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PROPOSING A FRAMEWORK FOR ASSESSING STUDENTS IN MALAYSIAN UNIVERSITIES FOR ADOPTION OF S-COMMERCE ACTIVITIES

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Abstract

Social commerce (S-Commerce) is a subset of electronic commerce that involves social media and online media that supports social interaction, and user contributions to assist online buying and selling of products and services. More succinctly, social commerce is the use of social network in the context of e-commerce transactions. Therefore, the main problem of the current study is the lack of new model to better understand the variables that influence the use of S-Commerce services in developing nations, notably in Malaysia. Thus, this study will work on suggesting model that would make it easier to see how many variables influence the use of S-Commerce services in Malaysia. The scope of the current study is the active students of three private universities near the smart cities in Malaysia. The main objective of this research is to propose an acceptance framework of S- Commerce adoption in Malaysia. To achieve this objective, this researcher used quantitative research method, which provides a quantifiable measurement and analysis of the elements that influence adoption of social commerce activities among students in private universities in Malaysia. The researcher reviewed the recent published literature in the field of technology acceptance and E-commerce alongside several underpinning theories like Theory of Reasoned action, Theory of Planned Behavior, Motivational Model, Technology acceptance model, Extension of Technology acceptance model, Innovation Diffusion theory, Social Cognitive Theory, Expectation-Confirmation

Theory, and UTAUT. The study included Performance Expectancy, Social Influence, Facilitating Condition, Effort Expectancy, Trust Factor, Culture, Hedonic Motivation, and Habit. In order to achieve better results from this study, the researcher has introduced both of Age and Education as moderating effects of the relationship between the variables. Hence, the researcher distributed 450 questionnaires to the students of three private universities, namely; Al-Madinah International University in Kuala Lumpur, Geomatika University Malaysia in Kuala Lumpur, and Lincoln University College in Kuala Lumpur. However, only 408 questionnaires returned fully answered, which considered the sample size of the current study. The results revealed significant relationship between Performance Expectancy, Social Influence, Trust, Culture, and Hedonic Motivation from hand, and Use Behavior of S-commerce websites from another hand, as well as, a significant relationship between Use Behavior and Continued Usage Intention of S-commerce websites. However, Facilitating Condition, Effort Expectancy, and Habit were found to be insignificant with Use Behavior of S-commerce websites. In addition, Education moderates the relationship between Performance Expectancy, Trust, and Hedonic Motivation with Use Behavior, while it did not moderate the relationship between Social Influence, Facilitating Condition, Effort Expectancy, Culture, and Habit with Use Behavior. Age moderates the relationship between Social Influence, Facilitating Condition, Effort Expectancy, Trust, and Culture with Use Behavior, while age did not moderate Performance Expectancy, Hedonic Motivation, and Habit with Use Behavior.

Keywords: *Technology Adoption, Technology Acceptance, Framework, E-commerce, S-commerce, Malaysia, UTUAT, TAM.*

1. Introduction

Although all of the claimed advantages of adopting Social Commerce services and their implementation in Malaysia, users remain wary of new commercial services such as S-Commerce, which is a subset of E-Commerce. They still have a conservative attitude, which prevents them from adopting new technologies in their corporate operations (Lim & Trakulmaykee, 2018; Yeng et al., 2015). The primary question is why consumers and the general public are hesitant to use S-Commerce to secure social media via social websites, and what the relationship is between this hesitation and the number of Malaysians who utilise Social Commerce (Hashim et al., 2017; Yeng et al., 2015). Moreover, a study about the use of social media activities in purchasing among users from private universities in Malaysia has mentioned this issue and highlighted the need for more research on the factors that influence the user to adopt such activities. (Koay et al., 2020). From a practical perspective, the current research demonstrates its significance by providing insight into one of the most pressing problems among Malaysian, namely the acceptance of S-Commerce services. As a result, the elements that have the potential to influence Malaysian' use of S-commerce services are identified. As a result, the variables will diminish students' aversion to using S-Commerce services. This knowledge gap has been discovered by

Hashim et al. (2017) and Bojei and Abu (2016). This gap is the rationale for this research, which focuses on adopting a novel model to modify the use of S- Commerce services among Malaysian by encouraging them to utilise S- Commerce services at any time and in any location (Bojei & Abu, 2016). However, several reports stated that the students in Malaysia, especially in the private universities, are victims of frauds and scams when doing online shopping; which elaborate the fact that students in Malaysia, especially in private universities, do not know how to use online shopping platforms. For instance, one Police chief said that a 19-year-old female student lost RM8128 in fraud related to online shopping, which was added to many cases related to students' victims of such frauds and scams (The New Straits Times, 2022). Moreover, in Pahang, Pahang Commercial Crime Investigation Department acting chief, said the four victims, aged between 20 and 28, had lodged separate police reports with losses amounting RM26557, which they were all students (Mamat, 2022). Another stated that a student lost a total of RM42000 on shopping virtual currency promoted on Instagram in Kuala Lumpur (The Star, 2022). All of the above have shown that the students in Malaysia, especially in the private universities, are suffering from the same problem, which will be addressed in this study, which is the lack of the sufficient knowledge on how to use the online shopping platforms in Malaysia. As discussed in gap analysis, although existing studies were relevant to the adoption of social commerce, they did not predict the continuous intention to use of social commerce. Studies done by (Ariansyah et al., 2021), (Osatuyi & Qin, 2018), (Mamonov & Benbunan-Fich, 2017), (Abed, 2020), (Makmor et al., 2019) are relevant to the adoption of social commerce, but they lack in a novel framework to measure the continuous intention to use among individual social commerce users such as students and experts in universities. Especially during Covid-19 pandemic, the need for social commerce is increased which can have a direct effect on the government and economy in each country including Malaysia. Therefore, in order to improve social commerce platform, there is a need to find its continuous intention to use during and after Covid-19 pandemic. In addition, one of the main social commerce users are university students due to busy schedule and limited budget. But existing studies mostly focuses on SMEs and general social media users. Existing studies related to social commerce lacks in a novel framework to find social media adoption among university students in Malaysia. Depending on the above, a new model is required to better understand the variables that influence the use of S-Commerce services in developing nations, notably in Malaysia. This suggested model would make it easier to see how many variables influence the use of S-Commerce services in Malaysia. As a result, this model will play a significant role in increasing the use of S-Commerce services in developing nations, particularly Malaysia. The researcher selected Al-Madinah International University in Kuala Lumpur, Geomatika University Malaysia in Kuala Lumpur, and Lincoln University College in Kuala Lumpur as a research population. These three private universities have been selected based on geographical location, number of faculties, and the variance of the disciplines. For the geographical locations, these universities are in the capital and close to the smart cities. In addition, these universities contain number of

