JOURNAL OF COMPUTATIONAL INNOVATION AND ANALYTICS
https://e-journal.uum.edu.my/index.php/jcia

How to cite this article:
Sappri, M. M., Hamid, A. S. M., Sulaiman, S. I. N., & Omar, F. M. (2023). A new framework on success factors of social media applications usage. *Journal of Computational Innovation and Analytics, 2*(2), 193-217. https://doi.org/10.32890/jcia2023.2.2.4

A NEW FRAMEWORK ON SUCCESS FACTORS OF SOCIAL MEDIA APPLICATIONS USAGE

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Received: 26/6/2020 Revised: 22/9/2020 Accepted: 17/6/2023 Published: 31/7/2023

ABSTRACT

Based on many past studies regarding Social Media Applications (SMAs) rarely focus on aspects of continuous use and Perceived Privacy (PP). The increasing user awareness issue regarding PP in using SMA is escalating due to various cybersecurity threats, such as malware, software, password and Man-in-the-Middle (MitM) attacks. Accordingly, this study examines the effect of users' PP on System Quality (SQ), Information Quality (IQ), Service Quality (SVQ), User Satisfaction (US) and Usage (USG) based on the DeLone and McLean Information System (IS) Success Model. A total of 345 samples were

used for this study using the convenience sampling approach and SmartPLS 3 as the analysis tool. Based on the study's results, it was discovered that SVQ and IQ affect the use of SMA. In addition, it was discovered that PP affects the relationship between SQ, SVQ and the use of SMA. The analysis results related to PP reveal that it is a dominant construct in the study model. Note that the importance of PP should be a solid foundation for developing an SMA application. The PP component in this study can be used as a guide and checklist for software developers to improve security features and SVQ, which is a catalyst for US and ensure that an SMA application is used continuously.

Keywords: Social media applications, user satisfaction, continual usage, information quality, service quality, system quality, perceived privacy.

INTRODUCTION

The use of Social Media Applications (SMAs) in daily life can be assumed as a new norm today in social activities (Yu et al., 2018). SMAs are "web-based services that allow individuals to (1) build a public profile that can be utilized for communication purposes, (2) have a list of online users who share the same SMA connection, and (3) interact and socialize with other online users" (Ellison & Steinfield, 2007, p. 1). Undoubtedly, social media is widely used and a crucial element in today's world to share information and connect (Hu et al., 2021). The term SMA refers to an application based on social media developed to enable the virtual community to interact directly or indirectly regarding any matter in the social network. This includes publishing, dissemination, releasing, gathering, transmission, webcasting, and production, to name a few (Uma et al., 2021). Most SMA collections available today are based on Web 2.0 philosophy and infrastructure to make creating and sharing user-generated content easier (Kaplan & Haenlein, 2010; Kaye, 2021). Based on the latest ranking released by Search Engine Journal in 2022, Facebook, YouTube and WhatsApp topped the SMA list, followed by Instagram, TikTok, Snapchat, Pinterest, Reddit, LinkedIn, and Twitter (Search Engine Journal, 2022). Basically, SMA is an application that allows sharing information and making connections. It allows a person to communicate with family and friends, share interests, learn something

new and act as an element of entertainment. The expansion of SMA based on mobile phones or smartphones is also the cause of the surge in SMA users reaching a billion users in the last 10 years (Sunday et al., 2021). Mobile technology has become the main axis in the explosion of SMA use since people can access SMA anytime and anywhere. As a result, SMA is now one of the most important elements in life (S. E. Chang et al., 2017).

By 2025, SMA users are expected to reach 4.4 billion or about 1/3 of the world's population. Easy access to the internet is also a factor that causes more individuals to connect with SMAs. This increase can be observed so drastically in the last 5 years. Based on a recent study, internet users worldwide spend more than 2.5 hours a day browsing SMA, which suggests an increase of 2% compared to 2022 (Dixon, 2022). Note that internet users in Malaysia spend 2 hours 47 minutes a day compared to global internet users, 2.5 hours a day. It was discovered that a total of 58.7% use it to get information about the brand. As many as 40.9% of users in Malaysia use the internet for banking, investment, and insurance purposes. The report also discovered that 87.4% play video games online, much higher than the global level of 81.9%.

