ISBN: 978-972-8939-31-1 © 2010 IADIS

RELATIONSHIP BETWEEN EDUCATIONAL LEVEL AND CUSTOMER ADOPTION IN INTERNET BANKING IN CURTIN MIRI COMMUNITY: CASE STUDY

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ABSTRACT

Customer adoption plays a significant role in sustainability of Internet banking. Concerning to the role of customer adoption in success of Internet banking, the researcher is inspired to focus on one of the demographic factors (customers' education level) that affect the adoption of Internet banking in Curtin Miri Community (CMC). The main purpose of this paper is to find out if there is a significant relationship between educational level and customer adoption in Internet banking in CMC. Furthermore, the research question of study: Is there a significant relationship between educational level and customer adoption in Internet banking in CMC? A survey approach was adopted to collect data from students, academic and non-academic staff. Statistical tools (i.e. Frequency, and One-Way ANOVA) were used to analysis the survey outcomes. The result shows that respondents with high education level, had more positive attitude towards Internet banking in contrast with respondents with low education level. In addition, in all questions of scale except question1 (i.e. I feel using Internet banking is a good idea), the difference of adoption score between high education and low education were significant ($P<0.0001$). Moreover, the total adoption scores ($F=38.61$) based on education level were significant ($P< 0.0001$). As such, that research's results give a positive response to the research question as there is a significant relationship between education level and customer adoption of internet banking among the CMC.

KEYWORDS

Internet banking, Educational level, Customer Adoption, Demographic factors

1. INTRODUCTION

Information Technology (IT) plays a significant role in the advent of the new electronic economy and provides a new concept called electronic banking (e-banking). E-banking can be defined from many different points of view. In general, according to Daniel (1999, p.75), e- banking is "the provision of information or services by a bank to its customers, via a computer, television, telephone or mobile phone". For example, in terms of using e-banking via computer, customers are connected to the banks through a modem and downloaded and run the software on their PCs (Liao et al. 1999).

As technology is developed, the concept of Internet is revealed. Internet impacts on all aspects of human's life and can shifting them from the traditional life to the virtual life. In the banking industry, Internet is conducted to convert and revolutionize the traditional economy and banking system to the new banking industry, where the banks have more chance to have a long-term relationship with customers and provide their needs based on improved customization, transaction, and data mining (Mols 2000).

With globalization and competitive electronic marketplace, one of the most important aims of every online service providers is to attract more customers (Li and Suomi 2007). In fact, Internet banking, like every online business, must provide good service quality to their customers to increase their adoption rate, as Rogers and Shoemaker (Cited in Naimi Baraghani 2007, p.30), define adoption as "the acceptance and continued use of a product, service or idea".

There are different factors that influence Internet banking adoption among online customers, as Jaruwachirathanakul and Fink (2005, p.298) state that, these factors can be subdivided into three categories: "bank factors" (under control of the bank, called perceived usefulness, adoption features, bank online features, and risk and privacy), "others factors" (not under control of the bank, called, external environment

and Thai culture) and "moderating factors" (age, gender, educational levels, income and, etc.), (called demographic factors).

2. BACKGROUND

Concerned about being sustainable in today's competitive marketplace, every online business strives hard to attract more customers and increase its customers' attitude towards this huge online marketplace. Internet banking providers like other online businesses must better realize and understand their customers' behaviors and attitudes towards Internet banking adoption to be more successful among the other Internet banking competitors (Naimi Baraghani 2007).

Some researchers indicated that there is no significant relationship between demographic factors and Internet banking adoption among bank customers. For example, Sathye (2005) indicated that there is no relationship between demographic factors and interest in Internet banking among Australian users. In addition, Laforet and Li (2005) claimed that there is no significant relationship between Chinese online bank users and their educational level in contrast with Western online bank users.

Opponents to this view argue that there are wide ranges of previous researches that indicate the influence of some demographic factors of Internet banking adoption. Sciglimpaglia and Ely (2002, p.125) stated that "interest in the use of specific online services is related to differing customer relationships in addition to ordinary demographic and balance information".

Polasik and Wisniewski (2009) argued that demographic factors such as age, gender, income, education, place of residence and work-related are the factors that affect customers' attitudes towards adoption and acceptance of Internet banking among Poland Internet banking customers.

A research by Karjaluoto, Mattila and Pento (2002) that was done on 3000 Finnish individual banks based on geographic location indicated that most Internet banking users in Finland are young, highly educated and have a high income. In a similar research in New Zealand, Gan, Clemes and Weng (2006, p.376), examined a total of 529 households based on some variables such as individual factors, and indicated that some demographic variables are significant in using e-banking in New Zealand. For example, they mentioned that "the educational qualification levels of non-electronic banking respondents are lower than the electronic banking respondents".

