



Relationship between Customer Relation Management Performance and E-Banking Adoption: A Look at Malaysian Banking Industry

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Abstract

This study seeks to identify the relationship between CRM performance and e-banking adoption. CRM performance is the process of value creation which results into the customer behavior intention (retain, repurchase, positive word of mouth), customer satisfaction and loyalty towards the product/brand. Despite of the popular practice of CRM in various industries, and particularly in banking, there is still lack of empirical studies, investigating to what extent the CRM performance influences on e-banking adoption. Hypothesized relationships were tested using survey responses from a sample of 307 lecturers at three public universities located in the northern states of Malaysia. The results which were compared with earlier findings illustrated that CRM performance does offer a positive influence on e-banking adoption and implications for further research were also being discussed.

Keywords: Customer relationship, Management performance, E-Banking, Adoption

1. Introduction

Customer Relationship Management (CRM) is a comprehensive strategy and process of acquiring, retaining and partnering with customers to create superior values for the company and customer (Parvatiyar and Sheth, 2001). Hence, the performance of CRM is defined as the success of creating values for customers through organizations in the objective of increasing the retention, repurchase and word of mouth in order to achieve improvements on relationship qualities. Although CRM has become the in-thing of marketing strategies nowadays, it is unfortunate that many people are still confused about the actual domain of CRM which perceives customer and service providers the act as major players. It is very important to measure the performance of CRM in any organization. Previous researchers believed that CRM performance should be measured ultimately in terms of customer behaviors since they are the underlying sources of current customer values within a firm. Researchers also believed that CRM has the potential to increase future revenue streams associated with them and to those prospective customers (Wang et. al., 2004). Their argument was supported by Grant (1995) who said that the fundamental of CRM is to ensure steady streams of revenue and

maximizations of customer lifetime value or customer equity, which in this case – customer behaviors become strategically significant (Grant & Schkesinger, 1995).

Based on such literature, Kim et al., (2004) proposed that CRM performance evaluation metrics are related to customer relationship strength, sales effectiveness, and marketing efficiency. All the metrics are from the organizational aspect of performance. However, as required by this study, the concept of CRM performance will be based on the customer behaviors since they are the underlying sources of value within a firm. Customer retention, repurchase decision and word of mouth will be chosen as the main indicators for CRM performance, as proposed by Wang et al. (2004).

The consequences of customer relationship management performance (CRM) are the area of studies that generate much interest. To date, the primary focus of research has centered on the impact of customer relationship performance from the perspective of organizations and customers' behavior. From the organization part, previous studies found out that customer relationship management can improve customer data and develop customer-centric (Seeman and O'Hara, 2006; Bose, 2002; Tan et al., 2002; Wells et al., 1999; Berger and Bechwati, 2000; Mithas et al., 2005; Kim et al., 2003). CRM has revealed many aspects that closely resemble the TQM approach since the core focus is on customer, participation and teamwork and also continuous improvement on learning (Curry and Kklou, 2004).

In terms of improving relationships, CRM performance can create more convenience, can closer and endure relationships with vendors, and can also create non market targets and competitors with other market relationships (Gummesson, 2002). In addition, Chang et al., (2005) found out that CRM performance in electronic service can increase internal process efficiency and also improve channel managements and innovations.

From the customer behavior perspective, CRM performance can increase customer loyalty, retention and satisfaction, (Seeman and O'Hara, 2006; Berger and Bechwati, 2000; Mithas et al., 2005; Kim et al., 2003; Fitzgibbon and White; 2005; Winer, 2001). Several systematic efforts have devotedly been done to investigate the impact of customer relationship management performance towards marketing performance (Blattberg et al., 2001; Rust et al., 2000); which can be in the form of customer behavior (Wang et al., 2004). Therefore, it is imperative to investigate the consequences of CRM performance from customer behavior perspectives, since they are the ones who have direct experiences when dealing with the services offered. Due to this, previous studies have validated the success of CRM performance measurement from customer behavior perspectives which is based on satisfaction, brand loyalty; repurchase intention and word of mouth (Wang et al., 2004). Because of this, the present research has chosen to practice the technology of electronic banking adoption in the goal of presenting customer behaviors in order for them to support the services based on their satisfaction, loyalty towards the brand, word of mouth and re-usage intention towards it. In other words, this research has chosen the usage of electronic technology by bank customers as the consequences of CRM performance.

