1f, H1g, and Simple Linear Regression (SLR) was used to test H2 and H3. Regression results are summarized in the Table 3.

Table 3: Results of Regression Analysis

Hypotheses	Independent Variables	Standardized Coefficient Beta	Standardized Coefficient Beta	Standardized Coefficient Beta
Dependent Variable (Behavioral Intention)		H1	H2	H3
H1a	PE	.228*		
H1b	EE	-.039		
H1c	SC	.110*		
H1d	FC	.185*		
H1e	HM	-.032		
H1f	PV	.185*		
H1g	HT	.345*		

H2	DC		-.404*	
H3	TT			.321*
R ²		.333	.163	.103
Model Sig		.000	.000	.000

* P < .05

** P < .001

The First Hypothesis (H1): The UTAUT2 towards behavioral intention of M-Commerce acceptance is partially influential. Hypotheses H1a, H1c, H1d, H1f, H1g are accepted. This inferred that UTAUT2 attribute variables such as performance expectancy (H1a), social influence (H1c), facilitating conditions (H1d), price/value (H1f) and habit (H1g) positively significantly impacted on behavioral intention of M-Commerce acceptance. The coefficients show that habit has the highest influence on behavioral intention at .345, the second highest influence on behavioral intention is performance expectancy at .228, the third highest influence on behavioral intention is price/value and facilitating conditions at .185 and followed by social influence with .110, respectively. The multiple coefficient of determination (R Square or R²) is 0.333 with significant level < .05, indicating that UTAUT2 attribute variables effected behavioral intention. This means 33.3% of the variance of behavioral intention on acceptance of M-Commerce can be explained by the performance expectancy, social influence, facilitating conditions, price value and habit.

The Second Hypothesis (H2) is accepted. The disturbance concerns negatively significantly influenced behavioral intention of M-Commerce acceptance. The standardized coefficient of

customer disturbance concerns equaled to -.404. The multiple coefficient of determination (R Square or R^2) is equal to 0.163 with significant level $< .05$, indicating that disturbance concerns effected behavioral intention. This means 16.3% of disturbance concerns can explain the variance of behavioral intention to accept M-Commerce in Yangon, Myanmar.

The Third Hypothesis (H3) is accepted. The perceived trust influenced behavioral intention towards M-Commerce acceptance. The standardized coefficient of perceived trust equaled to .321. The multiple coefficient of determination (R Square or R^2) is equal to 0.103 with significant level $< .05$, indicating that perceived trust effected behavioral intention. This means 10.3% of perceived trust can explain the variance of behavioral intention to accept M-Commerce in Yangon, Myanmar.

In addition, this research studied among different generations on perceived trust, disturbance concerns and behavioral intention.

The Fourth Hypothesis (H4) is accepted implying that the generations (Generation X, Generation Y and Generation Z) influence on a perceived trust towards M-Commerce acceptance in Yangon, Myanmar. From Table 4, a One-Way ANOVA was conducted to evaluate the mean difference of generation X to generation Z on perceived trust towards M-Commerce acceptance in Yangon, Myanmar. The ANOVA was significant, $F(2,402) = 11.91$, $sig. = .000$. Follow-up test of Scheffé revealed that there were significant differences in the means between generation Z and generation Y, and generation Z and generation X. However, there was no significant difference between generation Y and

generation X. The generation Z show greater mean values of perceived trust in comparison to generation X and Y. Table 5 shows Post Hoc Test of One-Way ANOVA among generation on perceived trust.

Table 4: ANOVA Table of Perceived Trust

	Df	Mean Square	F	Sig
Between Groups	2	2.510	11.913	.000
Within Groups	402	.211		
Total	404			

Table 5: Post Hoc Test of One-Way ANOVA among generation on perceived trust

Generation	Mean Difference	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Gen Z	Gen Y	.17837*	.0411	.3156
	Gen X	.26785*	.1306	.4051
Gen Y	Gen Z	-.17837*	-.3156	-.0411
	Gen X	.08948	-.0478	.2268
Gen X	Gen Z	-.26785*	-.4051	-.1306
	Gen Y	-.08948	-.2268	.0478

A One-Way ANOVA was conducted to evaluate the mean difference of generations on disturbance concerns towards M-Commerce acceptance. As can be seen in

Table 6, the ANOVA was insignificant, $F(2,402) = 2.76$, $sig. = .065$. Thus, the Fifth Hypothesis (H5) is not accepted implying that there is no mean difference of generations on disturbance concerns towards M-Commerce acceptance in Yangon, Myanmar.

