

BANKING CHANNELS ADOPTION IN MALAYSIA: AN ANALYSIS

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ABSTRACT

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The purpose of this paper is to examine the factors that affecting Malaysian bank customers acceptance of banking channels namely branch banking, ATM banking, telephone banking and Internet banking. Considering this objective in mind, the current study tends to develop a model, a theoretical framework that explains the factors affecting banking channels adoption from a Malaysian point of view. The model was tested with a survey sample (n = 241). Results suggest that convenience factors are the most influential drivers in branch channel adoption, assurance factors are the most influential drivers in ATM adoption, informativeness factors are the most influential drivers in telephone banking adoption while assurance factors are the essential factors in impacting Internet banking adoption. This study indeed suffers from two main limitations that lead for a potential future research in this field of knowledge. Worth to mention, the first limitation is on its limited number of measures applied in this study. The second limitation is based on the fact that it ignored mobile banking as a banking channel. Nevertheless, this study adds the very limited study available in this topic in Malaysia. On the other hand, it provides benefits to bank managers since this study offers an insight on the factors affecting Malaysia bank customers to utilize of different types of banking channels.

Keywords: *Banking channels, bank customers, commercial banks, Malaysia*

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1. Introduction

Banking channels in Malaysia are generally divided into non-electronic channel and electronic channels. The former refers to the branch-banking channel, which is to some people it called as over the counter-banking channel. It is acknowledged that branch-banking channel renders several unique advantages, therefore, creating adoption. First, branch banking encourages two-way communications between the teller/clerk and bank customers, whereby any mistakes can be adjusted in a minute. Second, branch banking shows a way of confidence to bank customers with the physical existence and the constant availability. The latter refers to the ATM, telephone banking and Internet banking. These advents of banking channels are not targeted to replace the role of branch banking channel, instead offer alternatives for bank customers in conducting banking transactions. Idyllically, bank customers (Wan et al., 2005) used ATM most frequently because it is more secure and reliable. Telephone banking was also used by bank customers because of its convenience and control. Indeed, bank customers are able to do banking 24 hours a day and seven days a week at places convenient and private to them (Ahmad and Buttle, 2002). The last type of electronic banking channels is Internet banking. Recent literature suggests the importance of Internet banking adoption among bank customers (Guriting and Ndubisi, 2006; Ndubisi and Sinti, 2006; and Suganthi and Balachandran, 2001). Indeed, Internet banking creates new banking channel for working class individuals, where they can do banking transaction at their own convenience at office (Karjaluo et al., 2002; and Jayawardhena and Foley, 2000).

The present study aims to evaluate factors that can influence adoption of banking channels among Malaysia bank customers. Evidently, Malaysia is the heaven for banking institutions for two main reasons. First, Malaysia has a comprehensive banking system ranging from domestic banks to offshore banks. Second, worth to say, Malaysian government wishes to formulate Malaysia, as a hub for Islamic financial system in the region of South East Asia (SEA) as well as in the other regions. As far as banking channels are concerned, there are growing academic studies have been done on the banking behavior of Malaysia bank customers (Ndubisi and Sinti, 2006; and Suganthi and Balachandran, 2001; to name a few). Nevertheless, none of these studies draws their attention in investigating of four banking channels in their study as found in the current study. As a result, the researchers had motivated to conduct a study that investigates banking channels adoption from Malaysia bank customers' viewpoint. Furthermore, the current study will develop a model of banking channels adoption among bank customers in Malaysia, a theoretical framework that explains the factors influencing the banking channels adoption. In order to reach this, Wan et al. (2005) measures are employed to explain the banking channels adoption in Malaysia. These measures are selected since Malaysia and Hong Kong have the similarity in banking environment, although some differences are, do remain.

The paper is organized as follows. Section 2 will present the previous studies have related to banking channels. Section 3 will present the research methodology. Section 4 will analyze the results. Finally, the authors attempt to highlight a conclusion, implications of the study, limitations and potential future study relevant to the present study topic.