Even though SMA has been widely studied, our knowledge of its users and applications is still minimal (Chimenti et al., 2022). Among the main issues discussed is what influences the use of an SMA. Is the quality content of an SMA a factor in why it reaches billions of users? As explained by Weller (2016), the stability and quality possessed by an SMA from the aspect of information and service become a survival determinant for the lifespan of an SMA. Humans tend to obtain and share information with friends and family. Hence, Information Quality (IQ) becomes the main basis for using SMA (Weller, 2016). In addition, the quality of the service offered is the main key to why there is an increase in the use of SMA (Gao & Bai, 2014). The suggestion to look at the Service Quality (SVQ) aspect offered by Facebook is also suggested to improve our understanding of how an SMA are able to be successful and last for a long time (Gao & Bai, 2014).

The existence of SMA nowadays has gone beyond interpersonal boundaries significantly, increasing relationships worldwide and enabling communication to be done anytime and anywhere (F. Zhou & Mou, 2022). The world without limits is now at the tip of the

finger, and imagine a relationship that was broken for 20 years can be mended in less than 2 minutes (Aichner et al., 2021). Although SMA generally brings many benefits to the virtual community, users' Perceived Privacy (PP) has long plagued user privacy (Schomakers et al., 2022). Effects of the upgrade on the daily use of SMA worldwide lead to more issues related to user privacy threats and behaviors. Every day, many cases and complaints involve the invasion of user privacy. This includes online shopping, access to personal information by third parties, and cookie issues, where users appear to leave their traces on the internet and allow interested parties to manipulate user data. The issue of PP was also addressed by Niranjanamurthy & Chahar (2013), who outlined three main security threats: denial of service, unauthorized access, and online fraud and theft. This situation leads to a situation where even though users are conveniently using SMA services, they still face the risk of security threats such as phishing or efforts to track someone's banking activities, identity theft, identity profile cloning, and false promotions. Although users are still worried about threats to PP, they continue to use this platform widely (Rehman et al., 2022). Given the strong relationship between use and PP, it is unlikely that users will ignore this factor even when threatened with risk (Cain & Imre, 2022). It is important to include the element of PP in predicting the use of social media to understand how technology acceptance occurs (Schomakers et al., 2022). Therefore, based on the DeLone and McLean Information System (IS) Success Model, this study has the potential to observe the extent of the relationship between quality and PP in the continuous use of technology. A past empirical study mentions PP, suggesting different support results using the DeLone and McLean IS Success Model (Pour et al., 2021). The DeLone and McLean IS Success Model has been widely applied, especially in social media (Aboelmaged, 2018; C. M. Chang et al., 2020; Hariguna et al., 2019). Therefore, the study focuses on how PP and quality continuously affect social media users' satisfaction in Malaysia. Secondly, the study also aims to observe how PP improves the predictive ability of the DeLone and McLean IS Success Model in explaining the relationship between quality and continuous use of social media.

LITERATURE REVIEW

This study aims to observe how DeLone and McLean's IS Success Model predicts the continuous use of social media in Malaysia.

Therefore, the discussion on quality factors, system, information, and service, as well as PP and User Satisfaction (US) with the use of social media, will be detailed below.

The modification of DeLone and McLean IS success model

DeLone and McLean have outlined six main constructs to build their research model in adapting to various situations, especially the evaluation of ISs or applications (DeLone & McLean, 2002). As a result, they produced a multi-dimensional measurement model that aims to evaluate the success of an IS. Consequently, DeLone & McLean (2003) revised and modified their model by including additional elements. As a result, System Quality (SQ), IQ, SVQ, and intention to use have been combined to measure US and net benefits for an IS. (Petter et al., 2008). Nevertheless, past scholars have developed various modifications in response to the DeLone and McLean IS Success Model to be applied in various IS situations (Ali et al., 2018; Alzahrani et al., 2019; DeLone & McLean, 2004; Dong et al., 2014; Iranmanesh et al., 2022; Kaur et al., 2022; Kulkarni et al., 2006; Rokhman et al., 2022; Sharma & Sharma, 2019; Wang & Liao, 2008). DeLone and McLean should be able to work in various environments and remain relevant now. Therefore, this study uses this to evaluate the continuous use of social media in Malaysia.

User Satisfaction

US refers to the user's perception and evaluation of the use of an IS and is a vital construct in the DeLone and McLean IS Success Model. According to Kim and Lee (2014), US refers to the feelings that arise, either pleasure or dissatisfaction, resulting from using an IS cumulatively. It can also be translated as the user's perception of the social application (Calvo-Porral et al., 2017). Among the terms often used to describe the US are user information satisfaction, system acceptance, IS appreciation and feelings towards ISs (Wang & Liao, 2007). In the DeLone and McLean IS Success Model, the construct of US can be applied to applications that facilitate communication, such as email, Facebook, WhatsApp and Twitter (Dong et al., 2014). Therefore, US is conceptualized in this study as individual feelings, whether satisfied or not with the SMA used.

