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THE IMPACT OF PERCEIVED CREDIBILITY AND PERCEIVED QUALITY ON TRUST AND SATISFACTION IN MOBILE BANKING CONTEXT

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ABSTRACT

Despite the continuous growth on the number of users embracing mobile banking, the issues on security and privacy will remain a concern that needs unremitting attention. Both practitioners and researchers have worked together finding solutions so that the issues of security and privacy will not hinder consumers from intensifying the degree of utilizations of the mobile banking services. Researchers have developed numerous models presenting the security and privacy concern and the effect on users' mobile banking behaviour. However, since mobile technology changes at a very rapid pace and coupled with the behavioural changes of the users, further refinement and modification of these model is seen necessary. Given this background, a study was undertaken with the aim of examining the impact of security and privacy concern on trust and satisfaction. In addition, the study is also aimed at examining the effect of perceived quality on security, privacy, trust and satisfaction. The study used a survey research methodology and a questionnaire as the data collection technique. Adopting the convenient sampling, a total of 365 usable responses were collected from mobile banking users in Malaysia. The results based on Structural Equation Modelling (SEM) analysis showed that perceived credibility, operationalised as comprising of security and privacy, are significant predictor of trust and satisfaction. In addition, it is also found that perceived quality has a significant relationship with trust and satisfaction. The finding further highlights the importance and significance of security and privacy in ensuring the success of mobile banking services.

1. INTRODUCTION

Mobile banking (MB) can be defined as the use of smart phones or other mobile devices to perform banking transactions such as monitoring the account balances, transfer of funds between accounts, pay bills and find an ATM (Mahad *et al.*, 2016). MB can be regarded as a subset of e-banking or online-banking and refers to the shift of conducting financial transactions from wired networks to wireless networks (Clarke III, 2008). According to Masrek *et al.* (2013) MB enables customers to perform three fundamental transactions: (i) storing money in an account that is accessible by the mobile device (ii) completing cash-in and cash-out transactions with the stored account, and (iii) transferring money among different accounts.

While the growth of consumer embracing MB has been remarkable over the last few years, the issues that remain plaguing the consumers as well as the MB providers are security, privacy, trust and satisfaction. Yu (2015) stated that "considerable literature has indicated that MB operates in an impersonal and technology-enabled environment that might cause customers to feel uncertainty and risk which create a lack of trust for using MB". Accordingly, Yu (2015) argued that examining antecedents of MB trust and its consequences becomes crucial. The literature suggests while there are many factors that can affect MB trust, perceived quality and perceived credibility are those that were commonly highlighted in the literature of past studies (Chu and Bin, 2009; Saleem and Rashid, 2011; Masrek *et al*., 2013; Jannat and Ahmet, 2015; Yu, 2015; Chaudhry *et al*., 2016; Arcand *et al*., 2017; Bankole *et al*., 2017; Berraies *et al*., 2017; Johannes *et al*., 2018). However, most of the studies did not combine both factors when examining their effect on trust. Given this background, a study was undertaken with the aim of examining the impact of perceived quality and perceived credibility on trust and satisfaction.