2. Literature review

The topic 'Banking channels adoption' has received a good attention in academic studies either in Malaysia or in other countries (Wan et al., 2005; Boon and Yu, 2003; Howcroft et al., 2002; Ahmad and Buttle, 2002; Al-Ashban and Burney, 2001; Ramsay and Smith,

1999; and Mols et al., 1999). These studies confirm that bank customers need more than one banking channel such as ATM, telephone banking and Internet banking, in addition branch-banking channel. The reasons of why bank customers have that need are two main reasons. First, bank customers in Malaysia received their salary through banking institutions that may lead them to utilize Internet banking and so forth. Second, bank customers in Malaysia have utilized banking financing products such as mortgages, automobile and credit cards. Further, the following provides some of the evident on the previous studies related to banking channel studies:

2.1. Branch banking channel

Evidently, branch banking channel plays an important role in banking transaction because transaction accuracy and security could be maintained effectively in face-to-face transactions without reliance on an electronic medium (Wan et al., 2005). In Malaysia, Boon and Yu (2003) examined the success factors for banking channel, with branch banking channel is the most successful delivery channel used by bank customers. Indeed, the branch-banking channel is still the most preferred delivery channel for banking transactions because of its availability and face-to-face communication. Furthermore, Howcroft et al. (2002) examined home-based banking, and argued that telephone banking and Internet banking will not totally replace the role of branch banking channel, since branch banking channel is easier to reach by many individuals regardless their status, education and income.

2.2. ATM banking channel

According to Boon and Yu (2003) all banks in Malaysia provide ATM services in addition to branch banking channel and other banking channels. Based on Boon and Yu (2003) finding, discovered that ATM channel becomes second behind branch banking channel because it is convenience to use, and easy to access. Marshall and Heslop (1988) found that convenience shopping was positively correlated with ATM usage, and familiarity with technology in general was related to the ATM usage. Leblanc (1990) found that the main factor of ATM adoption was related to accessibility benefits. Indeed, bank customers can use ATM for cash withdrawal, transfer money, balance query, bill payment and more. Briefly, Lewis (1991) believed that the bank management must avoid “out of service” situation, thus, consistent operation is needed for the ATM.

2.3. Telephone banking channel

Ramsay and Smith (1999) examined the Australian channel usage. Based on their findings, the phone banking was the preferred banking channel after the branches and ATM. Telephone banking is employed by bank customers because of its accessibility as well as convenience factors (Ramsay and Smith, 1999). Mols et al. (1999) who found that telephone banking is the preferred banking channel also support this outcome. The result shows that bank customers use telephone banking because all people have access to telephone and it is cheaper than the branch banking.

2.4. Internet banking channel

Although Internet banking provides flexibility in performing financial transaction, fast and easy, however Malaysians are still reluctant to adopt the system because of several reasons. First, the security and privacy are two elements in the perceived credibility. Without a proper knowledge of the system, individuals are not interested to test the system. Indeed, Tan and Teo (2000) found risk to be a very significant factor and Ndubisi et al. (2004) also agreed the importance of adequacy of security in order to raise

the confidence of public to utilize the system. Second, Internet banking is mixed-blessing. It consists of the software and hardware costs such as needing Internet-connection, personal computer or laptop and maintenance in order to ensure its can be implemented.

3. Research methodology

3.1. Sample

In this study, a convenience sampling was used because of its easiness in collecting the data. Definitely, the data collection method was based on personally administered questionnaire to the customers of banks in Labuan and Kota Kinabalu. The questionnaire was distributed to selected respondents of different banks in order to enrich the data findings. A total of 250 bank customers accepted the questionnaire, out of which, only 241 (96.4 per cent) usable responses were usable. The survey ran for three weeks of 5-working days during working hours in September 2006. Prior to conducting the survey, a written permission from the banks has been forwarded. The permission then was given by the banks at their own discretion for allowing the study to be conducted without restriction.