faculties and specifications, which means different types of demographical details. Moreover, these universities are selected as obtaining data will be easier compared with other types of institutions, the sample that will be selected will be from different nationalities and backgrounds, which will give the study an international perspective. Because of the efforts made by local small start-up enterprises, the level of competitiveness is also rather strong. In Malaysia, students are enthusiastically purchasing essential products on the internet. Despite the fact that the products sold on such online shopping sites are rather expensive, customers continue to demonstrate an interest in meeting their daily needs. In order to increase shop profits, it is critical to understand the demands and desires of prospective customers in Kuala Lumpur. To put it another intention, a merchant must understand the factors that influence a consumer's decision to purchase online. Despite the fact that students are fully aware of online retailing activities, a big percentage of students are still outside of this online network since they prefer to visit a physical shop nearby (Alyami & Spiteri, 2015). Moreover, many studies highlighted that despite the popularity of social commerce, not all students are ready to adopt it and those studies examine several factors that influence student to adopt such activities (Zhou, 2019), (Molinillo et al., 2020) and (Doha et al., 2019).

2. Literature Review

Continued Usage Intention (CUI) Of S-Commerce Services

According to Aren, Güzel, Alpkan, and Kabaday (2013) and Al-Adwan and Kokash (2019), the intention of a citizen to continue using S-Commerce services is analogous to the intention of a user to repurchase or revisit a product or service (Aren, & Kabaday, 2013; Al-Adwan, & Kokash, 2019). On the other hand, the intention to adopt a given behaviour indicates the element of motivation that encompasses the degree to which a person is willing to try the behaviour (Rao, & Troshani, 2007). During the post-adoption phase, the user's intention to continue using S-Commerce services derives (1) from the prior discussion of using the services, indicating a mechanism of repeating behaviour, and (2) from the prior usage of services assessment, indicating a system of feedback. Both of these factors contribute to the user's intention to continue using S-Commerce services (Alshboul, Bardai & Alzubi, 2018). After that, many different facets of the services provided by S-Commerce play a variety of roles in the user's persistent intention. In terms of the proven effect of continuous use after the success of IT, it is important to identify the major factors that influence users' post-adoption behaviour, that is, whether they continue or cease using IT. This is because there are a variety of factors that can influence users' post-adoption behaviour (Hong et al., 2006; Zhou, 2013).

Use Behaviour (UB)

Actual or Usage Behaviour, as illustrated by Walela (2009), refers to the observable response manifested by individual in a particular situation in terms of a particular target while behaviour comprises an operation of compatible intentions. In terms of behavioural psychology, it is a field in which certain number of theories examining

the reasons underpinning the adoption of an individual of new information technology have been scrutinised. Additionally, the behavioural aspect becomes a very important factor for the success of service (Al-Mushasha & Hassan, 2011). Also, empirical research has provided affirmation that certain theories make up approximately 50% variance of individual usage or intent towards IT use. In addition, a total of 32 constructs that were created from eight different theoretical models were put through a series of tests to determine whether constructions exhibit a higher degree of dominance in terms of the use of information technology (Venkatesh et al., 2003). The UTAUT consists of eight acceptance models, including UTAUT and other current research that considers intention as a fundamental aspect of system utilisation. These acceptance models are included in the UTAUT (Oye et al., 2014). According to the findings of the current research, the relationship between the antecedent factors (EE, FC, PE, SI, TF, and CSE) and the CUI of e-commerce services is mediated by UB in the theoretical framework. UB also mediates the interaction between the antecedent variables. According to the findings of research conducted by Baron and Kenny (1986), a mediator variable can be defined as a generative process in which the focused independent variable influences the dependent variable of interest. When the predictor variable and the criterion variable have a strong relationship, mediation is the most convenient method to use.

Performance Expectancy

The degree to which an individual is certain that the utilisation of a particular system or service will provide him or her with benefits in terms of work or in life conduct in general is related to the amount of performance expectation that exists. Students in Malaysia feel that advances in technology and e-commerce services would lead to an improvement in their lives, and they consider performance expectations to be one of the most important reasons influencing their use of e-commerce (Sharifi fard et al., 2016). It is interesting to note, however, that Performance Expectancy (PE) has an effect on the way S-Commerce services are used. Consequently, the following constructs were obtained from different types of models in order to conduct research on Performance Expectancy: extrinsic motivation MM, job fit MPCU, outcome expectations obtained from SCT, perceived usefulness obtained from TAM/TAM2 and C-TAM-TPB, and relative advantage obtained from IDT. It has been established in the relevant body of literature that the similarities can be discovered between a number of different construct pairs. These include usefulness and extrinsic motivation (Davies et al., 1989, 1992), usefulness and relative advantage (Davies et al., 1989), usefulness and job-fit (Thompson et al., 1991), job-fit and outcome expectation (Venkatesh et al., 2003), and usefulness and outcome expectations (Compeau & Higgins, 1995).

Effort Expectancy

Effort Expectancy is a term that describes the degree to which users anticipate the use of a particular technology to be simple and undemanding. EE is a concept that is derived by merging three components that are found in previously established models.

The constructs that are being questioned are Ease of Use (derived from TAM/TAM2), Perceived Ease of Use (derived from IDT), and Complexity (derived from MPCU). Previous studies have shown that these concepts have the same definitions and measurement scales; this has been documented in those studies as well (Davis et al., 1989; Thompson et al., 1991). With regard to the constructs of the component models, the construct of effort expectancy has been regarded as noteworthy in both the context of being voluntary and mandatory, with a documented significance for only the time duration; however, extended and sustained utilizations have rendered it irrelevant due to the fact that it is no longer applicable to those circumstances (Davis et al., 1989; Thompson et al., 1991).

Social Influence

The concept of social influence, as defined by Chiu and Wang (2008), is the degree to which one is aware of other people's beliefs on a new system as guarantee that he or she must use that system. The concept of social influence, which is thought to be a direct driver of behavioural intention, is represented by the application of three constructs: subjective norm (from TRA, TAM2, TPB/IDTPB, C-TAM-TPB), social variables (from MPCU), and image (from IDT) (Venkatesh et al., 2003). Every construct has an idea, which might be explicit or implicit. In this case, a person's behaviour is influenced by how they imagine others will react to their use of technology. Social Influence (SI), according to (Sheikh et al., 2017), has the potential to drastically reduce the use of S-commerce services.