Table-1. Past Studies of Mobile Banking (MB) Trust and Satisfaction

Authors	Aim of the Study	Research Method & Setting	Main Findings Related to Trust and Satisfaction
Chu and Bin (2009)	To reveal the mechanisms associated with the initial formation of people's trust in mobile banking and intention to use the service	Survey; Questionnaire; 313 MB consumers in China	Online trust positively influences initial trust in MB and customers' perceived structural assurance of mobile banking. And customers' previous satisfactions with online banking have positive effects on initial trust.
Saleem and Rashid (2011).	To identify the key factors of MB satisfaction	Survey; Questionnaire; 150 MB consumers in Pakistan	Customer's concerns about security, authenticity and reliability are significant predictor MB satisfaction.
Masrek *et al.* (2013)	To examine the role of technology trust on MB satisfaction	Survey; Questionnaire; 312 MB consumers in Malaysia	Technology trust comprising network, website and mobile phone are significant predictor of satisfaction
Yu (2015)	To investigate the connection amongst antecedents, dimensions, and consequences of trust in MB	Survey; Questionnaire; 247 MB consumers in Taiwan	Situational normality, structural assurance, knowledge-incurred trust, personal-incurred trust, and calculative-incurred trust considerably affect trust belief in MB
Jannat and Ahmet (2015)	To identify the key determinants of MB satisfaction	Survey; Questionnaire; 200 MB consumers in Bangladesh	Transaction speed, security & trust, ease of use, accuracy of transaction, system availability, responsiveness, convenience and cost effectiveness are the most influential factors for customer satisfaction
Chaudhry *et al.* (2016)	To identify the determinants of trust in MB	Survey; Questionnaire; 120 students who were MB users in Pakistan	Service quality, system quality, reputation and perceived credibility exert significant positive effects while perceived financial cost exert significant negative effect on Users' Trust.
Bankole *et al.* (2017)	To examine factors influencing MB adoption	Survey; Questionnaire; 220 MB consumers in South Africa	Trust and utility expectancy are a significant determinant of satisfaction
Arcand *et al.* (2017)	To investigate the multidimensional concept of MB service quality and the impact on the quality of the relationship	Survey; Questionnaire; 375 MB consumers in Canada	Trust is associated with security/privacy and practicity (regarded as utilitarian factors), while commitment/satisfaction is driven by enjoyment and sociality (dimensions more hedonic by nature)
Berraies *et al.* (2017)	To examine the effect of the perceived values of MB applications on customers' e-trust, e-satisfaction and e-loyalty	Survey; Questionnaire; 361 MB consumers in Tunisia	Quality, price and emotional perceived values' dimensions of MB applications are predictors of customers' e-trust. E-trust has positive effects on e-satisfaction and e-loyalty.
Johannes *et al.* (2018)	To analyze the influence of usability, customer satisfaction, customer service and trust towards MB user loyalty	Survey; Questionnaire; 200 MB consumers in Surabaya Indonesia	Usability and customer service are significant predictor to both satisfaction and trust

Source: Researchers' Own Compilation

2. LITERATURE REVIEW

2.1. MB in Malaysia

Over the last decade, internet banking and MB in Malaysia has advanced rapidly due to the unprecedented proliferation of a wide range of smart devices. As compared to other countries in Southeast Asia, Malaysia have the highest Internet penetration rate, and this could be another reason contributing to this remarkable development. The statistics released by the central bank of Malaysia or Bank Negara (Malaysian National Bank, 2018) showed that as of March 2018, there were about 26.6 million internet banking subscribers (i.e. 25.6 million individual subscribers and 1.0 million corporate subscribers) equivalent to 83.1% penetration to total population. In contrast, as of March 2018, the total number of MB subscribers was 12.35 million, equivalent to 38.5% penetration to population or 29.1% penetration to mobile users.

2.2. Past Studies of MB

Table 1 presents the summary of past studies on MB that focused on trust and satisfaction. From the methodological perspective, all of these studies were using survey research method with a questionnaire as the data collection technique. The findings indicate that, various factors are associated to increased trust and satisfaction. These factors are mainly revolve around attitudinal beliefs about the MB service characteristics such as network quality, website quality, smart devises quality, ease of use, accuracy of transaction, system availability, responsiveness, convenience, cost effectiveness etc.

3. THEORETICAL FRAMEWORK

Figure 1 presents the theoretical framework of the study. Satisfaction (CS) is defined as the extent to which users are pleased with the MB services because their MB needs and expectations are fulfilled by the MB service provider. According to Dahlberg *et al.* (2008) trust (TR) in MB means, the users will use mobile terminals to performed bank transaction such as online payment and any other purposes (e.g. balance inquiries, bill payments and transference) at any time and from anywhere. However, in this study, TR in MB is defined as the belief and conviction that the banking transactions through mobile gadgets such as mobile phones are reliable and dependable.

Information quality (IQ) and systems quality (SQ) are two important measurements of information systems success (Delone and Mclean, 1992). Many researchers have used these two variables when assessing the effectiveness of an information system (e.g. (Masrek, 2007; Masrek *et al.*, 2010; Samadi and Masrek, 2015). Given that MB systems is also an information system, these two variables are also appropriate to be used in this study. Roca *et al.* (2006) and Ramayah and Lee (2012) when studying adoption and post adoption of e-learning systems, defined quality as comprising of three dimensions, namely, IQ, SQ and service quality. Namahoot and Laohavichien (2015) also defined perceived quality as consisting of IQ, SQ and service quality in the context of online banking. Hence, adapting from the models by Roca *et al.* (2006); Ramayah and Lee (2012) and Namahoot and Laohavichien (2015) this study defined perceived quality (PQ) as a variable made of two dimensions which are IQ and SQ. IQ is operationally defined as the extent to which users believe that the information provided by the MB systems met their information needs and expectations which are measured in terms of comprehensiveness, completeness, up-to-dateness, formatting and appearance. SQ is defined as the extent to which users believe that the MB systems is reliable, accessible, promptly, efficient and effective.