Electronic banking adoption is referred to the variety of electronic banking service usages such as ATM machines, Internet banking, telephone banking and also phone banking services which are developed by certain banks. Rexha et al., (2003) had investigated on the impact of relational plan on the adoption of electronic banking. Respondents were individuals from selected firms including accountants, financial managers, chief financial officers, financial controllers, and financial directors, as they represent key informants in company-bank dealings. They found out that customer satisfaction with banks only affected through indirect adoption of electronic banking. They also argued that the experience of electronic tool usages, obstacles of machine availabilities, convenient services and friendly interface, openness, security, and information updates were among the variables which influences customer decision (Rexha et al., 2003).

Other studies in Portugal, found out that electronic banking customer satisfactions depend fully upon performances on the channel being used. Besides that, customer characteristics and the type of financial operations are also identified as important factors, influencing the process of acceptance (Ptricio L., Fisk R.P. and Cunha, T.F., 2003). In a survey of among more than 2,000 customers of an Austrian online banking, a study was conducted to gain important insights into how customers maintain their trust and loyalty through online banking business. The empirical survey by Floh and Treiblmaier (2006) identified that trust and satisfaction are important antecedents of customer loyalty towards electronic banking services. According to Griffin J (1995), loyalty is geared more on behavior and when a customer is loyal, he or she exhibits purchase behavior. However, in an e-service scenario, loyalty towards services is enough to be defined as an electronic technology adoption in electronic banking services.

Similar to this, Methlie and Nysveen (1999) investigated on the implementation of customer retention strategies from a bank in Norway. Customer satisfaction was found to have the most significant impact on retention and followed by brand reputation, while switching costs and search costs, although significant, had the most minor explanatory power. Their findings indicated that the adoption behavior or loyalties on online banking environment were similar to those in the physical market-place. This study also proves that customer satisfaction which represents CRM performances are very important attributes for e-banking adoption. Moreover, in a study by Sathye (1999) he had practically investigated the adoption of Internet banking by using through Australian consumers himself. The purpose was to analyze the factors affecting the adoption of internet banking by Australian consumers. The samples for their surveys were drawn mostly

from individual residents and business firms from Australia. Their findings also showed security concerns and lack of awareness about Internet banking while the benefits of it appeared to be some of the obstacles to the adoption of Internet banking in Australia. If we compare this finding with the concept of customer satisfaction, it shows that security and benefit issues are very important factors in order to achieve full satisfaction from customers. Customers tend to be less satisfied if such services appear to have less security and benefits to them. This situation indirectly gives a negative impact on the practice of e-service adoption.

Past research suggested that customer behavior in adopting electronic banking should consider other possible factors derived from literature. This review shows the possibilities of proposing CRM performances as the preceding factors for e-banking adoption behavior among banking customers. On this reason, e-banking adoption was chosen as the prime result of CRM performances in this research. Therefore, the main objective of this paper is to investigate the relationship between CRM performance and e-banking adoption.

2. Methodology

2.1 Research framework

The framework for this empirical research is illustrated in Figure 1.

2.2 Sampling design and sample selection

The population of this study is the users of Electronic Banking. Samples in this study are lecturers from three public universities in the northern states of Malaysia; Past research proved that the major users of electronic banking are graduates, holding an executive post and professionals (83%) (Ndubisi & Sinti, 2006). Hence, the reason why lectures were chosen as the main population was because that they were the most suitable groups to be categorized as high income groups, professionals, and all of them were university graduates. The sampling was done using stratified proportionate sampling according to university number of lecturers. A total of 307 set of questionnaires were returned and analyzed.