System Quality, Information Quality and Service Quality

Aspects of quality that are considered in evaluating an IS are SQ, IQ and SVQ (DeLone & McLean, 2003). It can manifest individual

feelings towards the IS, whether happy or unhappy (Junglas et al., 2013). SQ measures the individual's level of feeling about whether an IS is easy to use by considering the technical aspects of its use, the quality of processing and the system's response to an action (Gorla et al., 2010). Meanwhile, the quality of information is translated as how a system delivers correct and accurate information, a good interface, information display is not excessive and the ability of information to have an impact (DeLone and McLean, 2004). In addition, it also involves the user's perception regarding the extent to which the user believes that the information offered by the system is relevant, informative, and comprehensive in an appropriate format. At the same time, SVQ refers to the reliability of users in using the services offered by an IS (Choi et al., 2013). In the context of this study, SVQ is described as how SMAs offer support, help, convenience, and online assistance (Çelik & Ayaz, 2022).

Perceived Privacy

Nevertheless, there is ambiguity in clearly defining PP in SMA. As a result, most SMA users do not realize the importance of knowing about PP's dangers and threats, as most are easily complacent when using SMA for a long period. However, they are concerned about security-related issues involving their personal data (Awad & Krishnan, 2006). Among the security issues SMA users face are personal profile intrusion, information leakage, identity forgery, content intrusion and the threat of viruses and malware. These threats are sometimes not noticed at an early stage, and often SMA users only realize the intrusion is happening at a late stage and it is too late. In addition, SMA also offers various additional privacy to increase the security of the application, and SMA users should always be aware of the latest updates announced by SMA.

Most SMA users want to store and share data and information such as text, images and media with other social users. As a result, many are stuck with the issue of information leakage when they are careless and not alert. In this study, PP looks at how SMA users feel that an application protects and safeguards the importance of their personal information. An increased data confidentiality risk occurs when SMA users are unaware of a security leak from a third party (Arpaci, 2016). Therefore, the higher the PP by users, the higher the trust given to

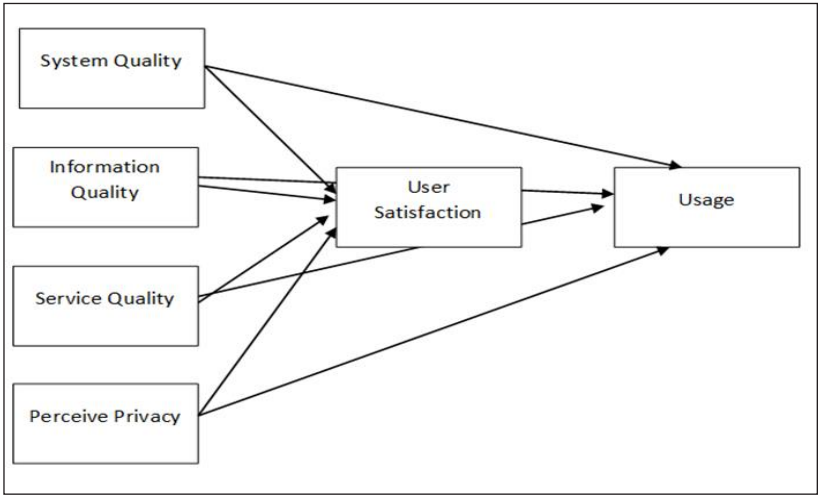
the SMA (Almaiah & Al-Khasawneh, 2020). The good perception of users towards appropriate and effective privacy management provided by SMA providers, such as not disclosing or using user information to third parties, using intentionally or unintentionally without the user's permission, and offering many privacy control options to users to display is needed to establish (Pavlou, 2011). SMA users always feel safe and protected when the SMA they use rarely faces problems with privacy. Hence, long-term and continuous awareness is very difficult to cultivate for users who pay less attention to aspects of information security and privacy (Sheehan & Hoy, 2000). Empirical studies also prove the occurrence of frequent and large-scale information leaks, for example, in telecommunications companies that sell user data to third parties. Therefore, sometimes users are surprised by suspicious calls from unknown callers due to privacy information leaks (Stone et al., 2013).

