Journal of Internet Banking and Commerce

Usage of Internet Banking Among Different Segments as an Example of Innovation – Trust and Information Needs

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Abstract

The usage of internet has had what can only be descried as an enormous growth in the last decade. This has also resulted in an increased risk in the usage of Internet, in particular for an area as internet banking. This paper examines the confidence among different segments of e-banking users or customers. It explains why results differ. Data were collected with a questionnaire with a sample of 50 fully completed answered. The results show that trust in internet banking usage differs among segments and also that the perceived lack of information tends to differ among segments. Moreover we found that the most valuable segmentation can be divided into three groups, between 18-25, above 66, and the rest. The findings have significance for both security and marketing of internet banking services.

Keywords: **Internet banking, marketing segmentation, trust, risk, innovation**

INTRODUCTION

Internet banking is a service the bank offers to its customers. The service allows the costumer to perform a wide range of banking services online. Originally, the bank mainly used it as an information platform. As the development of online security proceeded, the banks started to use their platforms more as a place for transaction services for its costumers (Margaret & Thompson, 2000).

Banks that offer their services over the internet are eager to accelerate the adoption process. This is because the cost of the service is less than over the counter (Ekin & Polatoglu, 2001). According to Fox and Beier (2006) online banking has grown by an enormous speed the last couple of years. Although, the growth has not been as wide as for regular internet usage, the trend to use internet banking has been increasing in popularity. The initial slow growth may have been due to the lack of trust among bank customers, especially as internet frauds increased (Cunningham, Devlin & Gerrard, 2006). It is also possible that the frequent reports on internet frauds have contributed to the initial slow growth. The main hypothesis for this study is that there are differences in trust depending on the marketing segment of the users. The objective is to develop a better understanding of the factors which explain why certain customers are not using internet banking more.

RESEARCH MODEL

There are four sub-hypotheses in this study:

   H1. Trust in internet banking usage differs among segments
   H2. Perceived lack of information tends to differ among segments
   H3. Relative advantage in mending users concerns' leads to an increased usage in internet banking
   H4. There is a correlation between perceived security and perceived information.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

We have identified five different theoretical basis or frameworks for this study. They are what is called the Rogers factors, the notion of relative advantage, of risk, the lack of information and trust.

Rogers (1983) defines three factors of innovation that influence a customer's decision to either adopt or reject an innovation. These are:

- Relative advantage
- Compatibility
- Risk

Relative advantage appears when a new innovation is perceived to be better than the previous generation. Perceived relative advantage of an innovation is positively related to its rate of adoption (Rogers 1983). Likewise, as internet banking allows the customers to gain access to their bank at any time, wherever they like, it also provides a significant advantage. The customers also obtain a greater control over their finances which they now can keep track of with more ease (Margaret & Thompson, 2000).

An innovation has an increased chance of getting adopted when it is compatible with the individuals' past experience and existing values (Klein & Tornatzky, 1982). It is therefore expected that the more an individual uses the internet and the more it is perceived to be compatible with his or her lifestyle, the more likely adoption of internet banking will be (Margaret & Thompson, 2000).

Ostlund (1974) introduced risk as further dimension in the adoption process. An established hurdle in the general internet usage has been the lack of security and privacy. The result of this is that many view internet banking as a risky undertaking (Klein & Quelch, 1996). To amend this banks are continuously looking for ways to fill these gaps. This is not a problem which is solved once and for all, but a continuous process as new technology and new functions introduce new forms of risk.

According to Karjaluoto, Mattila and Pento (2003) some customers perceive they lack training in internet banking usage. This leads to an uncertainty of another kind. Additionally, information both before and during usage is perceived to be important for customers, in order for them to perform the service individually (Filotto, Saita & Tanzi, 1997). Foley and Jayawardhena (2000) argue that the information should be easily available and detailed enough on the banks internet pages. Just how this is achieved is much a question of trial and error, as marketers and technicians introduce new functions and measure the results of these.

Trust has been defined as a personality trait of people interacting with peripheral environment of an organization by Butterfield, Farris and Senner (1973). This approach to trust sees it as a trait that leads to a generalized expectation about the trustworthiness of others (Davis, Mayer & Schoorman, 1995). Trust can also be seen as the risk taking in a relationship. Trust can only occur with a specific identifiable relationship with another party (Davis, Mayer & Schoorman, 1995).

These theoretical contributions are and continue to be of value for banks and their partners as they develop new services.

From a marketing point of view it would be of value to see the differences in users, to the extent that these differences exist, for the problems at hand. This notion and concept has not been sufficiently explored in existing research.

METHODOLOGY

Subjects for this study were people with a bank account in Halmstad, Sweden. Data was collected by a questionnaire in which answers from a sample of 286 participants was obtained. The population consists of approximately 70 000. Most of the items were measured on a 5-point Likert scale with '1' denoting the low end and '5' the high end. The questionnaire was then pre-tested and reviewed.

ANALYSIS

Respondents answered 286 questionnaires. Out of them, 264 were currently using internet banking. We excluded the non-users in the analysis since this might have affected the validity. One answer was missing data, which gave us a final count of 263 respondents (sample size).

Table 1 provides the respondents divided in categories of age and gender. 59 % of our respondents were females and 41 % were males. Most of them were aged 18-25.

