

CONSUMER SATISFACTION AS A MEDIATOR IN THE RELATIONSHIP BETWEEN COSTS AND PERFORMANCE OF E-BANKING LANDSCAPE IN MALAYSIA

Shairil Izwan Taasim

Remali Yusoff

Faculty Of Business, Economics And Accountancy

University Malaysia Sabah

cheril.com@gmail.com

ABSTRACT

This paper aims to determine the relationship cost of transaction in influence performance e-banking by address the role of satisfaction of systems as a mediator. A total 470 self-administered questionnaire were obtained from responded through convenience sampling in November 2014 until February 2015 whole of Malaysia. The result indicated that positive and significant moderating effect on relationship between independent variable and dependent variable. Direct effect showed that cost is significant to influence performance 0.79 but it's decrease to 0.58 when introduction of moderating satisfaction of system as indirect effect. This research to develop the cost of transaction effect the performance of e-banking in Malaysia and there are some of cost using e-banking should be re-consider to encourage society using e-banking as a new method in payments system.

Keywords: cost of transaction, e-banking, performance, innovation

1.0 INTRODUCTION

Assessment of the technology involving finance is dependent on the cost to the consumer like the existence of e-banking in the Malaysia financial landscape one decade ago. According to Williamson (1981), users would choose the method of transaction that is economical to them. Based on Liao and Cheung's (2002) study, rapid growth of commercial banks is due to the existence of technologies that create new products, services, market opportunities and development-oriented information systems and business process management. Blake et al. (2005) of various causes leading to the ephemeral to the e-banking applications used and this requires a study to evaluate causes of retention continues to use it. Delone and Mclean (2003) mentioned that the system is highly dependent on user satisfaction with the quality of information and system. Overall, the main problem is focused on the study on the role of satisfaction as a mediator on the costs and performance of e-banking using applied by users. E-banking application creates a visible cost for each usage and it is necessary to assess the direct contact with the existence of a mediator in assessing the performance of e-banking. There are good reasons to expect that e-banking will spread expeditiously and have a great impact on banks' performance.

2.0 LITERATURE REVIEW

Malaysia developed finance instruments from conventional to virtual banking supported by Central Bank of Malaysia after allowing banking system to implement e-banking in early 2001. To analyze the acceptance and performance of retail e-banking in Malaysia, Technology Acceptance Model (TAM) is one of the early methods to analyze innovation in technology. For this research, three indicators between cost and performance will be evaluated to finalize Malaysian respondents' level of performance and acceptance of e-banking. This is based on the studies by Williamson (1981) and Murillo et al. (2010), who argued that cost is significant to users' acceptance in banking system.

Instruments that do not involve cash payments in Malaysia were in an inconsistent state from 2008 to 2012 by 74.1% (2008) and decreased to 71.8% (2012). On the other hand, payment network has increased from 7.0% to 13.1% for 2008 and 2012 (Malaysia financial stability and payment systems Report, 2013). There are three items that relate to financial change, namely transaction cost, as well as users' performance and satisfaction. Based on a study by Thiruchelvam et al. (2013; 45), cost factors, lack of skills, lack of information on technology and market appropriateness to intervene are important factors that hinder innovation. Consumer always have high intention to choice whether e-banking or convention for each of this method more economical to them. Therefore, the purpose of this study to assess the performance in terms of cost and user satisfaction with an alternative payment method, which is more economical to the consumer.

Performance

The aim of this study was to evaluate the performance of the application of cashless transactions using mobile banking in Malaysia through technological assessment in the economy. Assessment of the technology is a measure of the sustainable development, management of technology and facilities in the view of the system. Previous studies discussing acceptance of electronic banking in Malaysia are relatively low and provide different factors influencing the decision of users to change the method of transaction (Yeoh and Benjamin, 2011; Suganthi & Balachandran, 2001; Quinine, Lim & Wee, 2005; Lichtenstein & Williamson, 2006; Ndubisi and Sinti, 2006; Khalil & Pearson, 2007; Huam et al., 2008; Yee et al., 2009; Onar, Aktas & Topcu, 2010; Mohamad et al., 2007). However, there are no studies that show the actual performance landscape of e-banking users in Malaysia. Therefore, it is necessary to evaluate the factor costs by consumers using e-banking because consumers always react to the costs they incurred (Williamson, 1981). Report from Financial Sector Blueprint 2011-2020, leading to a rise in e-payments for the performance level of competitiveness of Malaysia is a good indication of its ability to support development in diversifying payment instruments. Melek et al. (2010) in their study in Turkey using multiple regression correlation found high consumption by households of family groups in the use of online banking. As a developing country, the Malaysian finance e-

banking landscape has a big potential although user's register is higher but the number of active users is still low (BNM, 2014). This is to say that Malaysia has good information regarding the benefits from e-banking.