According to Wang *et al.* (2003) perceived credibility (PC) of the MB service is the extent to which a user believes that the use of MB will have no security or privacy threats. In light of this definition, this study operationalized PC as comprising of two dimensions, which are, security (SE) and privacy (PR). SE is defined as the belief that the MB systems provide a very effective control to protect and safeguard the information of the MB users. On the other hand, PR is defined as the belief that the information of the MB users is not manipulated and exploited for monetary gains or other benefits by the MB provider or other inappropriate parties.

Both PQ and PC are two important variables in developing user trust and satisfaction. Studies have shown that PQ is significantly related to trust (Lee and Chung, 2009; Namahoot and Laohavichien, 2015; Chaudhry *et al.*, 2016) and satisfaction (Chung and Kwon, 2009; Lee and Chung, 2009; Jaafreh, 2017). When the users believed that the information provided by the MB services met their expectations and requirements, their trust and satisfaction level will increase. In the same light, when the users believed that the MB systems was always accessible, very user friendly, promptly, efficient and effective, their trust and satisfaction level will also be positively affected. This belief will also translate into believing that the MB services are very credible. To this effect the following hypotheses are established:

H1: PQ has a significant relationship with TR

H2: PQ has a significant relationship with CS

H3: PQ has a significant relationship with PC

The effect of trust on user satisfaction is also shown in previous studies (Lee and Chung, 2009; Masrek *et al.*, 2013; Bankole *et al.*, 2017; Ofori *et al.*, 2017). The study by Masrek *et al.* (2013) focusing in technologies used in MB showed that the network, the websites and the mobile phones jointly predict user satisfaction. As explained by Masrek *et al.* (2013) trust in MB is not confined only to technology but also covers the service provider or the institution. The manifestation of user trust is normally translated in the form of increased usage of the MB services, which in turn affect the level of satisfaction. However, Ofori *et al.* (2017) found that trust has a direct relationship with satisfaction. On the basis of this argument, the following hypothesis is put forward:

H4: Trust has a significant relationship with satisfaction

Many studies done globally showed that majority of MB users are very concerned with the safety of their money kept in the bank (Susanto *et al.*, 2013; Gao *et al.*, 2015; Firdous and Farooqi, 2017). These studies also suggest that users are equally concerned with their personal information given to and stored by the banks. Recent study by Asian Institute of Finance (2016) involving Malaysian banking consumers revealed that 50% of the respondents did not feel safe with the data kept in mobile devices. Gao *et al.* (2015) found that security and privacy concern has a negative relationship with trust and satisfaction. In other words, when users perceived that the MB services as highly credible, their trust level and satisfaction will also increase (Susanto *et al.*, 2013; Firdous and Farooqi, 2017). Drawing upon the findings of these studies, the following hypotheses are developed:

