THE ROLE OF PERSONAL INNOVATIVENESS IN INFLUENCING BEHAVIOURAL INTENTION TO USE M-GOVERNMENT SERVICES

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Abstract. This study aimed to examine the role of behavioural intention to use m-Government services from Malaysian citizens perspectives. Drawing upon this aims, this study proposed personal innovativeness as a moderating variable in UTAUT2; performance expectancy, effort expectancy, social influence, facilitating condition and price value in predicting the behavioural intention to use the m-Government services. 354 data were collected through a self-administered questionnaire and was analysed using structural equation modelling to test the hypothesis. The findings found that performance expectancy, effort expectancy, social influence, facilitating condition and price value are the important determinant in influencing users' behavioural intention to use of m-Government services. Interestingly, this study found the significant moderating effect of personal innovativeness in a relationship of performance expectancy and effort expectancy on behavioural intention. This study has extended the understanding on the role of personal innovativeness towards users' behavioural intention to use m-Government services.
Keywords: *mobile government, mobile technology-based services, m-Government services, personal innovativeness*

Introduction

The advancement of technology, especially in the development of mobile technology, has encouraged many governments around the world to improvise and expand the delivery of public services. The mobile government, also known as m-Government services, has been developed and introduced as a modern service delivery channel by providing convenient access to services that can be conducted at anytime, anywhere at any time. M-Government is a form of online government that can be easily accessed through mobile devices. On the other hand, the m-Government services has a very important link between previous initiative of e-Government services. In details, the m-Government services are not being implemented as a substitute for e-Government services, but it served as a new evolution and complements the e-Government services. It's all about the mobility and '*always on and always connected*' features provided by the government that only can be addressed through m-Government services (Kushchu and Kuscu, 2003; Roggenkamp, 2004; Olanrewaju, 2013; Nguyen et al., 2015).

As a new trend of e-Government, the m-Government widely use in European and Asian countries (Shareef et al., 2011). Literature also showed that m-Government services has been implemented in developing (such as a study by Ohme (2014), developing country (such as a study by Al-hadidi and Rezgui (2010); Al-Hujran (2012); Althunibat et al. (2012); Nkosi and Mekuria (2010); Bakar et al. (2016); Sareen et al. (2013) and least developed country (such as a study by Mtingwi (2015).

In Malaysia, the m-Government services were first developed in 2008 and took place in 2011. Generally, it has five types of services; known as mySMS, myMMS, myUSSD, myPay and myApps, and each of the services comes with different objectives as well as different types of modes of operation. As a continuation of the previous e-Government services, the m-Government services brings the mobility concept that allowed citizens to have an easy and very convenience services that can be accessed anywhere as well as anytime (MAMPU, 2015b, 2015a; Abu Bakar et al., 2015).

In reality, the potential users of m-Government services in Malaysia were reported large in number. For example, it was reported that the number of subscribers of mobile phone services is 43112000 subscribers and penetration rate of 143.7% per 100 inhabitants (Malaysian Communications and Multimedia Commission, 2014). This statistic shows that the number of mobile phone subscribers in Malaysia exceeds the number of populations. Moreover, since some of m-Government services can be accessed through smart phone, the survey conducted by Malaysian Communications and Multimedia Commission (2015) reported that the percentage distribution of smart phone user among Malaysian citizens increased over the year starting from 2010 and it was reported that 2012 was the year of smart phone in Malaysia due to the drastically increasing percentage of smart phone users in 2012 (Malaysian Communications and Multimedia Commission, 2012). Statistically, two in one Malaysians are smart phone users now and thus make smart phone as the most commonly used connected device in Malaysia (Malaysian Communications and Multimedia Commission, 2015).