Table 1. Demographic profile (n = 263)

Variable	Category	Frequency	Percent
Age	18-25	124	47 %
	26-35	29	11 %
	36-45	22	8 %
	46-55	40	15 %
	56-65	31	12 %
	66-	17	7 %
Gender	Male	108	41 %
	Female	155	59 %

With the help of a χ^2-test we determined that trust differs among segments and we therefore accepted the first hypothesis. (H1. Trust in internet banking usage differs among segments). The younger segments seem to rely more on internet banking, than the elderly segments. Table 2 provides the distribution of our answers divided in categories of age:

Table 2. Perceived safety among different segmentswhere '1' is very bad and '5' is very good

Age	1	2	3	4	5
18-25	1 (5,4)	0 (0,9)	10 (13,5)	36 (40,1)	66 (53,1)
26-35	0 (1,39)	0 (0,23)	6 (3,5)	13 (10,2)	10 (13,6)
36-45	1 (1)	0 (0,17)	3 (2,5)	13 (7,4)	4 (9,9)
46-55	5 (1,91)	0 (0,32)	6 (4,8)	11 (14,2)	18 (18,8)
56-65	4 (1,48)	1 (0,25)	3 (3,7)	10 (11)	13 (14,6)
66-	1 (0,81)	1 (0,14)	2 (2,0)	6 (6)	7 (8)

With the help of a χ²-test we determined that lack of information differs among segments and we therefore accept our forth hypothesis. (H4. There is a correlation between perceived security and perceived information). The results indicate that segments containing elderly people perceive they lack information to a greater degree. Their concerns are mainly about safety/risks and usage. The most interesting finding here may be the significant leaps from the first age bracket of 18-25, to the rest, with exception of the last bracket, those above 66.

Table 3 provides the distribution of our answers divided in categories of age:

Table 3. Perceived insufficient information about the internet bank

Age	Yes	No
18-25	13 (23,1)	112 (101,9)
26-35	4 (5,4)	25 (23,6)
36-45	0 (4,1)	22 (17,9)
46-55	13 (7,4)	27 (32,6)
56-65	8 (5,7)	23 (25,3)
66-	11 (3,3)	7 (14,7)

The interesting finding here too, is the significant leaps from the first age bracket of 18-25, to the rest, with exception of the last bracket, those above 66. This finding is consistent with the previous and enhances our conclusion. It suggested that there is a strong case with segmentation in three parts at the present time.

As table 4 shows, there is a positive correlation between perceived security (6) and perceived information (7):

Table 4. Correlations between perceived security and perceived information.

		7	6
7	Pearson Correlation	1	,590[**]
	Sig. (2-tailed)		,000
	N	263	263
6	Pearson Correlation	,590[**]	1
	Sig. (2-tailed)	,000	
	N	263	263

[**]. Correlation is significant at the 0.01 level (2-tailed).

Relative advantage appears when the innovation is perceived to be better than the previous generation. As table 5 shows, availability and convenience is the most common answer. We assume that this is a relative advantage compared to the previous generation, with over the counter services even though the extent to which the two forms differ must be tested.

Table 5. Reasons to use internet banking

Question of cost	Time savings	Availability	Convenience	Other
2 %	5 %	41 %	45 %	7 %

As Klein and Tornatzky stated, an innovation has an increased chance of getting adopted when it's compatible with the individuals' past experience. We found that 99 % of the respondents are using the internet and 96 % of them are using internet banking as well.

FINDINGS, DISCUSSION AND PRACTICAL IMPLICATIONS

As hypothesized (H1), trust in internet banking usage was found to differ among segments. As hypothesized (H2), perceived lack of information was found to differ among segments. As hypothesized (H3), relative advantage was found to increase usage of internet banking. As hypothesized (H4) there is a strong positive correlation between perceived security and perceived information. Based on the findings it can be seen that the most different segmentations are those in the age bracket of 18-25, those above 66 and the rest. This means that these groups need different kinds and amounts of information and that they perceive risk in internet banking differently. The practical implication of these findings is that banks are advised to target these groups differently. If they do they can obtain significant efficiencies.

Our findings give indication as to what degree of adaptations to expect and what degree of information is needed for each segment. Younger segments are often more willing to take on risk. This has always been so, for as long as we have been able to gather and measure data. But, there is another factor here, which will change within a generation, which we may call the innovation factor of risk. As internet banking is new the older segments show themselves to be extra careful. However, we may assume that this will change, that within a generation the older segment will be more willing to take on risk in this domain as they become more familiar with the technology.

In other words, we can expect greater discrepancies in willingness to take on risks with innovative technology. Thus banks do not only have to study reactions to new technology, they also have to figure out how fast each segment, but in particular the older segments, may be willing to adapt, if at all. If we studied this over time we could be expected to come up with an adaptation curve for this new technology in banking. We could then correlated this curve with the more established curve of the technology adaptation lifecycle, also called the adaptation curve, to see what correlation exists between different adapters (innovators, early adaptors, early majority, late majority and lagers) and age segments over time. The result could be a dynamic model which we could then compare with innovations in other industries. For theoretical support of these cycles we could look to biology and evolutionary theory.

For future studies, it could also be of interest to do a broader segmentation, not only looking at age and gender, but also geographical location, income and education level, to give a few examples. This test was done in Sweden. It may be that other cultures see these issues differently. We could also look more specifically at what kinds of information are required and what types of risks are deemed more important for users.

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