Cost

In a culture of innovation, we are bound to see the cost of living in low-income environments and correlate with the pattern of expenditure. Consumers are always required to meet current needs but have restricted finance ability. Meanwhile, cost of living is not the only thing about the increase of salaries and wages for certain sectors or positions, as well as the determination of minimum wages in a sector. Cost of living also actually tells us about the rank of development in the local communities that live in the environment of a cost. Consumers will choose method of payments which more economical because budget constraints in economical unstable. So consumers always managing their finances more wisely and systematically. A study conducted by Gathergood (2012) in the United Kingdom found that the problem of individual bankruptcy and financial constraints is due to a lack of proper financial management skills and inability to control expenses. According to Murillo et al. (2010), adapting new technology virtually can reduce costs for bank customers in conventional bank branches. Previous studies mention skills of finance not only to manage the finance but the environment of landscape finance influence the consumer to take opportunity and make choices which are more economical to them, (Gathergood, 2012).

Satisfaction

Baron and Kenny (1986) refer to the confounding factor of three variables that explain independent and dependent variables. Zainuddin's (2014) equation with the existence of mediator of the variables has a direct significant impact on perceptions. Benefits from the continuous use of self-service technology systems may vary depending on the content of self-service systems, or content services with business expectations for continued use. Similarly, involvement and loyalty incorporated into the model (Wang, Pallister and Foxall, 2006b) can provide a response to the convenience and usability as seen in how the users decide (Kucuk and Krishnamurthy, 2007). Refer to the satisfaction acts as a mediator with the performance assessment indicators of mobile banking. After the structure has been evaluated and reached the level of the minimum requirements, structural equation model interpretation can be made based on theoretical foundations (Urbach & Ahlemann, 2010).

3.0 METHODOLOGY

The statistical analysis gives an overview of the demographic profile of the respondents involved in the research. Based on the analysis, the level of response was 58.75% (470 responses) of 800 questionnaires distributed in 2015. There are three methods of questionnaires distributed, namely through email using KwikSurveys online questionnaire, as well as using mail and face-to-face interviews. The existence of diversity in transaction costs is reduced in the study by looking at the costs of the transaction. These costs refer to the costs incurred by users when using online transactions.

Therefore, research questions and hypotheses are given as follows:

Question 1 : Does cost give impact on performance e-banking in Malaysia?

Hypothesis H1: Cost has a positive impact on performance of e-banking in Malaysia.

Questions 2 : Will satisfaction reduce impact of cost on performance as a significant mediator?

Hypothesis H2: Satisfaction is significant mediator between cost and performance.

Hypothesis H3: Mediator will significantly reduce value directly on model.

4.0 RESULT AND DISCUSSION

To show the effects of satisfaction as a mediator of the system's users, it is developed in the model to demonstrate the indirect effects of these indicators. Henseler et al.'s (2009) evaluation of direct and indirect effects of exogenous and endogenous latent variables is important in the evolution of model structure. Mediator effect is only for significant indicators in the model. Model prefix makes it easy to see the direct effects of cost and performance of e-banking as shown in Figure 1.