Facilitating Conditions

The term facilitating conditions refers to the level of trust that an individual has in the building of the organisational and technological infrastructure that will make it possible to use the system. There are three distinct constructs that make up the Facilitating Conditions. In TPBI, DTPB, and C-TAM-TPB, perceived behavioural control is extracted, facilitating conditions are employed in MPCU, and compatibility is used in IDT. These concepts are then operationalized by taking into consideration the various organisational and technical environments. Furthermore, there is a lack of Facilitating Conditions (FC) in terms of Infrastructure in Malaysia, which poses various challenges (Nawi et al., 2019). Because of these challenges, there is a need for research into this topic and its influence on the utilisation of social commerce in Malaysia. Companionable constructions produced from IDT contain things that largely fulfil the individual's purpose in terms of style and system utilisation inside the organisation. These kinds of structures are known as companionable constructions. Within TPB and DTPB, theoretical overlap, achieved through the modelling of enabling conditions, is considered to be the most important component of perceived behavioural control. According to what Venkatesh et al. (2003) and Taylor and Todd (1995). found, the concept of enabling conditions appears to have a major influence on innovation users.

Trust Factor

The idea of trust will be investigated in further depth in the following two subsections of this section. In the first paragraph, we will discuss the varying viewpoints held by academics on the topic of trust. In the second paragraph, we will discuss the concept of seller's trust as well as the medium of trust, which explicitly relates to the Internet, as well as its application in the context of S-commerce.

Krauter and Kaluscha (2008), Mukherjee and Nath (2003), and Pennington et al. (2004) are among the researchers who have emphasised the notion of trust, and these scholars come from a variety of fields. As a result, the initiating discipline shapes the meaning of trust. The concept of trust was first recognised in the field of psychology, but it has since become essential in other fields (Kartiwi, 2006a), including business, politics, technology, organisation, security (Castelfranchi & Falcone, 2010), and sociology. Trust was first recognised in the field of psychology (Pennington et al., 2004; Sztompka, 2003). It is important to stress, however, that a comprehensive definition of this concept is not yet complete and needs to be worked on. In his study on the effect of social interaction on users' social commerce intention, Tao Zhou highlighted the importance of social contact's influence on users' trust in both other members and the community. Trust in both other members and the community is a factor that influences social commerce intention. In addition, the data demonstrated that service providers are obligated to facilitate consumer participation in social interactions in order to attract customers to social commerce. (Zhou, 2019).

Cultures

According to Hofstede (1991), culture is the collective programming of the mind that distinguishes the members of one group or category of people from the members of another; alternatively, culture can be expressed as any shared values of a specific group of people, which is a more straightforward definition (Hofstede, 1991). (Erez & Earley, 1993). Hasan and Ditsa (1999) define culture as the beliefs, philosophy, shared values, attitudes, customs, norms, rituals, and common practises that govern the ways of living of a group of people. On the other hand, Shore and Venkatachalam (1996) define culture as the beliefs, philosophy, shared values, attitudes, customs, norms, rituals, and common practises that govern the ways of living of a group of people. Culture can also be defined as the beliefs, philosophy, shared values Values and norms, as defined by Laurent (1993), are what is worth doing or having, and they are shaped by experiences with parents, school, religion, and the media. Norms, on the other hand, are any shared beliefs about behaviour, as defined by Straub et al., (2004). Other researchers, such as Samovar et al., (2009), consider culture to be the accumulation of a group's values, beliefs, attitudes, experiences, knowledge, religion, meanings, hierarchies, roles, spatial relationships, concepts of the universe, notions of time, and material objects and possessions. On the other hand, Goodman and Green (1992) consider culture to be the differences that arise between the beliefs, values, and motivations of groups that are different from one another.

Hedonic Motivation (HM)

Fun, pleasure, and enjoyment derived from using technology is called Hedonic Motivation (HM). Hedonic Motivation (HM) is considered as one of the effective factors in acceptance and use of technology in IS research. Furthermore, in consumer context, Hedonic Motivation (HM) plays an important role in intention to use of technology or technology acceptance (Venkatesh et al., 2012). Hedonic Motivation (HM) is used as one of the factors which affect behavioural intention of S-Commerce (Sheikh et al., 2017).

In addition, Hedonic Motivation (HM) is also used as one of the constructs of behavioural intention of S-Commerce in Malaysia by (Sharifi fard et al., 2016). As Hedonic Motivation (HM) is the strongest and most relevant determinant of use of S-Commerce and S-Commerce adoption and it is developed to add customer perspective into UTAUT2 (Sheikh et al., 2017; Venkatesh et al., 2012), this study used this factor as one of the constructs in the proposed framework.

Habit

Habit is also added as another construct of use behaviour in the proposed framework in this study. Habit is related to the automatic behaviour that user performs towards using technology (Venkatesh et al., 2012). Habit is also defined in two ways: first as prior behaviour and second as automatic believes performed by individuals. Habit can be performed differently in a specific period, as different individuals can form different levels of habits depending on their technology use. Habit is considered as one of the determinants of user behaviour in UTAUT2 (Venkatesh et al., 2012).

Habit is also used as one of important factors of behavioural intention to use S-Commerce in various study inside and outside Malaysia (Sharifi fard et al., 2016; Sheikh et al., 2017). For this reason, Habit is added as another construct from UTAUT2 into the proposed framework of this study.

Control Variable (Moderators)

The knowledge of the demographic elements that have the potential to considerably impart impact on the adoption of S-Commerce Services in particular is going to be the primary focus of the literature review that will be conducted as part of this research project.

This review assists this research in evaluating and measuring these factors in terms of their influence. This work will be investigating tow demographic factors: education and age. In fact, previous studies have chosen these mentioned education and age as the key demographic factors (Han & Trimi, 2017; Ramayah et al., 2016; Sharifi fard et al., 2016; Venkatesh et al., 2012), and they are considered significant in the acceptance of a novel technology for instance, S-Commerce. Universally speaking, various types of adoption, acceptance theories and models have been used by the past works in examining and assessing these factors in terms of their impacts, but as mentioned by Alsaif (2014) and Alamin et al. (2015), these works were all focusing on developed countries. As such, the different settings developing countries were not properly investigated. In specific, developing countries have fairly low education

level and experience. Also, they embrace different cultures, for example, the Western and Asian nations have different social and cultural characteristics. Further, performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), Effort Expectancy (EE), Trust factor (TF), are strongly significant and are moderated by Education and Age (Phichitchaisopa, & Naenna, 2013; Khalil & Nasrallah, 2014).

Education

Because education is widely viewed as a critical control variable in S-Commerce, Han and Trimi (2017)'s research included it as a control variable. When it comes to education in general and bridging the digital divide, governments could help their citizens by providing computer education, particularly to older people and younger children (Al-Shafi & Weerakkody, 2009). In addition, Thomas and Streib (2003) found that one may identify between Internet users and non-users based not just on their education level but also on their ethnicity. They discovered that, among the aforementioned criteria, ethnicity and education are important predictors of internet users' willingness to utilise websites, with the majority of internet users having a higher level of education. One of the most important findings was that education was an important predictor of internet users' willingness to use websites. When we talk about citizens' educational levels, we're talking about a wide spectrum of education levels (Al-Shafi & Weekkody, 2009). According to Al-Shafi and Weerakkody (2009), educated people and citizens are more likely to advance their careers and make use of new, cutting-edge inventions.