H5: PC has a significant relationship with TR

H6: PC has a significant relationship with CS

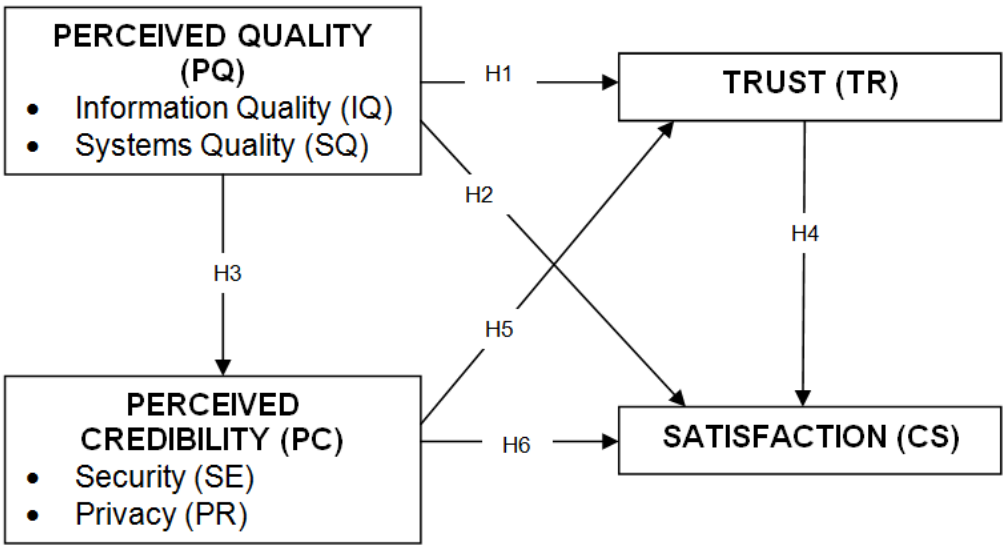

Figure-1. Theoretical Framework

Source: Researchers' Own Model

4. RESEARCH METHODOLOGY

The study used a survey research method with a questionnaire as the data collection instrument. The questionnaire was developed by adapting the instrument that had been used by previous studies (Yousafzai *et al*., 2003; Roca *et al*., 2006; Masrek *et al*., 2013). The first draft of the questionnaire comprised a total of 36 items, with the following breakdown: IQ (10 items), SQ (8 items), SE (5 items), PR (4 items), CS (5 items) and TR (4 items). For each item, a Likert scale of five anchoring was used. The respondents were required to indicate the extent which they agree or disagree with the items by ticking the Likert scale labelled as 1= "strongly disagree", 2= "disagree", 3 = "undecided", 4 = "agree" and 5 = "strongly agree". The questionnaire was pre-tested with several experts and prospective respondents. Feedback obtained from the exercise was used to revise and refine the questionnaire.

Since it is quite impossible to obtain the list of MB users in Malaysia, the study used convenient sampling for collecting the research data. Memon *et al.* (2017) and Hulland *et al.* (2018) explained that the use of non-probability sampling is considered appropriate when the intent of the study is to test theory developed to reflect the phenomenon. A total of 500 questionnaires were distributed to users who were easily accessed by the researchers. A total of 412 questionnaires were returned, yielding to a response rate of 82.4%. During data cleaning, 47 questionnaires had to be removed because more than 20% of the questions were not answered.

This study used Structural Equation Modelling (SEM) for analyzing the research data. SEM analysis involves two steps, the assessment of measurement model and followed by the assessment of the structural model. Measurement model in SEM is of two types, namely reflective model and formative model. In this study, a formative measurement model was used. In SEM analysis the measurement model is assessed in terms of convergent validity and discriminant validity. The convergent validity is concerned with how related are the items in measuring the constructs while discriminant validity refers to the degree to which items differentiate across constructs. The hypothesized relationship amongst constructs are normally analyzed through structural model. The steps involve in assessing the structural model are (i) assessment of collinearity issues (ii) assessment of the significance and relevance of structural model relationship (iii) assessment of the coefficient of determination (R^2) (iv) assessment of effect size (f^2) and (v) assessment of predictive relevance (Q^2).

5. FINDINGS

5.1. Common Method Bias Assessment

According to Podsakoff and Organ (1986) common method variance could be a major problem and a threat to the validity of the results. To ascertain whether such threat is present in the dataset, the Harman's single factor test was executed. All items from all constructs under study were entered for analysis and constrained to a single factor and the results showed that the single factor explained only 29.8% of the total variance. The results suggest that the collected data is free from the threats of common method variance.

5.2. Demographic Profiles of Respondents

Table 2 showcases the demographic information of the respondents. Between male and female, the later outnumbered the former. The male respondents made up 35.9% while female respondents were 64.1%. In terms of age, the majority were aged between 20 and 30 years old (79.5%). 69.6% respondents indicated that they were single, while 30.1% admitted that they were already married. Education wise, 59.2% indicated that they have a university degree while 4.4% and 2.5% only obtained O level and A level respectively. The majority (40.8%) of the respondent were working in the private sector.