Table 6: ANOVA Table of Disturbance Concerns

	Df	Mean Square	F	Sig
Between Groups	2	1.326	2.758	.065

Table 7: ANOVA Table of Behavioral Intention

	Df	Mean Square	F	Sig
Between Groups	2	.781	1.639	.195
Within Groups	402	.476		
Total	404			

Most of the customer in Yangon, Myanmar are using traditional ways in buying and selling goods. They cannot yet keep up with the practice of using M-Commerce in making business transaction. Therefore, this finding suggested that the rate of using M-Commerce in Yangon, Myanmar is relatively low because the user needs to have the habit to use M-Commerce. This research used all generation groups (X, Y and Z) in this hypothesis. The respondents posit that the use of M-Commerce needs habit and addict. This means that without habit, there is no automaticity, thus, it cannot harbor any addiction. Therefore, it is impossible that the user must use M-Commerce and

Within Groups	402	.481		
Total	404			

Similarly, a One-Way ANOVA was conducted to evaluate the mean difference of generations on behavioral intention towards M-Commerce acceptance. As can be seen in Table 7, the ANOVA was insignificant, $F(2,402) = 1.64$, $sig. = .195$. Thus, the Sixth Hypothesis (H6) is not accepted implying that there is no mean difference of generations on behavioral intention towards M-Commerce acceptance in Yangon, Myanmar.

intended to continue using M-Commerce in future. Thus, the habit is the most important factor on acceptance of M-Commerce in Yangon, Myanmar. Therefore, if the rate of using M-Commerce needs to increase, forming guided habit is the first priority that the business firms must focus on.

The second reason to use M-Commerce in making business transactions is performance expectancy (PE). The users or customers are expected the benefits and advantages from using M-Commerce. They want to accomplish and improve their jobs by using M-Commerce. They can do their tasks conveniently by M-Commerce and also, they assume that M-Commerce helps them accomplish things more quickly. Finally, they use M-Commerce because it improves their task productivity.

In this research, the price/value (PV) was significant and made positive impact. From the user's perspective, the price/value (PV) is not the highest reason to use M-Commerce but according to the positive results of price/value, the customers considers the cost while using M-Commerce. This means that if the cost of using internet is high while making transactions with M-Commerce making

price value of using M-commerce is less which in turn the behavioral intention on using M-Commerce can be decreased. According to the price value questionnaires, the consumers accept that M-Commerce services are good value for money and it can be high behavioral intention. Moreover, the M-Commerce users want the price of mobile internet is reasonably priced and then they can use M-Commerce with lower price of internet usage.

The facilitating conditions has made positive and significant influence on M-Commerce acceptance in Yangon, Myanmar. The user of M-Commerce needs to have the resources such as Mobile Internet, Payment Gateway. In addition, the user must have the knowledge (i.e., how to use) necessary to use M-Commerce and they need to capable to get help from others when they have difficulties while using M-Commerce. Moreover, the users have desire that M-Commerce should be compatible to other technologies.

For the social influence (SI) factor, this is the least contributing factor on behavior intention, meaning that the users will use M-Commerce if it is useful for them without any influence by others. The users from Yangon, Myanmar will use M-Commerce as long as they find it useful regardless of the degree of difficulty and convenience. Moreover, the uses or consumers from Yangon, Myanmar will use M-Commerce and they were not considered about technologies easiness and enjoyment while using M-Commerce.

Similar to previous findings (Lai, Lai, & Jordan, 2009), The disturbance concerns (DC) are significant and influence on behavioral intention towards M-Commerce acceptance. The M-Commerce users in Yangon, Myanmar worry about

being spammed when using the mobile device to conduct M-Commerce and also about losing private data (such as location, phone number) when using the mobile device to conduct M-Commerce. They also worry about the personal information (such as address, bank account, etc) being stolen or leaked when they are using the mobile device for M-Commerce. In addition, the users posit that the mobile transaction is not as secure as the traditional electronic commerce and they worry about using the mobile device for M-Commerce may result unexpected interrupts or disturbances as well. This finding posits that the disturbance concerns are the important for M-Commerce acceptance in Yangon, Myanmar.