However, regardless of the benefits and the empirical finding of users perspectives towards m-Government services, the overall performance of this beneficial initiative is still far from reaching its maximum potential as the performance on public hit was still not encouraging (Al Thunibat et al., 2010; Bakar et al., 2016; San et al., 2017; Azeez and Lakulu, 2018). Therefore, this study aims to identify the factors that influencing behavioural intention to use of m-Government services from Malaysian citizens perspectives. Since the potential users is large due to high number of mobile phone subscribers, it is not about the citizens' lack of technical equipment that explains why the responses towards these beneficial initiatives were still not encouraging (Ohme, 2014). Thus, this study intend to further analyse the role of personal innovativeness in understanding actors influencing behavioural intention to use m-Government services.

Literature review

To accomplish the objectives, this study adopted an extended Unified Theory of Technology Acceptance and Use of Technology (UTAUT2) which was founded by Venkatesh et al. (2012). UTAUT2 is developed more specifically to explain technology acceptance and use from users' perspectives. It was purposely developed in order to fill the gap that existed in the user adoption context (Babullah et al., 2015). However, due to the nature of m-Government services, the hedonic motivation was excluded since it is not a business activity and it is free from any entertainment or fun (Meiyanti et al., 2018; Munyoka, 2019; Aburamman and Szilágyi, 2020). As such, five factors of UTAUT2; performance expectancy, effort expectancy, social influence, facilitating condition and price value are ascertained as independent variables. Meanwhile behavioural intention served two roles: (1) as a dependant variable for performance expectancy, effort expectancy, social influence, facilitating condition and price value, and (2) as an independent variable on the use of m-Government services. Meanwhile, personal innovativeness was proposed as a moderating variable in a relationship of

performance expectancy and effort expectancy on behavioural intention to use m-Government services.

Performance Expectancy (PE)

Performance expectancy through its origin definition in organizational context are referring to the degree to which an individual believes that using the system will facilitate his or her to attain gain in his or her job performance (Venkatesh et al., 2003). Meanwhile, in the consumer use context, performance expectancy is referring to the degree to which using a system or technology will provide benefits to the users in performing certain activities (Venkatesh et al., 2012). However, the important point in performance expectancy is about the effectiveness perceived by the users' while using the system or technology (Sun et al., 2013). Literature reviews has revealed the significant effect of performance expectancy as one of a determinant of behavioural intention to use m-Government (Abu-Shanab and Haider, 2015; Babullah et al., 2015; Dwivedi et al., 2017; Sharma et al., 2018). Within the context of this study, performance expectancy deals with the citizens' perspectives regarding the m-Government services and whether they perceive the m-Government services competitive over traditional ways of implementing the same tasks. As a consequence, when the users consider that using the m-Government services will increase their productivity, the competence and effectiveness that impressed them over the traditional transaction procedure, they would be more likely to have a stronger intention to use the m-Government services. Therefore, this study proposed that:

H_0: Performance expectancy is insignificant and has no direct effect on behavioural intention to use m-Government services.

H_1: Performance expectancy is significant and has a direct effect on behavioural intention to use m-Government services.

Effort Expectancy (EE)

The terms of Effort Expectancy is referring to the degree of ease associated with the use of technology (Venkatesh et al., 2003). In other words, the effort expectancy construct explained the level to which an individual believes that the system is easy and effortless to use (Harsono and Suryana, 2014; Ali and Arshad, 2016; Dwivedi et al., 2016). According to Venkatesh et al. (2003), the effort expectancy had been considered as one of the strongest predictors and validated as a direct determinant of users' behavioural intention to use a new technology either in voluntary or mandatory settings. A number of reasonable studies has also verified that effort expectancy was able to capture the users' behavioural intention regarding the use of various technology based services such as e-Government (Al Khatib and Lee, 2013), m-Government (Babullah et al., 2015) and mobile technology based services (Alalwan et al., 2017; Sung et al., 2015).Thus, it can be concluded that there seemed to be some evidence to indicate that the higher the effort expectancy, the higher the possibility of the user's behavioural intention to use the system or technology. Within the context of this study, when the users perceived that performing transaction through the m-Government services is simple and free of difficulties (the m-Government services is simple, practical, easy to use and easy to access) in comparison to the traditional transaction procedures, they will

be more likely to have a stronger intention to use the m-Government services. Thus, this study proposed that:

H_0: Effort expectancy is insignificant and has no direct effect on behavioural intention to use m-Government services.