Jaruwachirathanakul and Fink (2005) sent a survey to 600 internet users (15 internet users in each 40 large company in Bangkok) to identify factors that influence the adoption of Internet banking in Thailand, the main purpose behind this survey is to increase Thailand's bank adoption rate. According to their research, bank factors accompanying some moderating factors such as gender, educational levels and, etc. with the exception of age, play a significant role in adaption of Internet banking among Thailand users.

Naimi Baraghani (2007) surveyed 240 Internet users who had an account in four branches of Saman bank in Tehran to find out factors (demographics and non-demographics characteristics) that influence the adoption of Internet banking among Iranian bank customers. In terms of one of demographics characteristics (educational level), the study stated that most of the respondents are highly educated. 47.5% are bachelor and 35.835% are master or PhD holders.

Finally, another study in Malaysia by Poon (2008, p.61), indicated that "privacy", "security", and "convenience of usage" followed by age, education, and income level play a significant role in adoption of e-banking among Malaysian.

Further to our literature review, it was noticed that demographic factors such as educational level of bank customers, plays a significant role in Internet banking adoption.

3. RESEARCH OBJECTIVES, QUESTION, & METHODOLOGY

Customer adoption plays a significant role in sustainability of Internet banking. Customer adoption of Internet banking is as important as government support to be successful (Jaruwachirathanakul and Fink 2005). In addition, the researcher believes that educational level of bank customers plays a significant role in Internet banking adoption. Therefore, concerning to the role of customer adoption in success of Internet banking, the researcher is inspired to focus on one of the demographic factors (customers' education level)

that affect Internet banking adoption in Curtin Miri Community (CMC). Moreover, this study remedies the lack of researches on Internet banking in CMC based on their educational level.

The main objective of this paper is to find out if there is a significant relationship between educational level and customer adoption of Internet banking in CMC. Moreover, this study deals with attitude towards Internet banking based on educational level of CMC. Therefore, the research question of this study: Is there a significant relationship between educational level and customer adoption in Internet banking in CMC? As for the research hypothesis, there is a significant relationship between educational level and customer adoption in internet banking in CMC.

For this paper, a questionnaire was used to find out if there is a significant relationship between educational level and customer adoption of Internet banking in CMC. The research questionnaire (15 questions) was based on Likert scale. For reducing the possibility of having wrong measurements, reliability and validity of the scale is very important (Saunders and Thornhill 2003). Therefore, concerning to the reliability of the scale, the Cronbach's Alpha (0.94) was considered acceptable, as for validity of the scale, each question of the scale correlated between 0.34 to 0.91 with the construct it is related to, therefore the scale is considered credible. Moreover, the questionnaire based on non-probability sampling method was distributed to at least one-time, twenty Internet banking users from CMC who were students, academic and non-academic staffs. The researcher endeavored to include equal numbers of high-educated (master or PhD) and low-educated (Bachelor or lower) respondents to investigate if there is a significant relationship between the customers education level and their Internet banking adoption. Descriptive statistical tools (i.e. Frequency, Percentage, and Mean) and inferential statistic tools such as One-Way ANOVA were used to analysis the questionnaire results.

For this paper, twenty respondents, who were at least one-time users of Internet banking, returned valid survey questionnaires as 50% were from high educated sector (i.e. master or PhD), while the rest were from the low educated sector (i.e. Bachelor or lower).

4. RESULTS & DISCUSSION

For Internet banking adopting, it was noticed that 91.33% of high educated respondents agreed to use Internet banking facilities. However, for low educated respondents, 33% disagreed, and 37.34% were neutral. This indicates that respondents with high education level, in contrast with respondents with low education level, had more positive attitude towards Internet banking.

Table 1. Average and standard deviation of respondents' adoption based on questions and education level

	High education		Low education	
Questions (Category)	**Average**	**Std. deviation**	**Average**	**Std. deviation**
1 (Behavioral intention)	4.6	0.52	4	0.82
2 (Behavioral intention)	4.6	0.52	3.6	0.84
3 (Performance expectancy)	4.7	0.48	4.4	0.70
4 (Performance expectancy)	4.5	0.53	3.8	0.92
5 (Performance expectancy)	4.7	0.48	4	0.94
6 (Trust)	3.8	0.42	2.3	1.06
7 (Trust)	4	0	3	0.94
8 (Trust)	3.5	0.53	3.2	1.03
9 (search facility)	4.3	0.48	4	0.82
10 (Effort expectancy)	4.6	0.52	3.1	0.87
11 (Effort expectancy)	3.7	0.67	2.3	0.48
12 (Effort expectancy)	4.3	0.48	3.8	0.92
13 (Effort expectancy)	4.3	0.48	3.7	0.48
14 (Satisfaction)	4.7	0.67	3.8	1.23
15 (Satisfaction)	4.5	0.70	3.9	1.70
Total Adaption Score	64.8	2.1	50.6	6.91