Table-2. Respondents' Demographic Information

		Frequency	Percentage
Gender	Male	131	35.9
	Female	234	64.1
Age	20-30	290	79.5
	30-40	48	13.2
	40-50	18	4.9
	50 & above	9	2.5
Marital Status	Single	254	69.6
	Married	110	30.1
	Other	1	0.3
Highest Education	SPM / O Level	16	4.4
	STPM / A Level	9	2.5
	Diploma	70	19.2
	Degree	216	59.2
	Master	53	14.5
	PHD	1	0.3
Working Status	Government	57	15.6
	Private	149	40.8
	Own business	9	2.5
	Unemployed	9	2.5
	Student	141	38.6

Source: Researchers' Own Findings

5.3. Measurement Model

Table 3 presents the results of the convergent validity assessment of the measurement model. The criteria used for assessing convergent validity are factor loading, composite reliability (CR) and average variance extracted (AVE). The literature suggest that the factor loading should be above 0.700 but under certain circumstances values of 0.4, 0.5 and 0.6 are acceptable (Ramayah *et al.*, 2018). The recommended values of CR and AVE are 0.7 and 0.5 respectively. The results as depicted in Table 3 suggest all of these criteria are fulfilled, hence, suggesting that convergent validity can be assumed.

Table-3. Convergent Validity Assessment

		Factor Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Satisfaction	CS1	0.811	0.907	0.71
	CS2	0.852		
	CS3	0.880		
	CS4	0.827		
Perceived Quality	IQ5	0.787	0.916	0.578
	IQ6	0.777		
	IQ7	0.789		
	IQ8	0.814		
	IQ9	0.784		
	SQ4	0.700		
	SQ5	0.709		
	SQ6	0.714		
Perceived Credibility	PRI1	0.832	0.908	0.586
	PRI2	0.757		
	PRI4	0.747		
	SEC1	0.773		
	SEC2	0.821		
	SEC3	0.782		
	SEC4	0.629		
Trust	TST1	0.755	0.908	0.713
	TST2	0.905		
	TST3	0.857		
	TST4	0.854		

Source: Researchers Own Findings

Following the convergent validity assessment, a discriminant validity was performed using the Fornell and Larcker (1981) criteria which requires that the square root of the AVE of a construct should be larger than the correlations between the construct and other constructs. The results as shown in Table 4 clearly suggest this criteria is also met, implying that discriminant validity of the model can be assumed. The SmartPLS output of the measurement model is shown in Figure 2.

Table-4. Discriminant Validity Assessment

	Perceived Credibility	Perceived Quality	Satisfaction	Trust
Perceived Credibility	0.766			
Perceived Quality	0.617	0.760		
Satisfaction	0.637	0.665	0.843	
Trust	0.733	0.573	0.671	0.845