Similar to the previous research (Saleh & Mashhour, 2014), the perceived trust (PT) is significant and influential on behavioral intention towards M-Commerce acceptance. M-Commerce users in Myanmar consider about trustworthiness of Wireless communications until they have clear evidence that it can be trusted. Moreover, they assume that there are too many uncertainties in wireless communications and there may be fraud. This finding posits that the perceived trust is important for M-Commerce acceptance in Yangon, Myanmar.

There is no mean difference on perceived trust towards M-Commerce acceptance in Yangon, Myanmar between generation Y with generation X. However, mean difference on perceived trust on M-commerce was found between generation Z and both generation X and Y. Thus, there is a gap between generation Z and both X and Y. Generation Z has more perceived trust towards M-Commerce than generation X and Y. For the reliable use of M-Commerce or trust, the generation X who

were born between 1965-1976 does not trust while using M-Commerce. In addition, the generation Y who were born between 1977-1995 is sensitive on trust to accept M-Commerce as well. It makes sense because the M-Commerce is the modern technologies and most of the consumers in generation X and Y do not show absolute trust on modern technologies including M-Commerce. In addition, this finding can be positioned that generation X and Y are the not risk takers. Hence, they use traditional ways rather than M-Commerce while making business transactions. They may also be afraid of fraud, system interruptions and data lost.

However, there is no mean difference on disturbance concerns and behavior intention towards M-Commerce acceptance in Yangon, Myanmar between generation X, Y and Z.

Conclusion and Recommendation

The five independent factors such as performance expectancy, social influence, facilitating conditions, price/value, habit from technology acceptance theory positively significantly influence the behavioral intention towards M-Commerce acceptance. The two extended variables such as disturbance concerns negatively significantly, and perceived trust positively significantly influence the behavioral intention towards M-Commerce acceptance.

It is found that there is mean difference on perceived trust on M-commerce was found between generation Z and both generation X and Y but no mean differences were found between generations X and Y. Similarly, there is no mean difference on disturbance concerns and behavior intention towards M-Commerce acceptance in Yangon,

Myanmar between generation X, Y and Z. Practitioner can treat all generation the same regarding disturbance concern and behavior intension towards M-commerce.

It is recommended that if the service providers of M-Commerce such as business organization (e.g. Bank, Online Shop) want to increase the behavioral intention on M-Commerce acceptance in Yangon, Myanmar, they need to encourage and nurture the citizens to make the habit for using M-Commerce. There are several ways to promote M-Commerce such as giving discount, giving shopping benefits while making business online transactions. If there are several advantages and benefits from making business transaction with M-Commerce, the consumers can use M-Commerce more and it make a habit to use M-Commerce.

It is found that performance expectancy positively significantly influences behavior intension, the service providers should make their M-Commerce services useful in the consumers' daily life. They should create their services where the consumers' can do the tasks conveniently and, M-Commerce services can help them accomplish their tasks more quickly. In addition, the service providers continue striving their services better throughout time going through iteration cycles because consumers who use M-Commerce in order to improve their task and productivity. This means consumers use M-Commerce for its performance as benefits.

Like habit, price value is also important for M-Commerce acceptance. If the price or cost of using Internet, M-Commerce or online services is high, the users may feel like the price value is low thus the behavioral intention on M-Commerce acceptance can be low. Therefore, to increase the behavioral

intention on M-Commerce acceptance, one should increase the price value of internet usage.

Regarding the facilitating conditions (FC) the service providers of M-Commerce should make effective use of resources (i.e., Mobile Internet, Payment Gateway) and these all are essential to use M-Commerce. Moreover, the service provider should organize knowledge forums and help desk for using apps in order to increase users' knowledge on using M-Commerce and they need to be capable to get help from others when they have difficulties while using M-Commerce. Moreover, the service providers should care about technologies compatibility because the users have desire that M-Commerce is needed to be compatible with other technologies.

With respect to the social influence (SI), the service providers should advertise with celebrities when they promote their services. The people may use M-Commerce if others people who are important to them around them are using the same services. For example, the persons may use M-Commerce if the other people such as parents, relatives, friends or celebrity who can significantly influence them. Therefore, to promote the new apps, services or products, the provider should promote with public influencer or celebrity in related category.