H_2: Effort expectancy is significant and has a direct effect on behavioural intention to use m-Government services.

Social influence

Social Influence refers to the degree to which the consumers believe that most people who are vital to them (e.g., family and friend) think he or she should utilized the new system (Venkatesh et al., 2003). The social influence construct has been commonly used in various studies that investigate technology acceptance and use regarding certain systems as one of the predictors for the behavioural intention (Sung et al., 2015). Literatures shows that social influence has a significant effects towards behavioural intention to use in a multiplicity of contexts such as technology-based services (Tsourela and Roumeliotis, 2015), mobile health services (Sun et al., 2013; Dwivedi et al., 2016), mobile learning (Ali and Arshad, 2016), and the m-Government (Babullah et al., 2015). Within the context of this study, social influence construct in this study refers to the degree to which Malaysian citizens perceive that their significant others believe that he or she should transform and use the m-Government services compared to the traditional transaction. It can be family, relatives or close friends who can influence their intentions to use the m-Government services. If they notice that more people who are important to them effectively perform the transactions through the m-Government services, they will be inspired and encouraged to use it too. Thus, this study proposed that:

H_0: Social influence is insignificant and has no direct effect on behavioural intention to use m-Government services.

H_3: Social influence is significant and has a direct effect on behavioural intention to use m-Government services.

Facilitating condition

Facilitating condition is the degree to which an individual believes that there is an organizational and technical infrastructure to support the use of the system (Venkatesh et al., 2003). In the consumer use context, the facilitating condition that is available for the consumer varies within the technology or system offered. Thus, in consumer use context, the facilitating condition influences behavioural intention to use the technology or systems. As a consequence, the proposition that can be formulated for consumer use context is that the greater access the consumers have to a favourable set of facilitating conditions, the higher their intention to use a technology (Venkatesh et al., 2012).

In adopting the concept of facilitating condition in the context of this research, the construct used refers to how the citizens believe that organizational and technical infrastructures exist to support them in performing a transaction through the m-Government services whenever necessary. Previous researches have also supported that facilitating condition has a significant effect towards behavioural intention to use in

mobile government services. For instance, a study by Hung et al. (2013), Babullah et al. (2015) and Sharma et al. (2018). Therefore, this study proposed that:

H_0: Facilitating condition is insignificant and has no direct effect on behavioural intention to use m-Government services.

H_4: Facilitating condition is significant and has a direct effect on behavioural intention to use m-Government services.

Price value

The term price value was used to refer the user's cognitive trade-off between the benefits that they gain from using the systems (or applications) and the cost that would be charged for using the system (Venkatesh et al., 2012). The concept of price value explains that if the benefits perceived by the users while performing certain technology is greater than the monetary costs, the more likely that the users intend to accept and use that technology services (Venkatesh et al., 2012). The price value has been confirmed by Venkatesh et al. (2012) as one of the important roles that influenced technology adoption which is tailored to the context of consumer acceptance and use of technology. This significant effect also supported by a study in the field of m-Government services by Babullah et al. (2015) as well as in the field of mobile technology based services such as a study by Dwivedi et al. (2016) and Ramirez-Correa et al. (2015). Thus, this study proposed that:

H_0: Price value is insignificant and has no direct effect on behavioural intention to use m-Government services.

H_5: Price value is significant and has a direct effect on behavioural intention to use m-Government services.

Behavioural intention and use of m-Government services

The terms behavioural intention has been widely used in some of the information system/information technology theoretical models such as Technology Acceptance Model, Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), and an extended Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2012). Generally, behavioural intention is defined as an individual's subjective awareness of performing a specified behaviour with regard to the technology. In other words, behavioural intention is used to refer to the users' level of desire to use particular technology (Harsono and Suryana, 2014).