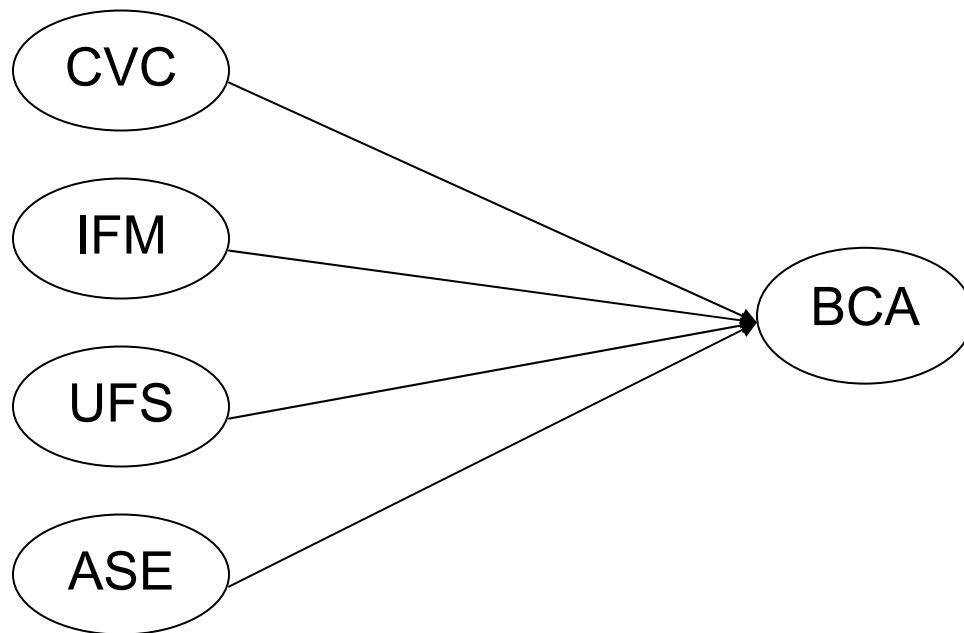


Figure 1: Research model

Note: CVC= Convenience factors, IFM=Informativeness factors, UFS=User-friendliness factors, ASE=Assurance factors, and BCA=Banking channels adoption

3.2. Measures

The questionnaire included three sections. The first section was designed to gather the respondents' personal and demographic characteristics. The second section was designed to gather the respondents' beliefs of banking priority. The third section was designed to gather banking channel adoption among bank customers. The items used in

this section are extracted from Wan et al. (2005) with slight modifications to better reflects bank customers in Malaysia. Wan et al. (2005) items were chosen for two main reasons. First, Hong Kong and Malaysia share the map of Asia, whereby the banking environment in Hong Kong is also similar to Malaysia because these countries received influence from British in terms of banking history, although differences are, do remain. Second, Wan et al. (2005) study mentioned about four banking channels range branch to Internet banking, these banking channels are also available and ready to use in Malaysia. Many countries in Asia apply the common banking channels, with ATM being the most popular among Asian. The research model of this study is shown in Figure 1.

3.3. Research hypotheses

In order to investigate the association between factors and banking channels adoption, about 16 hypotheses were verified. The hypotheses are possible to satisfy the research objective:

3.3.1. Branch banking channel

Hypotheses 1 (Wan et al., 2005; Boon and Yu, 2003; Howcroft et al., 2002)

- H1a.* Convenience has a significant affect on branch banking adoption;
- H1b.* Informativeness has a significant affect on branch banking adoption;
- H1c.* User-friendliness has a significant affect on branch banking adoption; and
- H1d.* Assurance has a significant effect on branch banking adoption.

3.3.2. ATM banking channel

Hypotheses 2 (Boon and Yu, 2003; Leblanc, 1990; Lewis, 1991)

- H2a.* Convenience has a significant affect on ATM adoption;
- H2b.* Informativeness has a significant affect on ATM adoption;
- H2c.* User-friendliness has a significant affect on ATM adoption; and
- H2d.* Assurance has a significant effect on ATM adoption.

3.3.3. Telephone banking channel

Hypotheses 3 (Ramsay and Smith, 1999; Mols et al., 1999)

- H3a.* Convenience has a significant affect on telephone banking adoption;
- H3b.* Informativeness has a significant affect on telephone banking adoption;
- H3c.* User-friendliness has a significant affect on telephone banking adoption; and
- H3d.* Assurance has a significant effect on telephone banking adoption.

3.3.4. Internet banking channel

Hypotheses 4 (Ndubisi et al., 2004; Tan and Teo, 2000)

- H4a.* Convenience has a significant affect on Internet banking adoption;
- H4b.* Informativeness has a significant affect on Internet banking adoption;
- H4c.* User-friendliness has a significant affect on Internet banking adoption; and
- H4d.* Assurance has a significant effect on Internet banking adoption.

4. Results

4.1. Demographic results

The respondents' profiles are reported in Table 1. More males (56 per cent) replied than females (44 per cent). The age group with the highest response was "21-30" group (50 per cent), followed with "31-40" group (25 per cent), "less than 20" group (15 per cent), "41-50" group (7 per cent) and "51 and over" group (4 per cent). Table 1 further shows

that most of the respondents were Moslems with 54 per cent. In terms of occupation, about 37 per cent worked in private sector, 24 per cent worked in public sector, 18 per cent worked as self-worked and 21 per cent participated in this study were university's students.