Age

In addition to being one of the most important demographic factors, age is also a crucial determinant in the degree to which academic staff members adopt new technologies at their respective universities (Khasawneh & Ibrahim 2012). Young academic staff members may be more or even more familiar with ICT in the education system. This is especially true for those who utilise computers while they are studying in college or those who earn a higher education degree from any developed country.

Notably, some researchers just used a portion of UTAUT rather than the whole thing since the portions that they used were particularly pertinent to the organisation that was being investigated (Maldonado et al., 2011; Wang & Yang, 2005). Concerning voluntariness of using S-Commerce services; remembering that the utilisation of S-Commerce services is not compulsory but instead, it is voluntary, is crucial. As such, several researches have removed voluntariness from their researcher to make the research framework less complicated (e.g., Adulwahab & Dahalin, 2011; Foon & Fah, 2011; Venkatesh et al., 2011). As for the current study, its objective is to take control of a framework in which the intention to use S-Commerce services serves as a strong relation between acceptance and the UB of a citizen with regard to the use of S-Commerce services. This is the goal of the research being presented here. There is also a close and significant connection between the popularity of S-commerce services and their level of success.

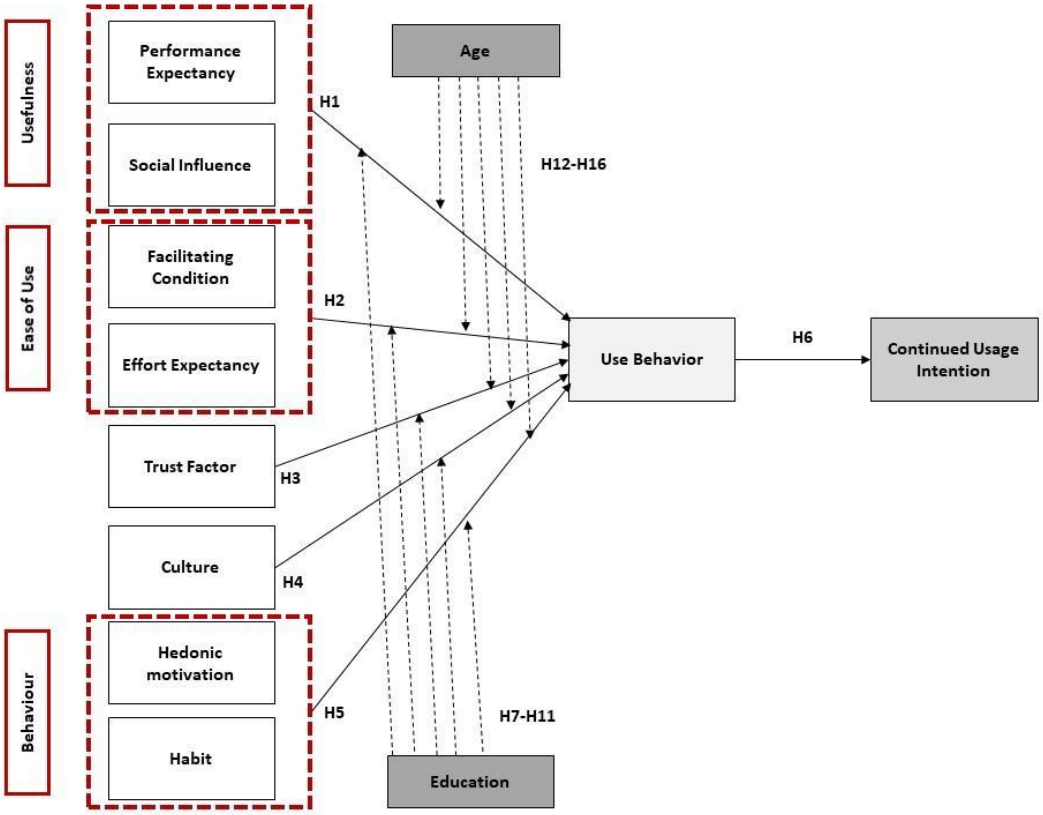

Figure 1: The Proposed Conceptual Framework Based on Education & Age as Moderators

3. Results

Measurement Model

The research model for this study is tested using Smart PLS 3.3. Based on the two-stage analytical procedures suggested by Anderson and Gerbing (1988), this research studied the measurement model (validity and reliability of the measures) and the structural model (testing the hypothesized relationships). In testing the significance of the path coefficients and the loadings, a bootstrapping method (1000 resamples) was used (Anderson & Gerbing, 1988). In this research, all constructs in the research model are multi-item constructs and are conceptualized as reflective rather than formative. The purpose of the reflective construct is to detect measures that are inter-correlated, have un-dimensionality, and have strong internal consistency. The following subsections discuss the guidelines used to access the measurement model.

Internal Consistency Reliability

The first assessment conducted is evaluating the internal consistency and reliability. Two tests were performed, using Cronbach's Alpha and Composite Reliability Index. Based on Table 1, the values for Cronbach alpha in this research range from 0.634 to 0.914, which did not meet the threshold of 0.7 recommended by Hair et al. (2017), which means that the measurement model required a modification for achieving a satisfactory Cronbach's Alpha in both the first and second run. In the second run, the scores of Cronbach's Alpha achieved satisfactory level and ranged from 0.743 to 0.914 (see Table 1).

Moreover, there have been arguments on the use of Cronbach's Alpha (α) as a tool to measure reliability. Cronbach's Alpha (α) value is said to underestimate of the true reliability (J. F. Hair et al., 2017; Sijtsma, 2009). Therefore, due to its deficiency, McNeish (2018) suggested an alternative reliability test, which is the Composite Reliability Index (McNeish, 2018). Chin (1998) considers composite reliability as a more rigorous estimate of reliability compared to Cronbach's alpha, because it is able to determine whether or not the specific indicators are sufficient in their representation of the respective constructs (W. W. Chin, 1998; Fornell & Larcker, 1981). The composite reliability should be higher than 0.7 to indicate adequate internal consistency (Hair et al., 2017). Overall, as shown in Table 1 the values of composite reliability were all above 0.7, which means no further modification is required in both the first and second run (see Table 1).