METHODOLOGY

Components of the Research Model

Figure 1

The Proposed Research Model



For each construct of the research model, hypotheses are formed as follows:

Table 1

Construct's Operational Definition and Hypotheses

Construct	Operational Definition	Hypothesis
System Quality	DIt is defined as desired SMA characteristics which will increase US.	**H1**: System quality has a positive impact towards user satisfaction. **H2**: System quality has a positive impact towards usage.
Information Quality	DIt is defined as the measurement of an SMA output quality.	**H3**: Information quality has a positive impact towards user satisfaction. **H4**: Information quality has a positive impact towards usage.
Service Quality	It is defined as a service or support that SMA users receive from the SMA.	**H5**: Service quality has a positive impact towards user satisfaction. **H6**: Service quality has a positive impact towards usage.
Perceived Privacy	It is defined as a measure of how a user feels that an application protects and safeguards the importance of their personal information.	**H7**: Perceived privacy has a positive impact towards user satisfaction. **H8**: Perceived privacy has a positive impact towards usage.
User Satisfaction	DIt is defined as the measure of users' feelings towards the SMA.	**H9**: User satisfaction has a positive impact towards usage.
Usage	It is defined as the degree and way users utilize the capabilities of the SMA and continue using it.	**H9a:** System quality has a positive impact towards usage through user satisfaction. **H9b:** Information quality has a positive impact towards usage through user satisfaction. **H9c:** Service quality has a positive impact towards usage through user satisfaction. **H9d:** Perceived privacy has a positive impact towards usage through user satisfaction.

Data Collection

The questionnaire instrument was developed using the basis of various previous studies. For example, the quality information component was obtained from Wixom and Todd (2005), T. Zhou (2005) and Yan et al. (2014). For the SVQ, the items were obtained from T. Zhou (2011) and T. Zhou (2012). As for the US item, the item was obtained from Bhatacherjee (2001). Meanwhile, the PP and Usage (USG) items were obtained from Dinev et al., 2009. The selection of items for this study was chosen based on the appropriateness of the study environment and the operational definition that is in line with the interpretation of DeLone and McLean's IS Success Model (2002). Using a Likert scale of "1 - strongly disagree to 7 - strongly agree" to measure variable items. Other than that, the Google Forms data collection method has been utilized for quick and easy responses. The use of Google Forms is also proven to increase user reach, with a total of 345 sample sizes targeted, as recommended by Boyd (2006). A simple random sampling method has been employed in this study, which is the most suitable method since it provides equal chances of being picked for each member of the target population.

Table 2

Questionnaire's Items

	System quality
SQ1	Social media apps are easy to use
SQ2	Social media apps are easy to learn and understand
SQ3	Social media apps are stable
SQ4	Social media apps are reliable
SQ5	Social media apps have an acceptable response time
	Information quality
IQ1	Information in social media apps is up to date
IQ2	Information in social media apps is accurate
IQ3	Information in social media apps is meaningful and
IQ4	understandable
IQ5	Information in social media apps is helpful and important
	Information in social media apps is clear and unambiguous
	Service quality
SERVQ1	Social media apps customer service should provide their services as promised

(continued)

	Service quality
SERVQ2	Social media apps customer service should always be willing to help the customer
SERVQ3	Social media apps customer service should have knowledge of every question asked by the customer
SERVQ4	Social media apps customer service should understand your needs
	Perceive privacy
PP1	Personal privacy is very important to social media apps
PP2	You are concerned about how is your personal information aired online
	User satisfaction
US1	You are satisfied with the experience of using social media apps
US2	You are satisfied with the social media apps' efficiency and effectiveness
US3	Overall, your interaction with social media apps is satisfying
	Usage
U1	You intend and expect to continue using social media apps in the future
U2	You will frequently use social media apps in the future
U3	You will strongly recommend others to use social media apps

Data Analysis

After data collection, the next process is data analysis using SmartPLS 3 software. Reliability testing will be done to observe the internal consistency of a construct, and for this purpose, the alpha value produced must be greater than 0.7. The next test is collinearity testing to test multicollinearity in the construct. This test will consider the Variance Inflation Factor (VIF) value score, which must be less than 5. If the VIF score exceeds 5, the tested construct should be combined with other constructs or eliminated.

Construct validity is when an item measures the construct it is supposed to measure. There are two types of construct validity that will be utilized in this study: convergent validity and discriminant validity. Convergent validity is when one item is positively related to other items in the same construct. This value will be determined using the Average Variance Extracted (AVE) value, which must be greater than 0.5. Note that discriminant validity is when one construct

is different from another construct. This validity will be measured using the Fornell-Larcker criterion method, where each cross-loading value of the same construct should be higher than the cross-loading value of a different construct. If there is a construct validity problem, the item with the lowest loading value for the construct should be removed until the validity value is sufficient.