Behavioural intention to use a particular technology is a strong predictor of the acceptance and use of the technology (Venkatesh et al., 2003). The investigation of the effect of behavioural intention regarding the use of information technology has always been a significant issue in information management (Tang and Chiang, 2009). For instance, a study by Harsono and Suryana (2014) found that behavioural intention and use behaviour construct are in the category of very high; thus, allowed them to conclude that their respondents have very high desires and intensities to use the system. On the other hand, Tsourela and Roumeliotis (2015) in their study regarding technology-based services also concluded that the stronger the user's intention regarding technology-based services will lead to the greater of users final choice to use the technology-based services. Based on these significant findings, this study predicts that users who have a

positive behavioural intention regarding the m-Government services will be more likely to perform a transaction through the m-Government services. Thus, this study proposed:

H_0: Behavioural intention is insignificant and has no direct effect on the use of m-Government services.

H_6: Behavioural intention is significant and has a direct effect on the use of m-Government services.

Personal innovativeness as a moderating variable

The moderating effect of personal innovativeness regarding behavioural intention has been supported by earlier researchers. For example, Rogers in 1983 through the diffusion of innovation theory claimed that the individual's tendency to innovate determines the sources of information that they considered in order to decide whether to accept or reject the technology. In other words, an individual's cognitive and decision-making process will be influenced by innovativeness. On the other hand, previous researcher also claimed that innovativeness in the domain of information technology serves as a moderating variable on the antecedents and the consequences of perceptions with regard to a particular system. Literatures also support that personal innovativeness are significantly moderate a relationship of performance expectancy and effort expectancy on behavioural intention.

A study by San Martín and Herrero (2012) revealed that personal innovativeness positively moderates the relationship between performance expectancy and behavioural intention. Meanwhile, in educational technology, Ke et al. (2012) also found a significant moderating effect of personal innovativeness on the relationship between perceived usefulness and behavioural intention to use a web-based classroom response system. Similar significant findings were also found by Thakur and Srivastava (2014) in analysing the moderating effect of personal innovativeness between perceived usefulness and behavioural intention to use mobile payment services in India. On the other hand, the significant effect of personal innovativeness as a moderating variable also had been reveal in a study about online purchase intention in rural tourism (San Martín and Herrero, 2012), web-based classroom response system (Ke et al., 2012), use of smartphone by (Park et al., 2013) and a study related to mobile wallet by Madan and Yadav (2016). Furthermore, literatures also found the significant effect of personal innovativeness in a relationship between effort expectancy and behavioural intention. For example in a study on mobile commerce by Lu (2014). Standing on the believes that personal innovativeness is an inherent trait of all individuals (Jianlin and Qi, 2010) and is totally related to self-attitude toward risk propensity regarding the technology usage decisions (Kishore and McLean, 2001), this study intended to examine the role of personal innovativeness in the context of m-Governmetn services. Thus, this study propose that;

H_0: Personal innovativeness is insignificantly moderate the relationship between performance expectancy and behavioural intention to use m-Government services.

H_7: Personal innovativeness significantly moderates the relationship between performance expectancy and behavioural intention to use m-Government services.

H_0: Personal innovativeness is insignificantly moderate the relationship between effort expectancy and behavioural intention to use m-Government services.

H_8: Personal innovativeness significantly moderates the relationship between effort expectancy and behavioural intention to use m-Government services.

Materials and Methods

This confirmatory study employed a self-administered questionnaire to collect the data. Based on a convenience sampling technique, the data was collected in Selangor. The selected respondents are consisted of Malaysian citizens with a smartphone and have access to the Internet (either through Wi-Fi or mobile data subscription) as a medium to access to the m-Government services. This is a very important criterion since it is an early prerequisite for the respondents to access m-Government services (Abu-Shanab and Haider, 2015). Then, the respondents were asked if they know about m-Government and have used the services even for once. This step is important to determine the effective respondents and to ensure that the perspective is measured on direct behavioural towards m-Government services (Shareef et al., 2012; Hung et al., 2013; Abu-Shanab and Haider, 2015).