Source: Researchers Own Findings

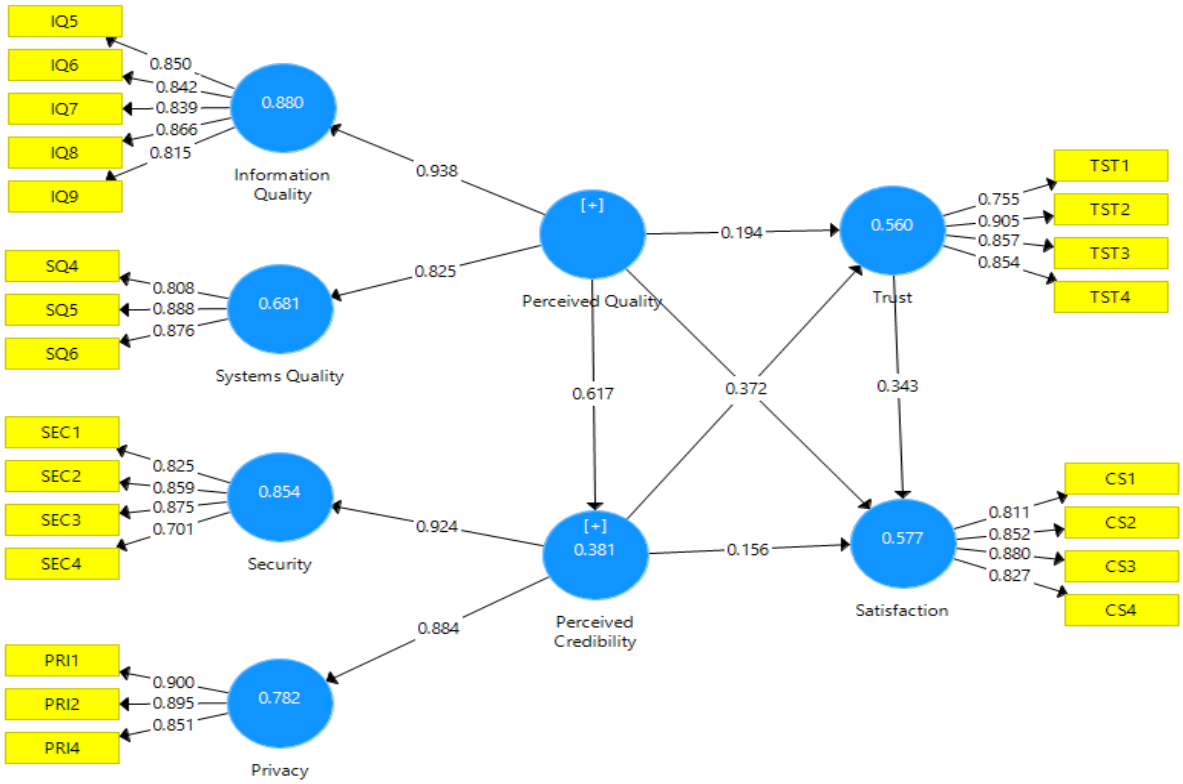

Figure-2. SmartPLS output of the Measurement Model

Source: Researchers Own Findings

5.4. Structural Model

Figure 3 presents the SmartPLS output of the structural model while Table 5 indicates the VIF values of the structural model. Diamantopoulos and Siguaw (2006) noted that VIF value of 3.3 or higher indicate potential collinearity problem. As shown in Table 5, none of the VIF values surpasses 3.3, suggesting that there is no collinearity issue in the structural model.

Table 6 presents the results of the hypothesis testing. Both PQ ($\beta = 0.194$, $p < 0.01$) and PC ($\beta = 0.613$, $p < 0.01$) are found to have significant relationship with TR. With these results, both H1 and H5 are fully supported. The R^2 for TR is 0.560, surpassed the recommended value of 0.30 by Cohen (1988). PQ ($\beta = 0.372$, $p < 0.01$), TR ($\beta = 0343$, $p < 0.01$) and PC ($\beta = 0.156$, $p < 0.05$) are also found to have predicting power towards CS. The combination of these three variables jointly explained 57.7% variance in CS ($R^2 = 0.577$). Given these results, H2,

H4 and H6 are supported. PQ (β = 0.617, p < 0.01) is also found to have predictive effect on PC. PQ by itself explains 38.1% variance in PC. Drawing upon this result, H3 of this study is also supported.

Table-5. Collinearity Assessment Results

	IQ	PC	PQ	PR	CS	SE	SQ	TR
Information Quality (IQ)								
Perceived Credibility (PC)				1	2.468	1		1.615
Perceived Quality (PQ)	1	1			1.701		1	1.615
Privacy (PR)								
Satisfaction (CS)								
Security (SE)								
Systems Quality (SQ)								
Trust (TR)					2.273			

Source: Researchers Own Findings

According to Cohen (1988) f^2 value of 0.35, 0.15 and 0.02 are considered large, medium and small effect sizes respectively. Out of the six hypothesized relationship, four are found to have either small of medium effect size. However, the relationship between PQ and PC is found to have big effect size. Similarly, the relationship between PC and TR is also having big effect size, which implies that while H3 and H5 are supported, further scrutiny is deemed necessary.

As suggested by the literature, it is also crucial to examine the predictive relevance of the structural model, and this is done using the Stone and Geisser's Q^2 (Geisser, 1974; Stone, 1974). The results indicate that Q^2 for TR is 0.375, Q^2 for CS is 0.383, while Q^2 for PC is 0.208. All of these values are well above zero, indicating that the model has predictive relevance.

Overall, the findings of this study is almost comparable to past studies described in the literature review sections i.e. Chu and Bin (2009); Saleem and Rashid (2011); Masrek *et al.* (2013); Yu (2015); Jannat and Ahmet (2015); Chaudhry *et al.* (2016); Bankole *et al.* (2017); Arcand *et al.* (2017); Berraies *et al.* (2017); Johannes *et al.* (2018).