For hypothesis testing, the research model will be tested using bootstrapping. It is a non-parametric procedure allowing statistical significance testing for various outputs, such as path coefficients and R^2 values. For this purpose, the resulting p-value must be less than the alpha value of 0.05, while the t-value must exceed 1.645 for the one-tailed test to allow the hypothesis to be accepted. In addition, the independent variable can be proven to have a significant and positive effect on the dependent variable. This procedure is important to answer the first objective, which states that any independent variable that has a positive impact on the dependent variable should be selected as a success factor in using SMA.

RESULTS AND DISCUSSION

Descriptive Analysis

Questionnaires were distributed randomly to internet users in Malaysia using Google Forms. Based on user responses, 94.49% of respondents have given feedback to answer this questionnaire or 326 questionnaires have been answered and returned, and the rest had to be set aside since they exceeded the allowed period. Respondents are in the age category of 20 to 29 years. As a result of the observation, the WhatsApp application is the most popular SMA used, with a percentage of 84.47% recorded, followed by Facebook and YouTube, respectively 75.79% and 74.21%. Despite its ranking in the Google PlayStore, Facebook managed to top the chart. However, WhatsApp was also in the first position several times. Based on usage trends, the WhatsApp application is the primary choice of social media users in Malaysia compared to Facebook and Instagram. It was discovered that, on average, respondents use the SMA application from 5 to 10 hours a day, and this figure coincides with the survey results in 2019, where the average time Malaysians spend on social media is an average of 5 hours and 47 minutes. A total of 62.37% of respondents

used the SMA application to find the latest news, while there were only 4% of respondents chose the answer 'Others' as the reason. Their main purpose of using SMA is to obtain the latest news, news sharing and news dissemination.

Reliability Analysis

A reliability test can be used to assess whether the construct has internal consistency and is reliable to be used in the study. The Cronbach's alpha (α) of all constructs used for the study must be in the range of 0.70 and 0.90 (Hair et al., 2014). If constructs have less than the required α value, the construct lacks internal consistency and the lowest loading items inside the construct must be eliminated. After the reliability test has been conducted on 345 data, all constructs meet the threshold.

Table 3

Reliability Test

Construct	Cronbach's Alpha	Number of Items
System Quality (SQ)	0.816	4
Information Quality (IQ)	0.802	3
Service Quality (SVQ)	0.856	4
Perceive Privacy (PP)	0.708	4
User Satisfaction (US)	0.886	5
Usage (USG)	0.837	4

Collinearity Statistics

Based on the results of collinearity testing, the resulting VIF value suggests a value of less than 5, indicating no collinearity between the constructs. Collinearity occurs when two or more constructs in one model have a high correlation value with another construct, or the nature of a construct can be predicted linearly with one construct or another construct with a high level of accuracy (O'Brien, 2007). VIF measures collinearity and must produce a value of less than 5. If otherwise, the construct is recommended to be combined with another construct (becomes one construct) or can be eliminated.

Table 4

Collinearity Test

	IQ	PP	SERVQ	SQ	USG
IQ					2.139
PP					2.488
SERVQ					3.785
SQ					4.091
USAGE					

Convergent Validity

Convergent validity is how the measure of a construct is positively correlated with another measure of the same construct (Hair et al., 2014). The validity can be established by the AVE value in the SmartPLS 3 software. The value of AVE must be more than 0.5, revealing that the convergent validity is sufficient. Suppose the AVE value is less than 0.5. In that case, the indicator with the lowest outer loading value should be eliminated until the AVE value satisfies the threshold (AVE > 0.5) since the elimination can increase the AVE value. According to Table 5, convergent validity has been established.

Table 5

Convergent Validity

Variable	Indicator	Main Loading	AVE
System Quality (SQ)	SQ1	0.789	0.582
	SQ2	0.787	
	SQ3	8.840	
	SQ4	0.616	
Information Quality (IQ)	IQ1	0.880	0.747
	IQ2	0.865	
	IQ3	0.847	
Service Quality (SVQ)	SERVQ1	0.786	0.586
	SERVQ2	0.784	
	SERVQ3	0.771	
	SERVQ4	0.719	
Perceive Privacy (PP)	PP1	0.807	0.556
	PP2	0.742	

(continued)

Variable	Indicator	Main Loading	AVE
	PP3	0.711	
	PP4	0.719	
User Satisfaction (US)	US1	0.691	0.577
	US2	0.799	
	US3	0.512	
	US4	0.795	
	US5	0.935	
Usage	U1	0.810	0.623
	U2	0.559	
	U3	0.794	
	U4	0.945	

Discriminant Validity

Discriminant validity can be measured using the Fornell-Larcker criterion method in the SmartPLS 3. The cross-loading value between the same construct (highlighted text) must be greater than all cross-loading values of a construct with other constructs. If the cross-loading value of the same construct is less than the cross-loading value of that construct with another construct, the lowest loading indicator of the said construct should be eliminated. According to Table 6, the cross-loading value between the same construct (bolded text) is higher than all cross-loading values with other constructs, which concluded that this study already established the discriminant validity.