Indicator Reliability (Outer Loadings)

After each internal consistency reliability has been confirmed, the indicator reliability is tested. As shown in Table 1, not all of the items had satisfactory indicator reliability (ranging from -0.064 to 0.922) which is 0.4 as the recommended by (Ramayah et al., 2018). Table 1 addressed the items dropped in the first run, while Table 1 representing the second run and showing that all of the items achieved satisfactory level ranging from 0.537 to 0.922.

4.8.3 Convergent Validity

Convergent Validity refers to the extent to which individual indicators reflect the constructs in comparison to indicators measuring other constructs (Urbach & Ahlemann, 2010). To access Convergent Validity, the Average Variance Extracted (AVE) is measured. The value of AVE should be higher than 0.5, which explains at least 50 per cent of the assigned indicators' variance (W. W. Chin, 2010; J. F. Hair et al., 2017). Using the PLS Algorithm in SmartPLS 3.3, the AVE value is calculated, and Table 1 shows the AVE values of all the constructs. Not all of the constructs recorded AVE values higher than 0.5 for each group of data, as the lowest AVE value reported is for Performance Expectancy (PE) (0.464), followed by Social Influence (SI) (0.521), Facilitating Condition (FC) (0.531), Habit (HA) (0.577), Trust Factor (TF) (0.578), Continued Usage Intention (CUI) (0.602), Effort Expectancy (EE) (0.650), Use Behavior (UB) (0.656), Hedonic Motivation (HM) (0.726) and Culture (C) (0.795), therefore, a second run with modification was required.

In the second run (depicted in Table 1), all constructs recorded AVE values higher than 0.5 for each group of data. The lowest AVE value reported is for Social Influence

(SI) (0.521), followed by, Facilitating Condition (FC) (0.531), Habit (HA) (0.577), Trust Factor (TF) (0.578), Performance Expectancy (PE) (0.580), Effort Expectancy (EE) (0.650), Use Behavior (UB) (0.656), Hedonic Motivation (HM) (0.726), Culture (C) (0.795), and Continued Usage Intention (CUI) (0.802), which explains more than 80% of the total variance. These results show that the measurement model demonstrated adequate convergent validity.

Table 1: Convergent Validity

Construct	Item	Factor Loading	Cronbach's Alpha	CR	AVE
Performance Expectancy (PE)	PE1	.595	.743	.842	.580
	PE3	.885			
	PE4	.885			
	PE5	.631			
Social Influence (SI)	SI1	.796	.767	.842	.521
	SI2	.828			
	SI3	.661			
	SI4	.545			
	SI5	.742			
Facilitating Condition (FC)	FC1	.713	.788	.848	.531
	FC2	.675			
	FC3	.616			
	FC4	.816			
	FC5	.805			
Effort Expectancy (EE)	EE1	.767	.865	.903	.650
	EE2	.816			
	EE3	.821			
	EE4	.829			
	EE5	.797			
Trust Factor (TF)	TF1	.537	.893	.915	.578
	TF2	.662			
	TF3	.776			
	TF4	.826			
	TF5	.830			
	TF6	.791			
	TF7	.769			
	TF8	.842			
Culture (C)	C1	.903	.914	.939	.795
	C2	.904			

	C3	.886			
	C4	.874			
Hedonic Motivation (HM)	HM1	.813	.874	.914	.726
	HM2	.840			
	HM3	.864			
	HM4	.889			
Habit (HA)	HA1	.699	.755	.845	.577
	HA2	.799			
	HA3	.819			
	HA4	.713			
Use Behavior (UB)	UB1	.866	.818	.882	.656
	UB2	.854			
	UB3	.879			
	UB4	.610			
Continued Usage Intention (CUI)	CUI1	.868	.876	.924	.802
	CUI2	.922			
	CUI4	.896			

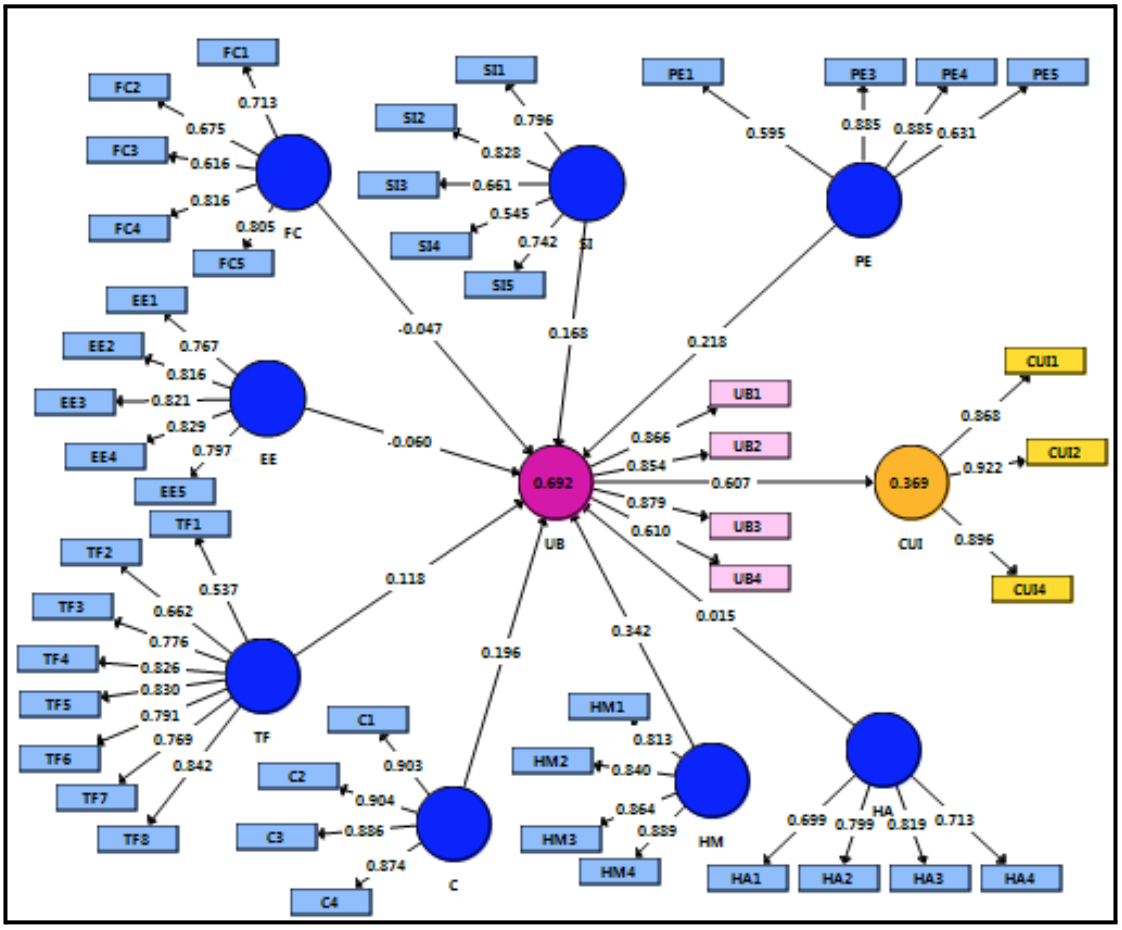

Figure 2: Model of PLS algorithm results (Measurement model) – Second run

Discriminant validity

The concept of a construct's discriminant validity was investigated in order to determine the degree to which it may be distinguished from other concepts. In the realm of distinguishing validity, the correlations between variables in the estimation of the model did not exceed 0.90, as recommended by Kline (2016). The validity was tested on the basis of measurements of the correlations between constructs and the square root of the average variance derived for a construct (Fornell & Larcker, 1981; Kline, 2016). The discriminant validity of the measurement model is represented in the table that follows, and it demonstrates that there is a significant level of discriminant validity among all of the constructs. The result shown in Table 2.