2.3 CRM model selection

The dimension for customer relationship management in this research was adopted from Wang et al., (2004). This factor was measured by nine items using five self-rating items on a five-point Likert scale. Out of nine items, three items come from behavior-based CRM performance, three from brand loyalty and three from customer satisfaction. Technology adoption measurement by Karahanaa, Straub and Chervany (1999) was also adapted to measure electronic banking adoption. This factor was measured by six items using five self-rating items on a five-point Likert scale. Out of six items, two items came from intention to regularly usage of e-banking and continuous use the services, four items from their experience of service usages such as ATMs, Telephone Banking, Mobile Banking and Internet Banking.

3. Results and Discussion

3.1 Reliability test and KMO

The factor analysis conducted on electronic banking adoption shows the Kaiser-Meyer-Okin value of 0.68, exceeding the recommended value of 0.5 (Hair et al., 1998) or above 0.6 (Pallant, 2001) and Barlett's test of sphericity was highly significant ($p=0.00$), supporting the factorability of the correlation matrix. As shown in Table 2, the factor loadings are between 0.65 and 0.85. The factor analysis conducted on customer relationship management performance shows the Kaiser-Meyer-Okin value of 0.925, exceeding the recommended value of 0.5 (Hair et al., 1998) or above 0.6 (Pallant, 2001) and the Barlett's test of sphericity was highly significant ($p=0.00$), supporting the factorability of the correlation matrix.

As shown in Table 3, the factor loadings are between 0.73 and 0.88. Reliability (Cronbach's Alpha) for this factor is 0.94, which indicates high reliability. Item-to-total correlations revealed that removal of any item would not increase the alpha beyond 0.94, thus supporting the inclusion of all scale items

With the F value of 298.396 ($p<.005$), indicates that customer relationship management performance significantly influences electronic banking adoption. Furthermore, the model is rather strong with customer relationship management performance explaining 49.5 percent of the variation in electronic banking adoption. We also noted that the score for β is .70, which eventually confirms that customer relationship management performance provides high contributions to the dependent variables. Regression analysis undertaken revealed that customer relationship management performance was positively related to the electronic banking adoption. This indicates that customer relationship management performance has high explanatory power to predict electronic banking adoption. These findings are consistent with many research findings from the past, for example online and telephone banking intention (Karjuluoto et al. 2002; Pikkaranen et al. 2004) and internet banking intention (Suh & Han, 2002; Wang et al. 2003; and Sohail & Shanmugam, 2003).

4. Conclusion

It can be concluded that CRM performance direct an influence on e-banking adoption. In other words, it is confirmed that customer satisfaction, brand loyalty, retention intention and word of mouth has a significant impact on e-banking adoption since they are the main dimensions of customer relationship management performance. As such, it appears that banking institutions should strive to improve their customer relationship management performance in their efforts to attain higher electronic banking adoption by their customers.

These findings provide additional evidence to the growing body of knowledge concerning the importance of achieving the higher levels of customer relationship management performance. Apart from theoretical contribution, this study also contributes to the methodological perspective. To date, most literature on customer relationship management performance has focused on customer behavior-based performance since they are underlying sources of current customer values within a firm (Jensen, 2001; Day, 1994; Slater, 1997; Wang et al., 2004). Wang et al (2004) had developed a measurement for customer relationship management performance that only consists of tangible behavior based performances. Regarding to their suggestion, to add intangible behavior as on of the dimension in the measurement, this research has confirmed that intangible behavior based performance also successfully measures customer relationship management performance. This dimension will give an extra contribution for the methodology so that banks would have to practically ensure that electronic banking services offered to customers must have the ability to satisfy their customers to ensure repeat usages and loyalty among them. Banks have to be more aggressive in promoting their electronic services instead of conducting campaigns, or seminars on customer service programs besides launching international linkages on banking services.