Table 6

Factors' Cross-Loading Value

	IQ	PP	SERVQ	SQ	US	USAGE
IQ1	**0.88**	0.572	0.585	0.651	0.576	0.547
IQ2	**0.865**	0.524	0.522	0.591	0.496	0.475
IQ3	**0.847**	0.513	0.532	0.592	0.507	0.479
PP1	0.571	**0.807**	0.615	0.594	0.609	0.564
PP2	0.407	**0.742**	0.522	0.515	0.468	0.388
PP3	0.414	**0.711**	0.557	0.564	0.512	0.438
PP4	0.44	**0.719**	0.509	0.456	0.513	0.446
U1	0.43	0.526	0.786	0.516	0.799	**0.81**
U2	0.347	0.244	0.324	0.293	0.512	**0.559**
U3	0.554	0.575	0.771	0.555	0.795	**0.794**

(continued)

	IQ	PP	SERVQ	SQ	US	USAGE
U4	0.493	0.561	0.813	0.575	0.935	**0.945**
SERVQ1	0.43	0.526	**0.786**	0.516	0.799	0.81
SERVQ2	0.498	0.605	**0.784**	0.84	0.583	0.531
SERVQ3	0.554	0.575	**0.771**	0.555	0.795	0.794
SERVQ4	0.461	0.595	**0.719**	0.787	0.518	0.447
SQ1	0.607	0.575	0.596	**0.789**	0.566	0.528
SQ2	0.461	0.595	0.719	**0.787**	0.518	0.447
SQ3	0.498	0.605	0.784	**0.84**	0.583	0.531
SQ4	0.622	0.385	0.432	**0.616**	0.409	0.4
US1	0.502	0.777	0.657	0.652	**0.691**	0.547
US2	0.43	0.526	0.786	0.516	**0.799**	0.81
US3	0.347	0.244	0.324	0.293	**0.512**	0.559
US4	0.554	0.575	0.771	0.555	**0.795**	0.794
US5	0.493	0.561	0.813	0.575	**0.935**	0.945

Hypotheses Testing

Direct Effect of Independent Variables on Dependent Variables (Usage)

This section will reveal the results for H2, H4, H6 and H8 hypotheses. Figure 2 displays that the value for R^2 of the relationship between independent variables and the US is 0.878 or 87.8% variance explained.

Figure 2

Path Analysis for H2, H4, H6, and H8

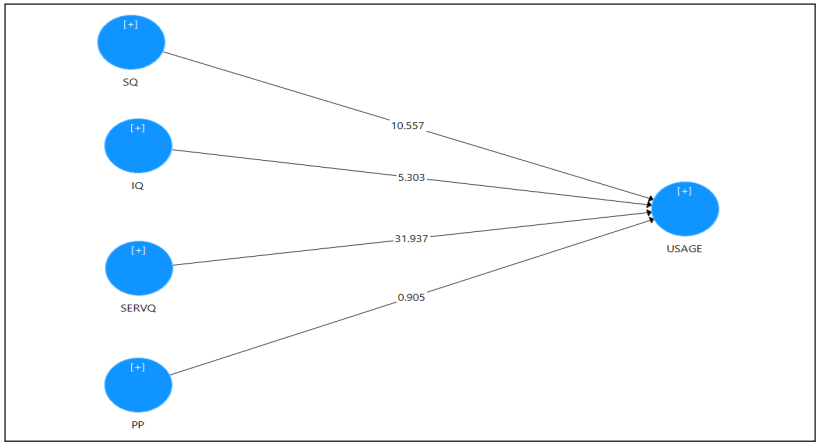


Table 7

Hypotheses Testing for H2, H4, H6, and H8

		β	*t*-value	*p*-value	Result
H2	SQ -> Usage	-0.48	10.557	0.00	Supported
H4	IQ -> Usage	0.166	5.303	0.00	Supported
H6	SERVQ -> Usage	1.221	31.937	0.00	Supported
H8	PP -> Usage	-0.03	0.905	0.00	Not Supported

User Satisfaction to Usage

Mediating has its own condition, where the relation of mediating variable with the dependent variable must be significant (Hair et al., 2014). Table 8 evaluates the H9, which is the impact of mediating variable (US) and dependent variable (USG). Based on Figure 3, the relationship between US and USG is significant, indicating that the US has a positive impact towards USG with 0.974 or 97.4%.