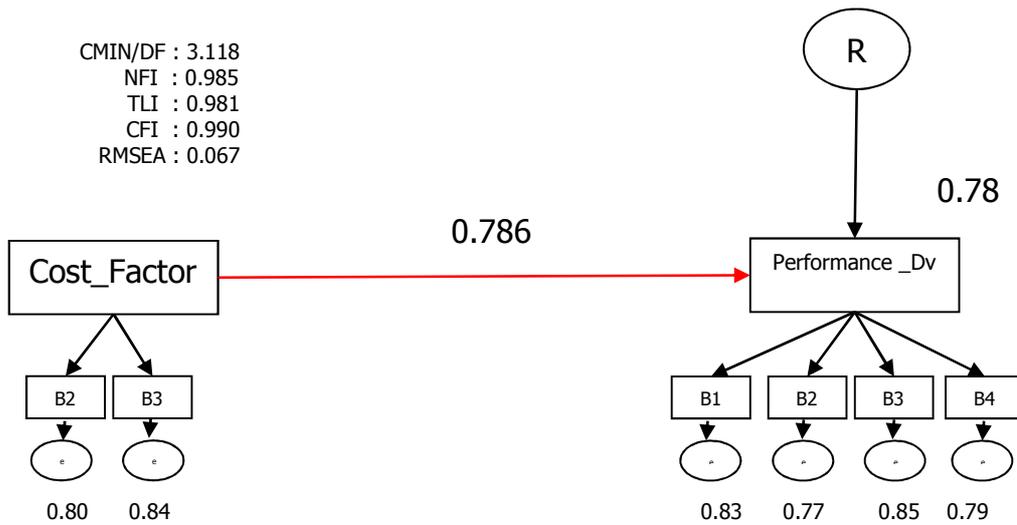


Figure 1: Model Structure Effects on Performance Direct Costs

Figure 1 shows the direct impact of the cost as an independent variable and performance of e-banking as the dependent variable. Suitability analysis model obtained meets the minimum requirements recommended by Hair et al (2010) based on the three indices on which the RMSEA (0.067 < 0.08); CFI (0.99), TLI (0.981) and NFI (0.985) approaches 1. The loading of items is above the minimum level previously discussed, namely larger than 0.6 is acceptable. Results of the analysis coefficient ($\beta = 0.786$, $p < 0.001$; $CR < 1.96$) indicate that cost is a factor that contributes significantly to the performance level of e-banking at the significance level of 0.001. When there is a mediator in the model, analyzing the impact of mediators is known as the indirect impact assessment model as shown in Figure 2.

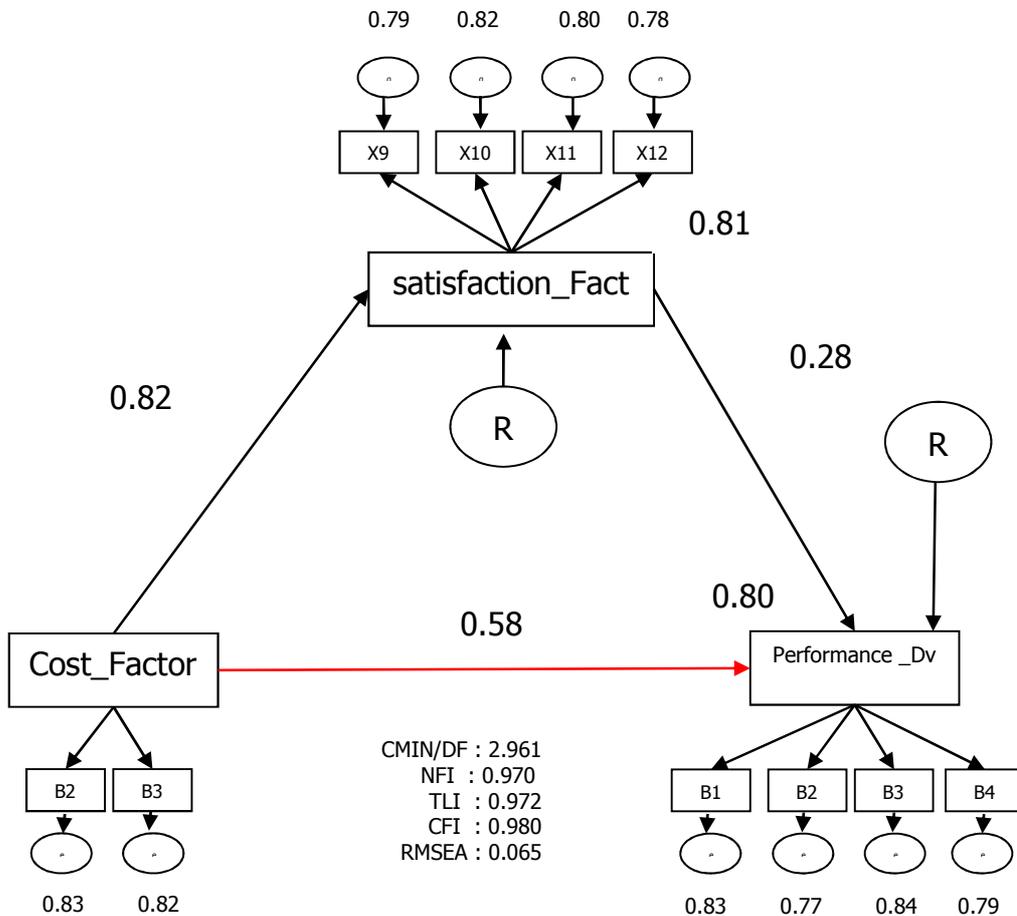


Figure 2: Model Structure to Construct Latent Mediator

When a intervention the effects of mediators, index model in the study met the minimum requirements which value RMSEA (0.065 < 0.08), the CFA, TLI and NFI approaches 1, while the loading is greater than 0.6. It shows that the model in Figure 2 is good and capable of achieving the goals of the study. The results of the analysis of the beta is significant direct and indirect effects of three latent constructs with the cost ($\beta = 0.58$, $p < 0.001$; CR < 1.96), the cost of satisfaction ($\beta = 0.82$, $p < 0.001$; CR < 1.96); satisfaction with performance ($\beta = 0.28$, $p < 0.05$; CR < 1.96). From the analysis, it was found that the beta coefficient for the cost of performance reduced from 0.786 to 0.58, which shows a reduction of the direct impact when there is a mediator in the model. The mediator type known as 'partial mediation' as a direct effect of the performance is a significant cost to construct the latent satisfaction after entering thought the beta coefficient, which decreased from 0.786 to 0.58.