The research instruments are adapted from prior researches with a minor modification are made to the items in order to ensure that all the items used are aligning with the context of this study. As this study proposes integrating variables in UTAUT2 with mobile self-efficacy, the sources of research instrument for each of the variables were adopted from various sources. The items of performance expectancy, effort expectancy, social influence, facilitating condition, price value, intention to use are adopted from Venkatesh et al. (2012) while the use of m-Government services items are adopted from Venkatesh et al. (2012) and Almarashdeh and Alsmadi (2017). In addition, the items for personal innovativeness was adapted from Agarwal and Prasad (1998) as well as Aldás-Manzano et al. (2009).

Results and Discussion

In total, this study has been participated with almost equal number of female respondents (56.8 percent) and male respondents (43.2 percent). Majority of respondents were aged between 30-39 years old (53.1 percent), followed by those aged between 40-49 years old (21.8 percent), 20-29 years old (19.8 percent) and a small proportion of respondents aged above 50 years old (5.4 percent). Furthermore, majority of the respondents have more than six years experiences in using smartphone, showing that majority of the respondents are familiar with smartphone features.

Confirmatory factor analysis

This study adopted two-steps approach of modelling and analysing the structural model, which is Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) as suggested by Awang (2015) and Awang et al. (2018). Thus, this study first examines the measurement model in terms of uni-dimensionality, validity, and reliability before modelling the structural model using a confirmatory factor analysis (CFA). Based on the findings, the Absolute Fit Category namely RMSEA is 0.055 has achieved the acceptable threshold of less than 0.08 (Hair et al., 2010; Awang,

2015; Awang et al., 2018), the Incremental Fit Category namely CFI is 0.920 has achieved the acceptable threshold of greater than 0.90 (Hair et al., 2010; Awang, 2015; Awang et al., 2018), the Parsimonious Fit Category namely the ratio of Chisq/df IS 2.065 has achieved the acceptable threshold of less than 3.0 (Hair et al., 2010; Awang, 2015; Awang et al., 2018). Accordingly, the measurement model is adequately fit the data.

The convergent validity of the measurement model was assessed using average variance extracted (AVE) and composite reliability (CR). In assessing the AVE and CR, this study found that all AVE and CR values exceed the acceptable threshold value of 0.5 and 0.6 (Awang, 2015; Awang et al., 2018) respectively. Thus, indicating the convergent validity and composite reliability for all latent construct. Besides, all the skewness value for all components in the measurement model fall within the range between -1.5 and 1.5 (Awang, 2015; Awang et al., 2018) indicating that the requirement of normality distribution has been fulfilled.

Direct effect between exogenous constructs and endogenous construct

Once all the requirement has been fulfilled, this study continues the analysis on the direct effect of exogenous constructs towards endogenous construct using structural equation modelling. *Figure 1* illustrates the Standardized Regression Path coefficient while *Figure 2* illustrates the Regression Path coefficient between constructs. The regression path coefficient for the effects of every exogenous constructs on endogenous construct are tabulated in table 1 and the hypothesis testing is decided based on the probability value (p-value). The hypothesis is significant if p-value obtained in the text output is less than the type error value (alpha) 0.05.