Table 1 show the average and standard deviation of respondents' adaption based on questions and education level. The average and standard deviation of total adoption score in respondents with high education were 64.8 and 2.1, whereas these for respondents with low education were 50.6 and 6.91. This

suggests that respondents with high education had more intention and adoption to use Internet banking compared with respondents with low education. Furthermore, the average results of adoption score between respondents with high education were more than low education, but in questions 6, 7, 10, and 11 the average of adoption score between high education respondents and low education respondents were more than the research's expectation.

According to table 1, concerning to the big differences between the averages of adoption score among high education and low education in questions 6, 7, 10, and 11, it seems that in question 6 (I feel safe when I use internet banking site) and question 7 (The Internet banking site is reliable), knowledge about computer and Internet or in the other word, computer literacy, among high education is in excess of those who are low education, therefore respondents with high education can trust Internet banking more than low education students. Moreover, regarding to question 10 (My interaction through Internet banking is clear and understandable) and question 11 (Interaction with Internet banking does not require a lot of mental effort), it can be concluded that high education are more intelligent in using the Internet Banking facility compared with low education students.

Table 2. Results of One-Way ANOVA analysis based on questions and educational level

Questions Between Groups	Sum of Squares	df	Mean Square	F	P
1 (Behavioral intention)	1.8	1	1.8	3.86	-
2 (Behavioral intention)	5.0	1	5.0	10.22	P<0.001
3 (Performance expectancy)	8.45	1	8.45	17.25	P<0.001
4 (Performance expectancy)	6.45	1	6.45	14.37	P<0.001
5 (Performance expectancy)	5.45	1	5.45	11..37	P<0.001
6 (Trust)	11.25	1	11.25	17.31	P<0.001
7 (Trust)	5.0	1	5.0	11.25	P<0.001
8 (Trust)	10.45	1	10.45	20.67	P<0.001
9 (search facility)	6.45	1	6.45	14.0	P<0.001
10 (Effort expectancy)	11.25	1	11.25	21.77	P<0.001
11(Effort expectancy)	9.80	1	9.80	28.45	P<0.001
12 (Effort expectancy)	10.25	1	10.25	21.32	P<0.001
13 (Effort expectancy)	9.3	1	9.3	20.7	P<0.001
14 (Satisfaction)	18.05	1	18.05	36.51	P<0.001
15 (Satisfaction)	18.05	1	18.05	36.51	P<0.001
Total Adoption Score	1008.20	1	1008.20	38.61	P<0.001

Table 2 point out the results of One Way-ANOVA analysis based on questions between groups and education level. As the results show, in all questions except question1, that the difference of adoption score between high education and low education were significant (P<0.0001). Moreover, the total adoption scores (F=38.61) based on education level were significant (P< 0.0001). This shows that research's results provide a encouraging outcomes to the research question. Thus, there is a significant relationship between education level and customer adoption of internet banking in CMC.

According to table 2, regarding the lack of significant relationship between the high and low educated respondents in question1 (I feel using Internet banking is a good idea), it seems that in CMC, particularly students with low education, have reached a level of understanding that working with Internet banking is more practically compared with traditional way. Therefore, this perception does not relate to the level of customers' education in CMC.

5. CONCLUSION

The results show that there is a significant relationship between educational level and customer adoption in internet banking in CMC. This finding conflicts with the studies such as Sathye (2005), and Laforet and Li (2005) that believe that there is no significant relationship between demographic factors such as education

level and adoption of Internet banking, however, support the findings which was made by Karjaluoto, Mattila and Pento (2002), Sciglimpaglia and Ely (2005), Jaruwachirathanakul and Fink (2005), Gan, Clemes and Weng (2006), Naimi Baraghani (2007), and Polasik and Wisniewski (2009) stated that there is a significant relationship between demographic factors such as education level and adoption of Internet banking.

This paper was limited to CMC, therefore, further research should be carried out to examine larger number of groups and expand the focus on the other factors such as gender, income level, and inexperienced users to investigate their attitude toward Internet banking.

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