The results of the analysis in Figure 1 shows that the cost could provide significant value directly on the performance of e-banking and the significant impact indirectly on the performance of e-banking through latent constructs satisfaction. To test whether the satisfaction of the system as a mediator between the cost and performance of e-banking is significant mediator in research question 2, will satisfaction reduce impact of cost on performance as a significant mediator?. Indirect impact is 0.2296 (0.82 x 0.28), which is lower than the direct effect of 0.58. The study concludes that the satisfaction of the system is not a mediator in the relationship between cost and performance of e-banking. This type is known as a partial mediator because the direct and indirect effect is significant. As for the effect size in the trajectory model that explains variance mediator who donated the model in which every impression r^2 for the effects of direct and indirect effects. According to Cohen (1988), effect size is represented by the narrow range of 0:13, 0:13 to 0:26 range in the medium and large range of 0:26.

R^2 values to measure intermediate effects in mediators which are measured by: -
 $R^2 = r^2$ (Mediator) - [r2 (indirect effects) - R^2 (direct effect)]
 $R^2 = 0.72 - (0.786 - 0.78) = 0,714$

According to Cohen (1988,) the intermediate effects mediator (satisfaction) in the relationship between cost and performance is in a big range. The analysis shows that the introduction of satisfaction as mediator increases R^2 value from 0.78 (78%) to 0.80 (80%).

Baron and Kenny (1986) used Sobel test to test whether the mediators had an impact on IV to DV. Assume that DV and mediators are continuous variables. If one or more of the data is dichotomous data then there are problems in scaling regression.

Table 3: Result of Sobel Test (Z Value)

	Path	Path coefficient	Standard Error	Type of Mediation	Z	Result
Path a	Cost> Satisfaction	0.830	0.051			The relationship between cost and performance is a significant mediator (p<0.01)
Path b	Satisfaction>Performance	0.854	0.053			
Path c'	Cost> Performance	0.786				
Path d	Cost>Satisfaction> Performance	0.581		Partial	11.45	

Sobel test was used to test the significant relationships in the study. Table 3 shows a summary of the direct and indirect effects on the model of the structure. According to the table, cost and performance is a significant mediator with satisfaction construct. Z value is greater than 1.96, which explains that satisfaction (z = 11:45, P < 0.001) is a significant mediator. As concluded in the research, this method can help users to possess more money and enjoy the real value of money. E-banking methods will reduce the indirect costs borne by consumers. Research acceptance three research hypothesis where cost is positive significant in influence performance e-banking Malaysia and satisfaction is partial mediator that will be reduce direct effect cost and performance.

5.0 CONCLUSION

This study provides an insight into the customers' needs, which may be useful to bankers in providing better services to their clients from the customers' point of view. Our research concluded that cost is most significant to participants in e-banking as an alternative for them in financing management. Certainly, increase in productivity will correspond to decrease in cost because some of the costs, especially transportation and waiting in counter are removed as part of their cost.

In addition to looking at the cost to the consumer in e-banking transactions, the cost of internet applications must be focused on. Although the study only focused on transaction costs through increased user productivity in reducing the cost of the expenses incurred, the cost of internet medium must be taken into account as an intermediary especially in e-banking. As shown in Table 4, the cost of internet applications on the responsibility of the user varies according to the service provider and the speed of the internet.

Table 4: Cost of Internet Households Malaysia

Provider	Mbps	Cost (RM) – Per month
P1	1	41.34 – 94.34
Streamyx™	1	116.60
Time Fibre	10	129
Astro iptv	10	156.88
Time Fibre	20	179
Time fibre	100	179
Unifi	30	189.74
Maxis	100Mbps	421.88
Time	50	249
Astro iptv	30	262.88
Unifi TV	20	263.94

Source: Intelligent Money Sdn. Bhd., 2015.

Costs incurred for the lowest Mbps per month is in a range from RM40 to RM100. The cost for the highest outstanding Mbps is at RM300-RM500. These costs are higher than in Singapore, which stands at RM252, for 100 Mbps, 1 Mbps for the Philippines at <RM40, Thailand <RM25, where the values are translated to Ringgit Malaysia to be RM3.80. Studies show that transaction costs are significant in affecting performance, which is the result that should be emphasized. To enhance user productivity towards creating an innovative country, costs are the direct and indirect cause that must be noted in enhancing the number of consumers using e-banking.

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