Table-6. Hypothesis Testing

	Std Beta	Std Error	t Value	Decision	f^2
H1: Perceived Quality → Trust	0.194	0.056	3.502**	Supported	0.053
H2: Perceived Quality → Satisfaction	0.372	0.051	7.232**	Supported	0.193
H3: Perceived Quality→Perceived Credibility	0.617	0.035	17.52**	Supported	0.615
H4: Trust →Satisfaction	0.343	0.064	5.372**	Supported	0.123
H5: Perceived Credibility → Trust	0.613	0.047	13.081**	Supported	0.528
H6: Perceived Credibility →Satisfaction	0.156	0.066	2.372*	Supported	0.023

* p < 0.05 ; ** p < 0.01

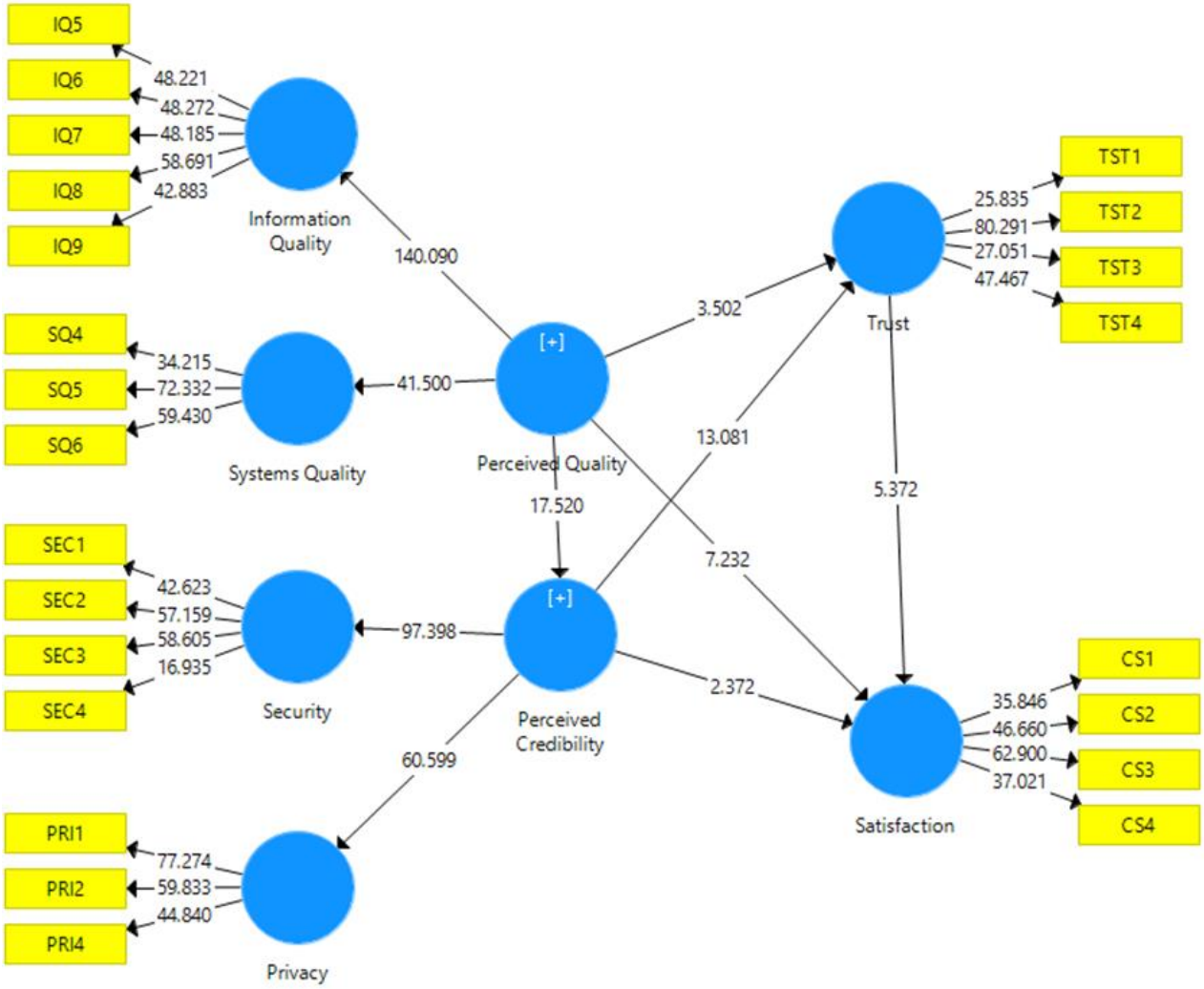

Figure-3. SmartPLS output of the Structural Model

Source: Researchers Own Findings

6. DISCUSSION

The objective of this study is to examine the impact of PQ and PC on TR and CS. In addition is it also aimed at examining the relationship between PQ and PC and between TR and CS. These two research objectives were translated into six hypotheses. The results of the analysis clearly showed that the relationship between PQ and TR; between PQ and CS; between PC and TR; between PC and CS; between PQ and PC; and between TR and CS were found to be significant. As suggested by our proposed model, CS should develop when PQ, PC and TR are well addressed. In the same light, in order to develop TR, focus should be given in addressing PQ and PC. Finally, in an attempt to enhance PC, effort should be made to promote PQ.

In this study, PQ consists of IQ and SQ. IQ is concerned with users' assessment of the MB in terms of its information comprehensiveness, completeness, up-to-dateness, formatting and appearance. Incomplete and outdated information will results in users losing their patience as they have to seek additional information from other sources. Similarly, when the information is not presented in the most appropriate format and appearance, users will have difficulty in having smooth interaction with the MB services.

SQ examines the aspects of reliability, accessibility, promptness, efficiency and effectiveness of the MB services. Reliability relates to the MB services performing its task without any failure. Accessibility refers to the MB services that are accessible by the users from anywhere and at anytime. Promptness means the MB services are delivered instantaneously and without any delay. Efficiency means minimum effort or energy is required in order to get the MB services. Effective is concerned with the accomplishment of users' objectives in engaging with the MB services.

Both SE and PR have always been the major concern for all MB users. The growing reports of virus, malware and spyware attacks as well as the threats of phishing and third party software or applications make the users become more worry on the safety of their financial information. Wei and Yanling (2010) stated that mobile devices have low computational capacity which makes it unable to apply complex cryptographic system. Because of this reason, it makes the mobile devices vulnerable to various forms of attacks. To this effect, MB service provider must always make sure that appropriate mechanism and controls are in place to safeguard and protect the MB services from any forms of attacks.