Table 2 Discriminant Validity (Fornell and Larcker index)

	C	CUI	EE	FC	HA	HM	PE	SI	TF
C	.892								
CUI	.475	.896							

EE	.544	.422	.806						
FC	.594	.404	.695	.729					
HA	.345	.211	.326	.409	.760				
HM	.786	.492	.544	.618	.474	.852			
PE	.585	.471	.519	.544	.428	.616	.761		
SI	.720	.437	.609	.666	.263	.651	.578	.722	
TF	.643	.496	.707	.627	.350	.665	.684	.637	.760

Heterotrait-monotrait ratio (HTMT)

The heterotrait-monotrait ratio, often known as HTMT, is an estimation of what the real correlation between two constructs would be if those constructs were precisely measured (i.e., if they were perfectly reliable). HTMT is the mean of all correlations of indicators across constructs measuring different constructs (i.e., the heterotrait-heteromethod correlations) relative to the (geometric) mean of the average correlations of indicators measuring the same construct (i.e., the monotrait-heteromethod correlations), and it can be used to assess the discriminant validity of a discriminant model (J. F. Hair et al., 2017). The accepted level of HTMT is .90 as recommended by Gold et al. (2001) (See Table 3).

Table 3: HTMT Criterion

	C	CUI	EE	FC	HA	HM	PE	SI	TF
C									
CUI	.528								
EE	.611	.483							
FC	.643	.453	.828						
HA	.405	.255	.395	.610					
HM	.879	.557	.624	.719	.582				
PE	.702	.581	.637	.677	.596	.752			
SI	.833	.530	.722	.802	.450	.761	.759		
TF	.717	.548	.821	.748	.437	.761	.815	.752	

Structural Model

The structural model is the component of the path model that represents the theoretical or conceptual aspect. In PLS-SEM, the structural model is often referred to as the inner model. It consists of the latent variables and the path relationships between them (J. F. Hair et al., 2017). After performing an analysis on the measurement model, the following step is to perform an analysis on the structural model. To evaluate the structural model using PLS-methodology, SEM's there are six phases to follow in the process (Hair et al., 2017). The processes that make up the examination of the structural model are as follows: (Step 1) assessment of collinearity, (Step 2) assessment of the path coefficients, (Step 3) Coefficient of determination (R2 value), and (Step 4) Blindfolding and predictive relevance. Q2; (Step 5) Effect size f2, (Step 6) Assessment of Moderating Effect.

Table 4: Summary of Structural Model (PLS bootstrapping)

Hypothesis		Std. Beta	Std. Error	T values	P values	Decision	Confidence Intervals		f2	Effect size	VIF	R^2	Q^2
							Lower	Upper					
H1a	PE -> UB	.219	.038	5.793	P<.01 (.000)	Supported	.155	.282	.369	Substantial	2.221	.692	.442
H1b	SI -> UB	.166	.054	3.097	P<.01 (.001)	Supported	.068	.252	.153	Medium	2.779		
H2a	FC -> UB	.045	.044	1.067	P>.05 (.143)	Rejected	-.121	.029	.003	No effect	2.611		
H2b	EE -> UB	.056	.048	1.258	P>.05 (.104)	Rejected	-.137	.020	.005	No effect	2.573		
H3	TF -> UB	.114	.050	2.374	P<.01 (.009)	Supported	.033	.200	.015	Weak	3.103		
H4	C -> UB	.200	.056	3.475	P<.01 (.000)	Supported	.106	.302	.167	Medium	3.217		
H5a	HM -> UB	.338	.059	5.772	P<.01 (.000)	Supported	.239	.439	.382	Substantial	3.184		
H5b	HA -> UB	.014	.030	0.490	P>.05 (.312)	Rejected	-.036	.066	.001	No effect	1.429		
H6	UB -> CUI	.609	.054	11.261	P<.01 (.000)	Supported	.515	.694	.584	Substantial	1.001	.369	.291