Table 1: Demographic results

<i>Profile</i>	<i>Description</i>	<i>Respondents</i>	<i>Percentage</i>
1. Gender	Male	134	55.6
	Female	107	44.4
2. Age	Less than 20	36	14.9
	21-30	120	49.8
	31-40	60	24.9
	41-50	16	6.6
	Above 50	9	3.7
3. Religion	Moslem	130	53.9
	Buddhist	29	12.0
	Hindu	10	4.1
	Christian	60	24.9
	Others	12	5.0
4. Occupation	Private sector	90	37.3
	Public sector	57	23.7
	Students	50	20.7
	Self-worked	44	18.3

4.2. Reliability and validity measurement

In this section, two statistical tools were undertaken namely reliability and factor analyses. Here, a reliability analysis was carried out in order to examine whether or not the underlying dimension for the factors would be deemed reliable. As seen in Table 2, cronbach's alpha reliability scores were all over 0.8, which is considered adequate. This section also presents factor analysis. The aim of factors analysis is to confirm the construct validity of the scales could be performed adequately by using principle component analysis (PCA). This study used the recommendation made by Hair et al. (1992), who claimed that the factor loadings greater than 0.50 were considered to be very significant. In line with this recommendation, most of the factor loadings for each instrument exceeded 0.8, with most of them above 0.90. Therefore, all factors used in this study had the essential significant level of convergent validity. The results are displayed in Table 2.

Table 2: Reliability and factor analysis

<i>Items</i>	<i>No. of items</i>	<i>Mean</i>	<i>Std. deviation</i>	<i>Reliability</i>	<i>Factor loadings</i>
Convenience factors	4	4.5145	1.72506	0.9458	0.931
		4.6556	1.69855		0.943
		4.6680	1.70226		0.937
		4.6266	1.59477		0.899
Informativeness factors	3	4.6515	1.52305	0.8985	0.897
		4.6680	1.57512		0.922
		4.5726	1.55319		0.916

User-friendliness factors	2	4.8133	1.60805	0.7954	0.911
		4.7261	1.57576		0.911
Assurance factors	2	4.8921	1.72867	0.8337	0.926
		4.8216	1.62702		0.926

4.3. Relationship testing

The results of the multiple regression analysis shown in Table 3 indicate that convenience factors ($\beta=0.293$, $t=3.104$, $sig=0.002$) are significantly associated with branch banking channel adoption. The same outcomes also found in informativeness factors and user-friendliness factors with ($\beta=0.346$, $t=2.572$, $sig=0.011$) and ($\beta=0.549$, $t=2.529$, $sig=0.012$) respectively. Table 3 further shows that assurance factors ($\beta=0.0784$, $t=0.450$, $sig=0.653$) have no significant relationship with branch banking channel adoption. Consequently, *H1a*, *H1b* and *H1c* are supported whereas *Hd* is not supported. In more detail, it is argued that assurance factors are not determinants of branch banking channel adoption. This is could be due to the bank customers' belief where the banking system in Malaysia is stable and secure.

Table 3: Results banking channels adoption

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
(Constant)	Branch banking (0.900)	ATM (2.113)	Telephone banking (3.318)	Internet banking (4.285)
Convenience factors	0.293 (0.002***)	0.125 (0.143.n.s.)	0.277 (0.018***)	0.159 (0.181.n.s.)
Informativeness factors	0.346 (0.011***)	0.363 (0.003***)	0.599 (0.000***)	0.442 (0.010***)
User-friendliness factors	0.549 (0.012***)	0.450 (0.023***)	0.612 (0.023***)	0.309 (0.260.n.s.)
Assurance factors	0.07844 (0.653.n.s.)	0.500 (0.002***)	0.415 (0.054**)	0.751 (0.001***)
<i>F</i> statistic	63.683 (0.000***)	77.748 (0.000***)	26.958 (0.000***)	26.956 (0.000***)

Note: ***Significant at 5 per cent level, and **Significant at 10 per cent level

Evidently, assurance factors ($\beta=0.500$, $t=3.181$, $sig=0.002$) are significantly related to ATM channel adoption, while convenience factors are not significantly associated with ATM channel adoption ($\beta=0.125$, $t=1.468$, $sig=0.143$). The rest factors namely informativeness factors ($\beta=0.363$, $t=2.991$, $sig=0.003$) and user-friendliness factors ($\beta=0.450$, $t=2.296$, $sig=0.023$) are significantly determine ATM channel adoption. Thus, *H2b*, *H2c* and *H2d* are supported. It is concluded that convenience factors are not determinants of ATM channel adoption. This could be due to the assurance of the banks over the efficiency of the services delivered, convenience of location, convenience-operating time as well as the speed in delivering services.