For the disturbance concerns (DC), the M-Commerce users in Yangon, Myanmar worry about being spammed when using the mobile device to conduct M-Commerce and also about losing privacy and data (such as location, phone number) when using the mobile device to conduct M-Commerce. Therefore, the service providers of M-Commerce services, they should avoid of requesting privacy data

such as location, phone number and photos. They also worry about the personal information (such as address, bank account, etc.) being stolen or leaked when they are using the mobile device for M-Commerce. Thus, the service providers make sure the perimeter of security of their websites, portal and apps. They should invest on hardware and software security tools and even hire the IT/Cyber security professionals. They should make the highest security priority level for all of their services and must have the contingency plan for emergency response. They also should have business continuity plan. They also let their customer knows that they care and well handle about customer security from stolen data by hacking. In addition, the users posit that the mobile transaction is not as secure as the traditional electronic commerce and they worry about using the mobile device for M-Commerce may result unexpected interrupts or disturbances as well. Therefore, the service providers of M-Commerce services, they should prepare for the 24 hours help desk to solve the customers' unexpected problems from hardware or software.

For the perceived trust, the M-Commerce users in Yangon, Myanmar also consider about reliability of M-Commerce services, also business firms to keep the promises that they make. Therefore, the service providers of M-Commerce should lift the quality of their services, products and apps. They should use better quality of hardware and software. And then they should train their staff or hire high qualified staff to keep the promises and for giving better services. The consumers also consider about trustworthiness of Wireless communications until they have clear evidence that it can be trusted. For these issues, there are two aspects and for

trustworthiness of wireless communications, depending on consumer's knowledge, age and their perception. The second one, the quality of internet on wireless communications depends on internet service provider. For the first one, it can be different perspectives between different age, knowledge because internet and wireless communications are modern technologies for Yangon, Myanmar. For the second one, the quality of internet is better than before in Yangon, Myanmar. Therefore, this research recommends the service providers should make knowledge seminar in public area to promote public awareness of security on wireless communication. Moreover, the consumers assume that there are too many uncertainties in wireless communications and there may be fraud. For this issue, the service providers should increase the highest security level for their services, products and apps. If the services are good, reliable, certainty and no trick, the user of the services can spread out the good will of services by word of mouth. This may take a time, but the user of the services can increase in future.

Since there is a gap between generation Z and both X and Y regarding perceived trust towards M-Commerce acceptance. Generation X and Y have less trust towards M-Commerce acceptance than generation Z. Therefore, if the business organization such as bank, online shops etc., want to increase the M-Commerce acceptance, they need to promote the M-Commerce in generation Z. Moreover, they can make an awareness event related with M-Commerce technologies targeting to generation X and Y.

However, there is no mean difference on disturbance concerns and

behavior intention towards M-Commerce acceptance in Yangon, Myanmar between generation X, Y and Z. Practitioner can treat all generation the same regarding disturbance concern and behavior intention towards M-commerce.

Since, the education and employment can produce different results on behavioral intention towards M-Commerce acceptance in Yangon, Myanmar, future studies should incorporate the behavioral intention difference among these factors. Factors such as knowledge on using M-Commerce technology and security awareness on using M-Commerce are also to be considered and investigated in future research. By adding the findings from other major cities in Myanmar such as Mandalay, Naypyitaw and Mawlamyine could enhance the generalizability of the research findings. Sourcing data from all these cities are recommended in the future studies.

References

- About Myanmar*. (n.d.). Retrieved from Telenor Group:
<https://www.telenor.com/about-us/global-presence/myanmar/telenor-in-myanmar/about-myanmar/>
- Ajzen, I. (1985). "From intentions to actions: A theory of planned behavior" In *Action-control: From cognition to behavior*. Heidelberg: Springer, 11–39.
- Brown, S. A., & Venkatesh, V. (2005). Model of Adoption of Technology in the Household: A Baseline Model Test and Extension Incorporating Household Life Cycle. *MIS Quarterly*, 29(3), 399-426.