*** P<0.001, ** P<0.01, * P<0.05

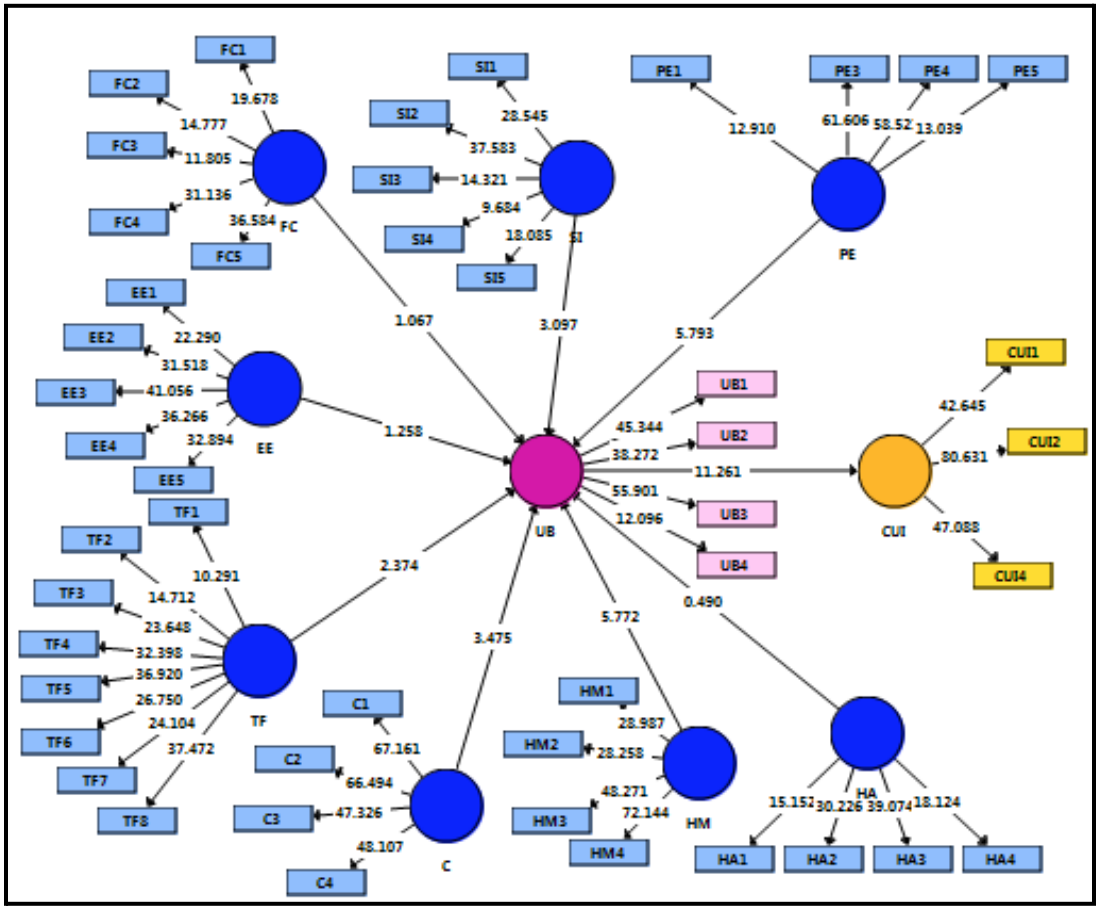

Figure 3: structural Model (PLS bootstrapping)

Assessment of the Structural Model for Collinearity issues.

Collinearity assessment is an important assumption to be met in order to make sure that multicollinearity did not exist. Collinearity diagnostics was performed in order to assess and identify the predictors' multicollinearity problems. This can be done by investigating the Variance Inflation Factor (VIF). According to (Hair et al., 2017), the VIF has a standard cut-off value equal or less than 3.3 as recommended by Diamantopoulos & Siguaw (2006). Table 4 above provides the results of the multicollinearity test values, and shows no VIF value above 3.3 (Diamantopoulos & Siguaw, 2006).

Assessing the significance of the structural model relationships

The structural paths in the structural model were assessed to determine the significance of the path coefficients. The significance of the structural paths was assessed by inspecting the path coefficients and the t-values. To test the hypothesis, the PLS algorithm and bootstrapping were carried out. The path coefficients and R2 were obtained from the PLS algorithm while the t-values were obtained from the bootstrapping. As recommended by Hair at el. (2017), if the p-value is equal or less than .05, the accepted level of t-value is at least 1.645. As per the Table 4, all of the t-value scores have met the accepted level recommended by Hair at el. (2017) except for H2a, H2b and H5b which did not meet the terms, therefore H2a, H2b and H5b will be rejected.

The coefficient of Determination (R2)

Furthermore, Hair et al. (2017) detailed 3 different levels of R2 scores. If R2 is above .75 it will be considered as substantial, if R2 is above .50 it will be considered as moderate, and if R2 is above .25 it will be considered as weak, while if R2 below .25 it will be considered as unacceptable. As per Table 5, the score of R2 for UB is considered as in Moderate level, while the score of R2 for CUI is considered as in Weak level as recommended by Hair et al. (2017).

Table 5 Path Coefficient (R2)

Construct	R2
UB	.692
CUI	.369

Assessment of the Effect Size (f2)

The summary and inference on the f2 estimate for independent (exogenous) constructs across the model is shown in Table 4. As recommended by Cohen (1988), if f2 scored below .02 then no effect was shown. In addition, the effect will be considered as weak if the value of f2 is 0.02 and above (J. Cohen, 1988). Moreover, f2 score that above 0.15 will be considered to have medium size of effect. Finally, if f2 scored above 0.35 it will be considered to have substantial size of effect. Thus, H2a, H2b and H5b have f2 values less than 0.02 which indicated no effect at all, H1a, H5a and H6 have f2 values more than 0.35 which indicated substantial of effect, H3 has f2 values more than 0.02 which indicated weak size of effect and H1b and H4 have f2 values more than 0.15 which indicated medium size of effect.

Assessment of the Predictive Relevance (Q2)

Table 6 shows the Q2 value (along with the R2 value) for each endogenous construct. The Q2 value was greater than zero, indicating that the model was predictive of the endogenous latent variables, as suggested by Stone (1974), Geisser (1974) and Hair et al.

(2017). Finally, there was no issue associated with a single-indicator construct as a predictor construct in this research (Geisser, 1974; J. F. Hair et al., 2017; Stone, 1974).

Table 6 Path Coefficient (Q^2)

Construct	Q^2
UB	.442
CUI	.291

Assessment of Moderation Analysis

After testing the direct effect, the moderation hypothesis is tested. A moderator is characterized as a third construct that can change or affect the relationship between the independent and dependent variables (Dawson, 2014; J. F. Hair et al., 2017). This study used continuous types of data as the moderation, and the analysis is conducted using the SmartPLS 3.3.

Table 7: Moderating Analysis

Hypothesis		Std. Beta	Std. Error	T values	P values	Decision	Confidence Intervals		f2	Effect size	VIF	R2
							Lower	Upper				
H7a	PE*Education -> UB	.099	.055	1.914	P<.05 (.028)	Supported	.155	.282	.160	Medium	1.526	.581
H7b	SI*Education -> UB	.021	.053	.584	P>.05 (.280)	Rejected	-.117	-.011	.001	No effect	1.501	
H8a	FC*Education -> UB	.076	.084	1.049	P>.05 (.147)	Rejected	-.084	.199	.001	No effect	2.125	.343
H8b	EE*Education -> UB	.038	.064	.435	P>.05 (.332)	Rejected	-.067	.145	.006	No effect	2.090	
H9	TF*Education -> UB	.158	.072	2.209	P<.05 (.014)	Supported	.039	.248	.158	Medium	1.004	.465
H10	C*Education -> UB	.060	.052	1.087	P>.05 (.139)	Rejected	-.029	.147	.007	No effect	1.023	.546
H11a	HM*Education -> UB	.105	.043	2.285	P<.05 (.011)	Supported	.029	.173	.161	Medium	1.127	.598
H11b	HA*Education -> UB	.030	.041	.444	P>.05 (.328)	Rejected	-.096	.041	.001	No effect	1.114	
H12a	PE*AGE -> UB	.015	.045	.280	P>.05 (.390)	Rejected	-.093	.063	.001	No effect	2.003	.596
H12b	SI*AGE -> UB	.142	.049	2.960	P<.05 (.002)	Supported	-.219	-.063	.226	Medium	2.034	
H13a	FC*Age -> UB	.105	.059	1.745	P>.05 (.041)	Supported	-.206	-.009	.168	Medium	2.193	.397
H13b	EE*Age -> UB	.197	.064	3.067	P<.01 (.001)	Supported	-.303	-.090	.357	Substantial	2.232	
H14	TF*Age -> UB	.241	.038	6.342	P<.001 (.000)	Supported	-.306	-.178	.361	Substantial	1.094	.494