The moves towards international banking linkages will allow customers to withdraw and deposit money throughout world wide locations. Somehow, due to this limit, future research must investigate other factors as the predictors for CRM performance instead of focusing on its consequences. This study examines electronic banking customers at a single period of time. A longitudinal study would therefore provide a significant approach in testing the outcomes of this study. Further research should consider both quantitative and qualitative techniques in order to understand the phenomena. By considering a qualitative type of research such as field interviews, we can really deeply understand the customer emotion when dealing with online technology.

This study examines electronic banking customers at a single period of time. A longitudinal study would therefore provide a significant approach in testing the outcomes of this study. Future researches have to explore the specific categories of electronic banking rather than the general concept of electronic banking. Besides that, future research can consider a model testing in distinguishing online context services instead of electronic banking to see if there is any difference on the research result.

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Table 1. Measurement Characteristic of e-Banking Business

Variables	Scale(Items)	Previous Reliability Test	Sources
Electronic banking adoption: <i>The behaviors of customers to regularly and continuity of the usage of ATMs, Internet Banking, Telephone banking or mobile banking services.</i>	Likert scale 1-5 (6 items)	0.92	Karahanaa, et al., (1999)
Customer Relationship Management performance: <i>Behavior-based CRM Performance, Brand loyalty, Customer Satisfaction</i>	Likert scale 1-5 (9 items)	0.84- 0.92	Wang (2004)

Table 2. Factor Loading, KMO and Bartlett's Test for E-Banking Adoption

	Extraction
I am regularly use electronic banking	.858
The use of electronic banking is my preference	.868
My electronic banking experience is on Self Service Terminals (<i>ATM Machines – money transfers/ withdrawal, Cash Deposit Machines, Check Deposit Machines, or Passbook Update/Bank statement printing</i>)	.699
My electronic banking experience is on Telephone banking (balance enquiries, fund transfers, bill payments, fixed deposit placements, Loan or credit card payments and check clearing status)	.719
My electronic banking experience is on Mobile banking (<i>SMS - balance enquiries, fund transfers, bill payments, fixed deposit placements, Loan or credit card payments and check clearing status</i>)	.721
My electronic banking experience is on Internet banking (banking transaction through <i>online services - online payment, online trading etc.</i>)	.657
Extraction Method: Principal Component Analysis.	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. Bartlett's Test of Sphericity	.680
Approx. Chi-Square	908.731
df	15
Sig.	.000

Table 3. Factor Loading, KMO and Bartlett's Test for Customer Relationship Management Performance

Items	Factor Loading
Even with more choices, I will not choose other bank electronic banking services	0.883
The electronic banking services offering of this bank is my first choice.	
I would like to keep close relationship for a longer period with my electronic banking services	0.856
Taking my experience with banks, I am satisfied with this electronic banking services offers	0.849
I would like to continue this electronic banking services with the bank	0.848
The electronic banking services offerings always meet the desirable level.	0.843
The electronic banking services offerings always meet my expectation.	0.836
I would like to recommend this electronic banking services offerings to others.	0.835
I feel I am loyal to this electronic banking services offering of this bank	0.821
	0.729
Eigenvalue	6.26
% of variance	69.61
Kaiser-Meyer-Olkin Measures of Sampling Adequacy	0.925
Barlett's Test of Sphericity: Approx Chi-Square	2328.161
	df
	36
	Sig
	0.00

Table 4. Reliability Coefficients for the Variables in the Study

Variables	Number of Items	Reliability
Electronic banking adoption	6	0.74
Customer relationship management performance	9	0.94

Regression Analysis on the Influence of Customer Relationship Management on Electronic Banking Adoption

Table 5. The influence of Customer Relationship Management Performance on Electronic Banking Adoption

Independent Variable	B	SE B	β
CRM Performance	0.845	0.049	0.703

Note: $R^2 = 0.495$; $F = 298.396$; Sig. $F = .00$; $**P < 0.01$

B= Unstandardized coefficient beta; SEB= Standard error of regression coefficient;

B= Beta coefficient



Figure 1. Framework for the relationship between CRM Performance and E-Banking Adoption