- Chong, A. Y.-L. (2013). Mobile commerce usage activities: The roles of demographic and motivation variables. *Technological Forecasting and Social Change*, 80(7), 1350-1359.
- Chong, A. Y.-L. (2013a). A two-staged SEM-neural network approach for understanding and predicting the determinants of m-commerce adoption. *Expert Systems with Applications*, 40(4), 1240-1247.
- Compeau, D. R., & Higgins, C. (1995). Computer self-efficacy development of a measure and initial test. *MIS Quarterly*, 19(2), 189-211.
- Cunningham, S. (2014, April 21). *Yangon Online Delivers Amazon, eBay And Apple To Myanmar*. Retrieved from Forbes: <http://www.forbes.com/sites/susancunningham/2014/04/21/yangon-online-delivers-amazon-ebay-and-apple-to-myanmar/>
- Dahlberg, T., Mallat, N., & Öörni, A. (2015). Trust Enhanced Technology Acceptance Model - Consumer Acceptance of Mobile Payment Solutions.
- Davis, F. A. (1989). Perceived usefulness perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 8, 318-339.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111-1132.
- Department of Population, M. o. (2015). *The Census of Yangon Region*. Naypyitaw, Myanmar: Department of Population, Ministry of Labour, Immigration and Population.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). The effects of price, brand and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307-319.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, Massachusetts: Addison-Wesley.
- Kim, S., & Malhotra, N. (2005). A Longitudinal Model of Continued Is Use: An Integrative View of Four Mechanisms Underlying Postadoption Phenomena. *Management Science*, 51(5), 741-755.
- Kuciapski, M. (2017). A model of mobile technologies acceptance for knowledge transfer by employees. *Journal of Knowledge Management*, 1053-1076.
- Kuciapski, M. (2017). A model of mobile technologies acceptance for knowledge transfer by employees. *Journal of Knowledge Management*, 21(5), 1053-1076.
- Lai, D. C.-F., Lai, I. K.-W., & Jordan, E. (2009). An Extended UTAUT Model For The Study of Negative User Adoption Behaviours of Mobile Commerce. Macau: The 9th International Conference on Electronic Business.

- Li, T.-Y. (2015). Factors Influencing the Technology Adoption of Mobile Commerce in Taiwan By Using the Revised UTAUT Model. *The Asian Conference on Psychology and Behavioral Sciences 2015 Official Conference Proceedings*. Taiwan: National Chung-Hsing University.
- Limayem, M., Hirt, S. G., & Cheung, C. M. (2007). How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance. *MIS Quarterly*, 31(4), 705-737.
- Lu, J., Yu, C.-S., Liu, C., & Yao, J. E. (2003). Technology acceptance model for wireless Internet. *Emerald Insight*.
- Nam, K.-Y., Cham, M. R., & Halili, P. R. (2015). *Developing Myanmar's information and communication technology sector toward inclusive growth*. ADB Economics working paper series.
- Nam, K.-Y., Cham, M. R., & Halili, P. R. (2015). *Developing Myanmar's information and communication technology sector toward inclusive growth*. Philippines: ADB Economics working paper series.
- Peter, I. (2004). *History of the Internet protocols*. Retrieved from Net History: http://www.nethistory.info/History_of_the_Internet_protocols.html
- Rogers, E. M. (1962). *Diffusion of innovations*. New York: Free Press.
- Rondan-Cataluna, F. J., Arenas-Gai, J., & Ramirez-Correa, P. E. (2015). A comparison of the different versions of popular technology acceptance models: A non-linear perspective. *Kybernetes*, 44(5), 788-805.
- Saleh, Z. I., & Mashhour, A. (2014). Consumer Attitude towards M-Commerce: The Perceived Level of Security and the Role of Trust. *Journal of Emerging Trends in Computing and Information Sciences*, 5(2), 111-117.
- Schoorman, F., Mayer, R., & Davis, J. (2007). An Integrative Model of Organizational Trust: Past, Present, And Future. *Academy of Management Review*, 32(2), 344-354.
- Tak, P., & Panwar, S. (2017). Using UTAUT 2 model to predict mobile app based shopping: evidences from India. *Emerald Insight*, 248-264.
- Tak, P., & Panwar, S. (2017). Using UTAUT 2 model to predict mobile app based shopping: evidences from India. *Journal of Indian Business Research*, 9(3), 248-264.
- Tapscott, D. (2014). *The Digital Economy*. New York: McGraw-Hill Education.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 53-55.
- Taylor, S., & Todd, P. (1995). Understanding Information Technology Usage: A Test of Competing Models. *Information Systems Research*, 6(2), 144-176.

- Thompson, R., Higgins, C., & Howell, J. (1991). Personal Computing: Toward a Conceptual Model of Utilization. *MIS Quarterly*, 27(3), 125-143.
- Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157-178.
- Windsor, J. (2015, June). *Choice among Myanmar telecom providers*. Retrieved from Myanmar Insider: <http://www.myanmarinsider.com/choice-among-myanmar-telecom-providers/>
- Yamane, T. (1967). *Statistics, An Introductory Analysis*. New York: Harper and Row.
- Zainudeen, A., & Galpaya, H. (2015). *Mobile phones, internet, and gender in Myanmar*. London, UK: GSM Association.