Further details show that informativeness factors ($\beta=0.599$, $t=3.613$, $sig=0.000$) are significantly related to telephone banking adoption. Convenience factors ($\beta=0.277$, $t=2.387$, $sig=0.018$) are also significantly associated with telephone banking adoption. Details of the results show that assurance factors ($\beta=0.415$, $t=1.933$, $sig=0.054$) and user-friendliness factors ($\beta=0.612$, $t=2.281$, $sig=0.023$) significantly determine

telephone banking adoption. Consequently, *H3a*, *H3b*, *H3c* and *H3d* are supported and all the measures are determinants of telephone banking adoption.

Finally, Internet banking channel adoption is influenced by informativeness factors and assurance factors. Table 3 further shows that informativeness factors ($\beta=0.442$, $t=2.606$, $sig=0.010$) is significantly related to Internet banking channel adoption. Also, assurance factors ($\beta=0.751$, $t=3.423$, $sig=0.001$) are significantly associated with Internet banking channel adoption, as stressed earlier, while convenience factors ($\beta=0.159$, $t=1.342$, $sig=0.181$) is not significantly associated with Internet banking channel adoption at 5% significance level. Moreover, user-friendliness factors ($\beta=0.309$, $t=1.128$, $sig=0.260$) are not significantly associated with Internet banking channel adoption at 5% significant level. Consequently, *H4b* and *H4d* are supported while *H4a* and *H4c* are not supported. It is concluded that convenience factors and user-friendliness are not determinants of Internet banking channel adoption. This could be due to the good perceptions of bank customers on Internet banking, therefore convenience factors as well as user-friendliness are not an issue. Evidently, Internet banking is a flexible banking facility and it can be accessed by many of us at anywhere and anytime. Moreover, Internet banking is worked at the bank customers' easiness.

5. Conclusion

The study results reveal that four banking channels adoption are influenced by different factors. Generally, it is worth to mention that one factor cannot be assumed to fit to all banking channels. Likewise, this study leads to several contributions to the banking channels study available in Malaysia:

1. First, it is revealed the different factors for different banking channels adoption. This could be due to the different nature of banking channels. Moreover, convenience factors, informativeness factors and user-friendliness factors were significantly related to branch banking channel. In addition, informativeness factors, user-friendliness factors and assurance factors were significantly related to ATM banking channel, while for telephone banking, all measures were significant. Indeed, the study revealed Internet banking was influenced by user-friendliness factors and assurance by banks; and
2. Secondly, this study will be able to elevate the amount of literature available on banking channels in Malaysia. Consequently, it enriches the knowledge base in banking channel study that motivates for future research.

This study has a tendency to provide some implications regarding the way banks seek to attract bank customers use different type of banking channels. Catch all marketing program for each banking channel may not sufficient for bank customers' deployment. Therefore, offering different marketing program is required for different type of banking channels. For instance, if one bank offers Internet banking, it must examine the important of informativeness factors. The information must reliable and adequate for the benefits of bank customers for conducting banking transactions. Indeed, assurance to the website used for Internet banking must be overtime observed and further advice given to the bank customers in case of errors. By doing so, it encourages bank customers to use it, thus, influencing adoption.

Moreover, this study suffers from two setbacks but they are not too serious. Relatively,

the important factors in using banking channel may not be specific up to convenience, informativeness, user-friendliness and assurance. Considering potential future research in this area, new factors such as normative pressure and pricing system must be investigated in order to tackle this limitation as well as to enrich findings related in this area. Secondly, this study has overlooked other type of banking channel. In 2000s, mobile banking was introduced in Malaysia to provide more options of doing banking. This latest banking channel has been ignored in this study. Therefore, future study should add mobile banking into banking channel lists, further expanding the results in banking channels study. Consequently, future research will incorporate branch, ATM, telephone, Internet banking and mobile banking.

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