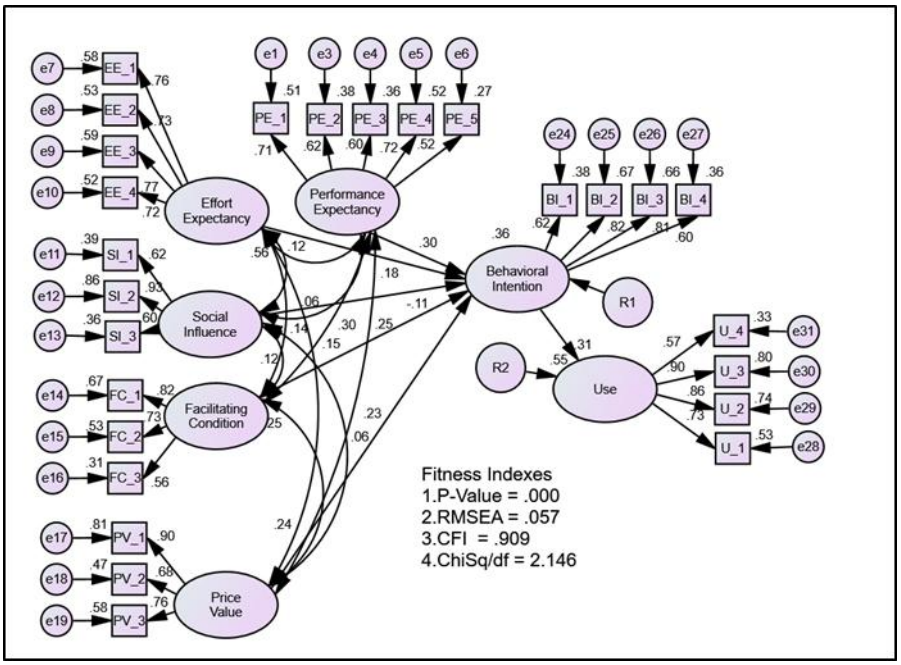

Figure 1. *The standardized regression path coefficient.*

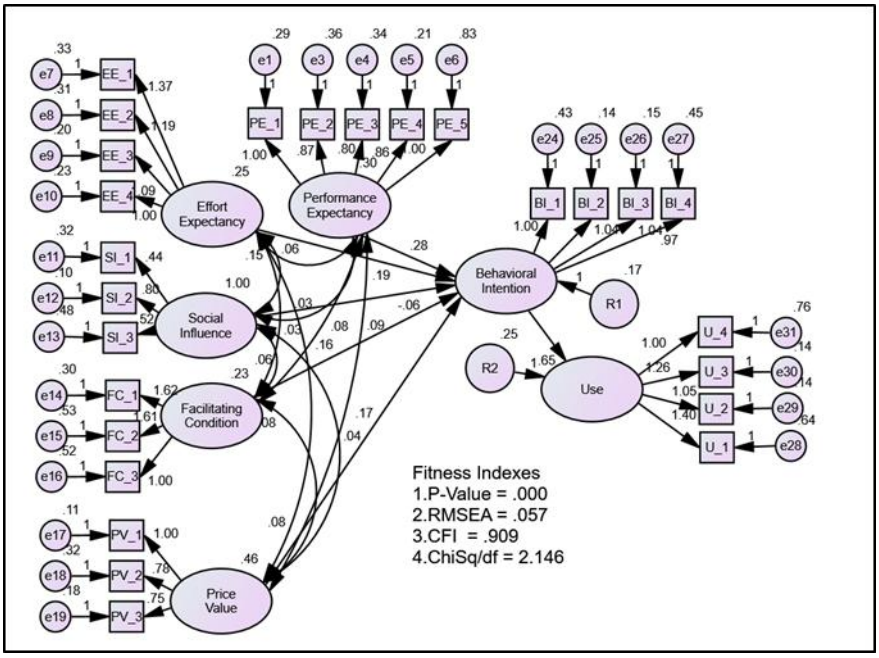

Figure 2. *The regression path coefficient.*

Performance expectancy has a significant and direct effect on behavioral intention

Based on the *Table 1*, the findings found that when performance expectancy goes up by one, behavioural intention also goes up by 0.283. The regression weight estimate of 0.283 had a standard error of about 0.078. The regression weight estimate was 3.650, with standard errors above zero. Moreover, the probability of getting critical ratio of 3.650 in absolute value was less than 0.001. In other words, the regression weight of performance expectancy in predicting behavioural intention was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that performance expectancy had a significant and direct effect on behavioural intention to use m-Government services. On top of that, the first hypothesis has been supported.