7. CONCLUSION

7.1. Contribution of the Study

The contribution of the study can be described from two perspectives, namely, theoretical and managerial. Many researchers already examined the inter-relationship of the variables as shown in the theoretical framework, prior to the conduct of this study. However, past studies while arguing that PQ as comprising of IQ, SQ and service quality did not analyze them as second order model. In the same light, past researchers while arguing that PC as having two dimensions which are SE and PR, did not treat their model as second order during data analysis. Unlike previous studies, our study used second order for both PQ and PC during our analysis. Hence, from the theoretical perspective, this is our significant contribution.

From the managerial perspective, the instrument used in the study can be a diagnostic tool for assessing the MB services, especially on the websites. MB provider can use the instrument to assess their MB effectiveness. This exercise can help to identify areas that require improvements and enhancements. At the same time, they can also measure the level of their customer satisfaction, which is considered as one of the most important indicator of business performance.

7.2. Limitation and Future Studies

Similar to many other studies, this study has several limitations which create opportunities for future researches. As shown in the literature review (Section 2) of this paper, there are many other factors that may affect trust and satisfaction. Among them are the service quality, usability and individual traits. These variables can be examined along with the PQ and PC. In addition, future studies should also consider integrating moderating variables such as length of MB usage or internet efficacy. Combining moderating variables would further strengthen accuracy of the model in representing MB trust and satisfaction.

Another limitation of the study is that the sample size may not be adequate for doing Structural Equation Modelling. In this study, there are six constructs with 23 items. Soper (2018) suggested that for a model consisting six constructs with 23 items (i.e. observed variables) the ideal number of sample size would be 742. Therefore, any researcher who intends to replicate this study should increase the number of respondents to be at least 742.

The time horizon of the data collection for this study was cross-sectional while the instrument used was perceptual measurement. Human perception by its nature changes over time. The same respondents who involved in this study would definitely respond differently in case when data are to be collected again from them. So instead of collecting data at a single point in time, future researcher should consider adopting longitudinal study which will provide better understanding of the causality and the interrelationships between variables.

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