H15	C*Age -> UB	.091	.045	2.117	P<.05 (.017)	Supported	-.157	-.011	.159	Medium	1.135	.552
H16a	HM*Age -> UB	.055	.049	1.172	P>.05 (.121)	Rejected	-.133	.030	.007	No effect	1.356	.598
H16b	HA*Age -> UB	.019	.031	.564	P>.05 (.287)	Rejected	-.069	.036	.001	No effect	1.245	

4. Discussion

In practice, this study has a number of practical implications for the S-commerce websites usage in Malaysia. The study suggests Usefulness factors (like Performance Expectancy and Social Influence) would reflect the Use Behaviour of the S-commerce websites by the students in the Private University. As well as, user trust and culture would reflect the usage of the S-commerce website. In addition, establish the feel of enjoyment in a form of Hedonic Motivation would cause a better level of S-commerce websites usage. However, Ease of Use factors (like Facilitating Condition and Effort Expectancy) and Users Habit have no effect on usage of the S-commerce websites.

Students of the private universities in Malaysia, in order to raise their usage of the S-commerce websites, the owners of these websites are advised and recommended to reconsider the Usefulness of their websites by improving the performance of their websites and fix and bugs that may occur, in addition to present their products in accordance to the user's social influences, as well as, to implement promotion programs in order to gain their user's trust. Moreover, the websites owners should also work on using other international languages in their websites' interfaces to represent their customers' culture. In addition, the S-commerce websites owners are advised to design their websites in consideration with the Hedonic Motivation by making the website more joyful and colouring. Finally, in order to maintain the users' continuance usage of their websites, owners of S-commerce websites should focus on all of the elements that enhance the Use behaviour. However, owners of S-commerce websites could focus on Ease-of-Use elements, but they don't have to deal with Facilitating Condition, Effort Expectancy, and/or Habit as core elements of their S-commerce websites.

Moreover, the websites owners should differentiate between educated and uneducated users when presenting their products on the S-commerce websites, as the websites' Performance Expectancy, Trust, and Hedonic Motivation are all matter to the educated users, therefore, designing the websites and putting these elements in their account will be more beneficial to their business. In line with that, owners of the S-commerce websites are required to supervise their products in accordance with the Users' Social Influence, factors related to Ease of Use, Culture, and/or User habit to maintain good usage behaviour by their users, however, these elements do not come with promises to the owners of these websites to enhance the usage of their websites whether the users are well-educated or not.

Furthermore, websites owners need to consider the age groups they are dealing with, as the age plays a significant influence on the users' Social Influence, Ease of Use factors, Trust, and Culture. However, Age could be influential for websites' Performance Expectancy and Behavioural factors, therefore, having a good supervision over this concept will ensure the S-commerce websites' owner a better business performance.

The purpose of this study is to determine what factors are related to the S-commerce websites Use Behavior and continued use intention among the students of the private universities in Malaysia. The study included Performance Expectancy, Social Influence, Facilitating Condition, Effort Expectancy, Trust Factor, Culture, Hedonic Motivation, and Habit. In order to achieve better results from this study, the researcher has introduced both of Age and Education as moderating effects of the relationship between the variables. The target population for this study are the

students of the private universities in three different private universities in Malaysia. This study suggests significant relationship between Performance Expectancy, Social Influence, Trust, Culture, and Hedonic Motivation from hand, and Use Behavior of S-commerce websites from another hand, as well as, a significant relationship between Use Behavior and Continued Usage Intention of S-commerce websites, which all support what was found in the majority of the previous published literature. But unlike the majority of the published literature, Facilitating Condition, Effort Expectancy, and Habit were found to be insignificant with Use Behavior of S-commerce websites.

Furthermore, in terms of methodological implications, the study presents an appropriate model to assist answering the research questions and identifying the study's important aspects. Furthermore, the research is conducted in an academic manner in order to fulfil the research objectives and answer the research questions. The study's methodology consists of many steps that must be completed in order to meet the objectives. The evaluation of the literatures in the field of behavioural studies in the field of E-commerce and technology adoption and use, particularly in Malaysia, in order to identify the theories and elements appropriate to the region and environment of this study and develop a research model.

Furthermore, the data collection process began with the development and testing of surveys. In this research, data were obtained quantitatively by randomly distributing questionnaire utilising non-probability sample convenient sampling approaches, as well as a pilot study. Cronbach's alpha and factor analysis techniques are used in the research to examine the reliability and validity of the construct's items. Finally, using Smart PLS and IBM SPSS, the study analyses the data and displays the results measurement and structural model analysis to examine the relation between dependent and independent variables and examining the research hypotheses.

One of the most important theoretical implications that it will enrich the body of literature with a holistic study dedicated to the Students of the Private Universities in Malaysia and the S-commerce websites to firmly conceptualize what are the variables that affect the Students of the Private Universities behavioural usage of the S-commerce websites, which many studies were lacked this concept and did not include the aspect of private universities students as S-commerce websites users. Therefore, this study was well structured to bridge this gap and overcome the problem caused by this gap theoretically. In addition, including the both age and education in the study as a moderating effect have drawn a new theoretical discipline, by highlighting how this variable could be integrated into the underpinning theories of the current topic, like Theory of Reasoned action, Theory of Planned Behavior, Motivational Model, Technology acceptance model, Extension of Technology acceptance model, Innovation Diffusion theory, Social Cognitive Theory, Expectation-Confirmation Theory, and UTAUT.

6. Future Scope

This study has a lot of potentials, many of them could be addressed here in order to make sure that future researchers are aware of them, and to list few:

- Focusing on other types of Universities (public universities for example) as case study with convenient selection would generate different types of results on the factors that affect S-commerce websites usage.
- Studying a larger sample size may return with more options in the analysis and results
- Following the mix methods (i.e., including the interviewing) as a methodology for future studies would spot the light on the Perceived Productivity and opinions that are worthy of studying
- In this study, Age and Education were considered as moderators, while a good sum of studies considered Gender and Level of Experience moderating influence on the UTAUT and UTAUT2, it is recommended that the future studies may consider the Gender and Level of Experience and associate them with E-commerce website usage behaviour.
- Redoing the same study but with other independent variables would come back with different determinants of the E-commerce website usage behaviour in Malaysia.

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