Table 1. *The regression path and its significance.*

			Estimate	S.E.	C.R.	P	Result
Behavioural intention	<	Performance expectancy	0.283	0.078	3.650	0.001	Significant
Behavioural intention	<	Effort expectancy	0.189	0.078	2.430	0.015	Significant
Behavioural intention	<	Social Expectancy	-0.056	0.028	-1.973	0.048	Significant
Behavioural intention	<	Facilitating condition	0.160	0.069	2.320	0.020	Significant
Behavioural intention	<	Price Value	0.174	0.046	3.768	0.001	Significant
Use	<	Behavioural intention	0.648	0.093	6.950	0.001	Significant

Effort expectancy has a significant and direct effect on behavioral intention

The findings found that when effort expectancy goes up by one, behavioural intention also goes up by 0.189. The regression weight estimate of 0.189 had a standard error of about 0.078. The regression weight estimate was 2.430, with standard errors above zero. Moreover, the probability of getting critical ratio of 2.430 in absolute value was less than 0.001. In other words, the regression weight of effort expectancy in predicting behavioural intention was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that effort expectancy had a significant and direct effect on behavioural intention to use m-Government services. Therefore, the second hypothesis has been supported.

Social influence has a significant and direct effect on behavioural intention

The findings found that when social influence goes up by one, behavioural intention goes down by -0.056. The regression weight estimate of -0.056 had a standard error of about 0.028. the regression weight estimate was -1.973, with standard errors above zero. Moreover, the probability of getting critical ratio of -1.973 in absolute value was less than 0.001. In other words, the regression weight of social influence in predicting behavioural intention was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that social influence had a significant and direct effect on behavioural intention to use m-Government services. Therefore, the third hypothesis has been supported.

Facilitating condition has a significant and direct effect on behavioural intention

The findings found that when facilitating condition goes up by one, behavioural intention also goes up by 0.160. The regression weight estimate of 0.160 had a standard error of about 0.069. The regression weight estimate was 2.320, with standard errors above zero. Moreover, the probability of getting critical ratio of 2.320 in absolute value was less than 0.001. In other words, the regression weight of facilitating condition in predicting behavioural intention was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that facilitating condition had a significant and direct effect on behavioural intention to use m-Government services. Therefore, the fourth hypothesis has been supported.

Price value has a significant and direct effect on behavioural intention

The findings found that when price value goes up by one, behavioural intention also goes up by 0.174. The regression weight estimate of 0.174 had a standard error of about 0.046. The regression weight estimate was 3.768, with standard errors above zero. Moreover, the probability of getting critical ratio of 3.768 in absolute value was less than 0.001. In other words, the regression weight of price value in predicting behavioural intention was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that price value had a significant and direct effect on behavioural intention to use m-Government services. Therefore, the fifth hypothesis has been supported.

Behavioural intention has a significant and direct on use of m-Government services

The findings found that when behavioural intention goes up by one, use also goes up by 0.648. The regression weight estimate of 0.48 had a standard error of about 0.093. The regression weight estimate was 6.950, with standard errors above zero. Moreover, the probability of getting critical ratio of 6.950 in absolute value was less than 0.001. In other words, the regression weight of behavioural intention in predicting use was significantly different from zero at the 0.001 level (two-tailed). Therefore, since the p-value was lower than 0.05, this study concludes that behavioural intention had a significant and direct effect on use of m-Government services. Therefore, the sixth hypothesis has been supported.

Moderating effect of personal innovativeness

Analysis of the moderating effect was conducted to examine the interaction effect of personal innovativeness on the relationship of performance expectancy and effort expectancy on behavioural intention. The moderating effect was examined using multiple group analysis. In this study the moderating effect of personal innovativeness was proposed in a relationship between performance expectancy and effort expectancy on behavioural intention.