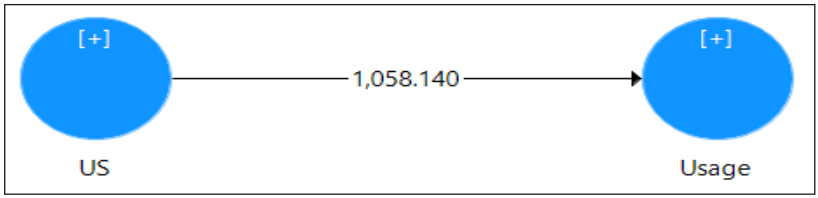
Table 8

Hypothesis Testing for H9

		β	*t*-value	*p*-value	Result
H9	US -> Usage	0.98	1058	0.00	Supported

Figure 3

Path Analysis for H9

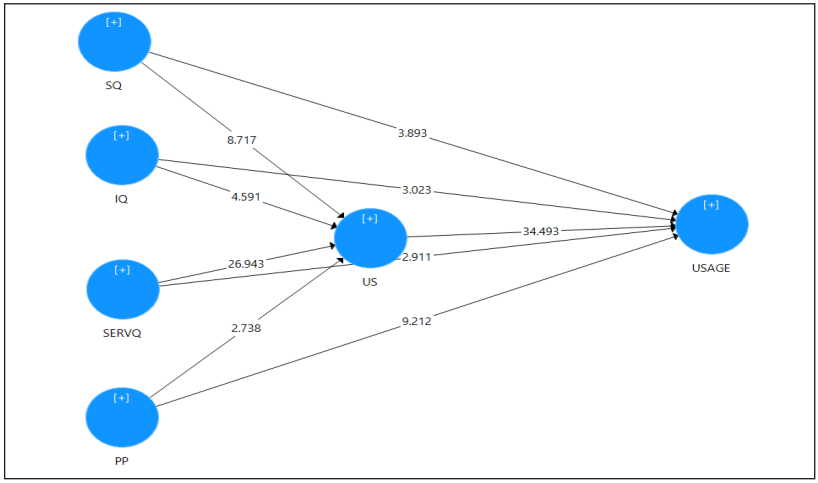


Mediating Effect of Independent Variables and Dependent Variables

To determine the mediation in the model, Hair et al. (2014) suggested using a bootstrapping technique. There are three conditions that should be determined. The conditions should be ensured: (1) the significance of the direct effect relationship between the independent variable and dependent variable, (2) the significance of the indirect effect relationship between the independent variable and dependent variable through mediating variable, and (3) determine full or partial mediating effect using Variance Accounted For (VAF). The mediating role of the US to USG is described in Figure 4.

Figure 4

Mediating Effect on Independent Variables to Usage



SQ, IQ and SVQ have a positive and significant relationship with USG. However, PP was discovered not to be significant with USG.

In the second step, through observation, all independent variables positively relate to USG when the US is included as a mediator. In addition, the significance of these relationships is increased than direct relationships.

Table 9

The Mediating Effect of User Satisfaction on Independent Variables and Usage

IVs	Usage			
	Before Mediation		After Mediation	
	β	t-value	β	t-value
System Quality	-0.48	10.557	-0.090	3.893
Information Quality	0.166	5.303	0.040	3.023
Perceive Privacy	-0.03	0.905	-0.145	9.212
Service Quality	1.221	31.937	0.109	2.911
User Satisfaction	-	-	1.024	34.493
R^2	0.878		0.979	

In summary, all 13 hypotheses proposed are supported in this study. Based on SmartPLS 3 analysis, the result of path analysis for all variables is presented in Figure 5. The R^2 for the dependent variable is 0.979, indicating that 97.9% of predictor variables used in the study explain SMA usage in Malaysia.