Moderating effect of personal innovativeness in a relationship of performance expectancy and behavioural intention

Table 2 presents the output of moderation test for personal innovativeness towards the causal effect of performance expectancy on behavioural intention. Based on table 5.31, the moderation test for low and high personal innovativeness level is significant since the Chi-Square difference between constrained and unconstrained model is greater than 3.84. In overall, the results show support for the hypothesis that personal innovativeness significantly moderates the relationship between performance expectancy and behavioural intention to use m-Government services. Further, the standardized parameter estimate for “low personal innovativeness” is 0.327, while the same estimate for ‘high personal innovativeness” is 0.749. Thus, this study can conclude that the effect of personal innovativeness on behavioural intention is more pronounced in higher personal innovativeness compared to low personal innovativeness. Furthermore, the type of moderation in this causal effect is a full moderation since the standardized estimate for higher personal innovativeness is significant and low personal innovativeness is not significant at 0.05.

Table 2. *The moderation test for personal innovativeness.*

	Constrained model	Unconstrained model	Chi-square difference	Result on moderation	Result on hypothesis
(i) Low personal innovativeness					
Chi-square	64.916	59.668	5.248	Significant	Supported
DF	47	46	1		
The effect of personal innovativeness on behavioural intention (Standardized beta estimate: 0.327; p: 0.654)				Not significant at 0.05	
(ii) High personal innovativeness					
Chi-square	223.554	118.050	105.504	Significant	Supported
DF	47	46	1		
The effect of personal innovativeness on behavioural intention (Standardized beta estimate: 0.749; p: 0.001)				Significant at 0.05	
The hypothesis statement: H_7: Personal innovativeness significantly moderates the relationship between performance expectancy and behavioural intention to use m-Government services					Supported

Moderating effect of personal innovativeness in a relationship of effort expectancy and behavioural intention

Table 3 presents the output of moderation test for personal innovativeness towards the causal effect of effort expectancy on behavioural intention. Based on table 5.32, the moderation test for low personal innovativeness and high personal innovativeness level is significant since the Chi-Square difference between constrained and unconstrained model is greater than 3.84. In overall, the results show support for the hypothesis that personal innovativeness significantly moderates the relationship between effort expectancy and behavioural intention to use m-Government services. Further, the standardized parameter estimate for low personal innovativeness is 0.400, while the same estimate for higher personal innovativeness level is 0.666. Thus, this study can conclude that the effect of personal innovativeness on behavioural intention is more pronounced in higher personal innovativeness compared to low personal innovativeness. Furthermore, the type of moderation in this causal effect is a full moderation since the standardized estimate for higher personal innovativeness is significant and low personal innovativeness is not significant at 0.05.

Table 3. *The moderation test for personal innovativeness.*

	Constrained model	Unconstrained model	Chi-square difference	Result on moderation	Result on hypothesis
(i) Low personal innovativeness					
Chi-square	95.662	76.628	19.034	Significant	Supported
DF	37	36	1		
The effeict of personal innovativeness on behavioural intention (Standardized beta estimate: 0.400; p: 0.074)				Not significant at 0.05	
(ii) High personal onnovativeness					
Chi-square	176.972	126.880	50.092	Significant	Supported
DF	37	36	1		
The effect of personal innovativeness on behavioural intention (Standardized beta estimate: 0.666; p: 0.001)				Significant at 0.05	
The hypothesis statement: H_8: Personal innovativeness significantly moderates the relationship between effort expectancy and behavioural intention to use m-Government services					Supported

Conclusion

This study aimed to identify factors that influencing behavioural intention to use m-Government services from Malaysian citizens perspectives by integrating the role of personal innovativeness. The findings indicated that performance expectancy, effort expectancy, social influence, facilitating condition and price value is significant and has a direct effect on behavioural intention. On the other hand, behavioural intention is significant and has a direct effect on the use of m-Government services. Meanwhile, the moderating role of personal innovativeness also significantly affect the relationship between performance expectancy and effort expectancy on behavioural intention. The findings of this study have broadened the understanding on factors that influencing behavioural intention to use m-Government services. Moreover, the findings of this study can be a benchmark point to expand public manipulation towards this initiative.

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Conflict of interest

Author confirm there are no conflict of interest with any parties involve in this research.

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