Table 10

Summary of Hypotheses Testing

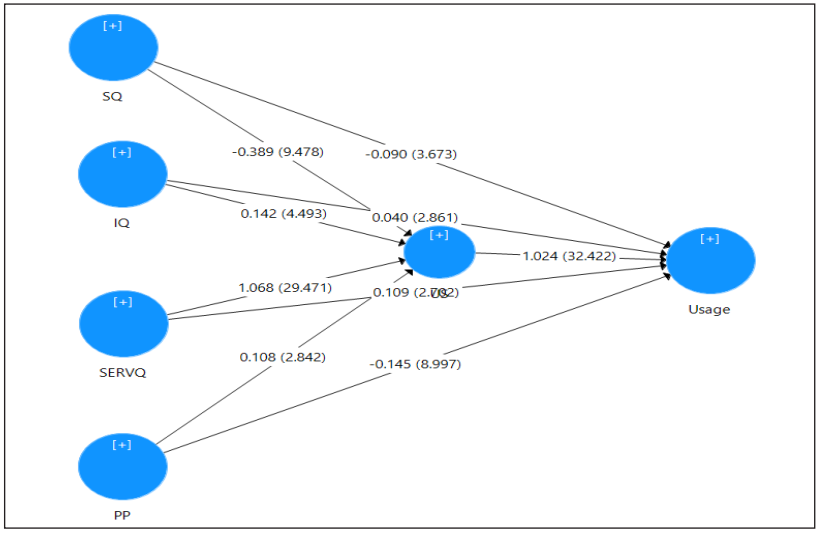
Relationship	β	Hypothesis	*t*-value	*p*-value	Result
SQ -> US	-0.39	H1	9.478	0.00	Supported
SQ -> Usage	-0.09	H2	3.673	0.00	Supported
IQ -> US	0.142	H3	4.493	0.00	Supported
IQ -> Usage	0.040	H4	2.861	0.004	Supported
SERVQ -> US	0.108	H5	29.471	0.00	Supported
SERVQ -> Usage	0.20	H6	2.702	0.007	Supported
PP -> US	0.108	H7	2.842	0.005	Supported
PP -> Usage	-0.15	H8	8.997	0.00	Supported

(continued)

Relationship	β	Hypothesis	*t*-value	*p*-value	Result
US -> Usage	1.024	H9	32.422	0.00	Supported
Mediation					
SQ -> US -> Usage	-0.39	H9a	9.48	0.00	Supported
IQ -> US -> Usage	0.142	H9b	4.493	0.00	Supported
SERVQ -> US -> Usage	1.068	H9c	29.47	0.00	Supported
PP -> US -> Usage	0.108	H9d	2.842	0.005	Supported

Figure 5

Result of the Research Model



CONCLUSION

This study is based on DeLone and McLean's IS Success Model, using constructs such as SQ, IQ, SVQ, PP, US and USG. The research model is employed to understand the continuous use of SMA for users in Malaysia. The use of DeLone and McLean IS Success Model is also accurate in studying this scenario in Malaysia.

Specifically, (1) IQ and SVQ are important predictors in measuring the use of SMA. The results of the analysis are in line with previous work (Al-Rahmi et al., 2021; Alzahrani et al., 2019; Ameen et al., 2019; Aparicio et al., 2017; Wu et al., 2020). This proves that users

will continue to use SMA if the IQ and SVQ are offered to meet their needs. Most respondents agreed and gave positive feedback regarding these two constructs. Application developers can think of ways to make this quality element (information and service) the main offering to users. In addition, accuracy, relevance, timeliness, completeness, and usefulness of data should also be emphasized during the development of SMA. However, no clear statistical relationship is exhibited based on the analysis between SQ and the use of SMA. This suggests that the quality system does not influence an individual's decision to use SMA.

(2) Based on the results revealing that all quality constructs have a significant relationship with SMA US, and these results are in line with previous studies (Al-Rahmi et al., 2021; Alzahrani et al., 2019; Busalim & Ghabban, 2021; Dong et al., 2014). It can be concluded that a user will be satisfied if provided with the latest IQ features. It is as user feedback to SMA: they want SMA that has fewer errors, offers new, up-to-date, and constantly updated information content and provides assistance services when needed.

3) The basic principle for DeLone and McLean IS Success Model is between US and continuous usage. The analysis results also suggest a significant relationship between US and USG, indicating that a satisfied attitude will encourage the continuous use of SMA. The results obtained from the model analysis also align with the studies of Joo et al., 2018, Veeramootoo et al., 2018, and Guinea and Markus, 2009.

The use of constructs in this study is also based on an in-depth study of previous literature and adapted according to the context of the study. In addition, the role of PP has also proven to have a significant relationship in predicting the continued use of SMA. The questionnaire was adopted from past researchers' work with minor changes to suit the study environment. The finding also amplifies the proposed research model in identifying success factors for social media research. Hopefully, this study will provide useful insight for Malaysian developers, particularly in designing SMA.

ACKNOWLEDGMENT

This research was supported by the Ministry of Higher Education (MoHE) of Malaysia through the Fundamental Grantt Scheme for

Research Acculturation of Early Career Researchers (RACER/1/2019/ICT04/UUM//1). We also want to thank Universiti Utara Malaysia for giving us the opportunity to conduct this research.

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