
E-banking: Relevance of demographics with customer's perception of various risk dimensions in the usage of E-banking services

Madhuri S. Bankar

(Assistant Professor)

HOD, Department of Information Technology,
KBP College, Vashi, Navi Mumbai.

Abstract

This paper emphasizes on the relevance of demographics with customer's perception of various risk dimensions in the usage of E-banking services in Thane city of Maharashtra. A cross sectional study has been conducted to collect the data. Statistical software SPSS is used to carry out the statistical test on the data. The analysis resulted in: no difference in the opinion of gender with regards to various risk dimensions except financial risk; no difference of E-banking users of different age groups with regards to various risk dimensions except security and time risk; no difference of E-banking users of different occupation with regards to various risk dimensions except financial risk; no difference of E-banking users belong to different income groups with regards to various risk dimensions; no difference of E-banking users belong to different education level with regards to various risk dimensions, except financial risk; no difference of E-banking users having different level of experience with regards to various risk dimensions, except security and time risk.

Keywords: E-Banking; Risk Dimensions; Customer's Perception; Demographics.

INTRODUCTION

The information technology revolution in the banking industry distribution channels began in the early 1970s, with the introduction of the credit card, the Automatic Teller Machine (ATM) and the ATM networks (Pang, 1995). This was followed by telephone banking, cable television banking in the 1980s, and the progress of Personal Computer (PC) banking in the late 1980s and in the early 1990s (Giannakoudi, 1999). Banking has always been highly information intensive activity that relies heavily on IT to acquire process and deliver the information to relevant users. Not only is IT critical in processing of information, it provides way for the banks to differentiate their products and services. Banks find that they have to constantly innovate and update their demanding and discerning customers and to provide convenient, reliable and expedient services.

Driven by the challenge to expand and capture a large share of the banking market, many banks consider a revolutionary approach to deliver their banking services via a new medium: the Internet. Recently it has been rapidly gaining popularity as a potential medium for electronic commerce (Crede, 1995, OOI, 1999, US. Department of Commerce, 1999). The rapid growth of Internet has presented a new host of opportunities as well as threats to business. With the rapid diffusion of the Internet, banking in cyberspace is fast becoming an alternative channel to provide banking services and products. The Internet is now being considered as a strategic weapon and will revolutionize the way banks operate, deliver and compete against one another. As "Business Week" noted, "Banking is essential to modern economy, banks are not" (quoted in Financial Times, 1996). This statement is supported by a recent report from Booz Allen & Hamilton (Warner, 1996) that claims the Internet poses a very serious threat both to customer base of the traditional banking oligopoly and to its profits.

The emergence of E-banking has prompted many banks to rethink their IT strategies in order to stay competitive. Customers today are demanding much more from banking services. They want new level of convenience and flexibility (Birch and Young, 1997; Lagoutte, 1996) on top of powerful and easy to use financial management tools and products and services that traditional banking could not offer. Despite many potential benefits, many problems need to be addressed related to Internet Banking. Although there has been a rapid diffusion of E-banking by commercial banks in India, e-Banking services have not been widely adopted by bank customers. This may be due to lack of trust, poor customers' attitude and risks towards services.

RESEARCH GAP

Previous studies on E-banking covered the issues related to familiarity, awareness, adoption, perception usage and economic benefits of internet banking in India. In the present study, the researcher emphasizes on the relevance of demographics with customer's perception of various risk dimensions in the usage of E-banking services in Thane city of Maharashtra.

OBJECTIVES OF THE STUDY

1. To understand the demographic profile of E-banking users in Thane city.
2. To identify the various risk dimensions associated with the usage of E-banking.
3. To understand the relevance of demographics with customer's perception of various risk dimensions associated with the usage of E-banking services.

HYPOTHESES OF THE STUDY

H0: Null Hypothesis & Ha: Alternate Hypothesis

H01: Customer's perception of various risk dimensions in the usage of E-banking is independent of gender.

Ha1: Customer's perception of various risk dimensions in the usage of E-banking is dependent of gender.

H02: Customer's perception of various risk dimensions in the usage of E-banking is independent of age.

Ha2: Customer's perception of various risk dimensions in the usage of E-banking is dependent of age.

H03: Customer's perception of various risk dimensions in the usage of E-banking is independent of occupation.

Ha3: Customer's perception of various risk dimensions in the usage of E-banking is dependent of occupation.

H04: Customer's perception of various risk dimensions in the usage of E-banking is independent of level of monthly income.

Ha4: Customer's perception of various risk dimensions in the usage of E-banking is dependent of level of monthly income.

H05: Customer's perception of various risk dimensions in the usage of E-banking is independent of education.

Ha5: Customer's perception of various risk dimensions in the usage of E-banking is dependent of education.

RESEARCH METHODOLOGY

This study is descriptive in nature. In this study, secondary data were collected through the already existing literature from journals, newspapers, textbooks, articles, websites etc. On the other hand, primary data were collected through a structured interview in the form of questionnaire from 500 E-

banking users belonging to various banks in Thane city, Maharashtra. Stratified Random sampling method is adopted for identifying approximately 500 respondents from nine prabhag samities (area covered by Thane Municipal Corporation) of Thane city. Questionnaire consists of part-I and part-II having 20-25 closed ended questions. Part-I of the questionnaire is used to collect demographic profile of the respondents. Part-II of the questionnaire is used to measure the perceptions of respondents regarding various risk dimensions in the usage of E-banking. Five point Likert scale with responses ranging from totally disagree (1) to totally agree (5) is used to measure the perceptions of respondents regarding various dimensions of risk in the usage of E-banking. The relevance of demographic with customer's perception of various risk dimensions associated with E- banking is measured using statistical tests such as Mann Whitney U test, Kruskal Wallis test etc. using statistical software SPSS.

LITERATURE REVIEW

This chapter presents the review of literature on the studies conducted in the past. However, most of the reviewed literature presented is cited from the studies from developed as well as developing countries.

Hewer & Howcroft (2000), states that the emergence of new forms of technology has created highly competitive market conditions for bank providers. While this is a global phenomenon, creating a truly global marketplace, penetration of internet banking into less developed countries lags behind that of the developed Western countries. While, poor economies, education and infrastructure are obvious factors in the slow adoption of technology in some of the developing countries, there are also the other issues like trust that plays role.

The evolution of internet banking has altered the nature of personal-customer banking relationships that has enabled electronic channels to perform many banking functions that would traditionally be carried out over the counter (Giannakoudi, 1999).

The information technology revolution in the banking industry distribution channels began in the early 1970s, with the introduction of credit card, the Automatic Teller machine and the ATM networks (Pang, 1995).

Akhlaq & Shah, (2011) investigate and find out the complexities or factors that resist the customers to adopt internet banking in Pakistan.

Liao et al. (2003) suggest that consumer perceptions of transaction security, transaction accuracy, user friendliness, and network speed are the critical factors for success in Internet banking.

Ndiwalana, (2008) finds that the rate of adoption of internet banking has not risen as strongly as expected.

Chiu, (2005) & Schlosser, (2003) identify attitudes towards internet banking to be the customer's positive or negative feelings related to accomplishing the banking behaviour on the internet.

An obstacle to internet banking adoption has been lack of security and privacy over the internet (Bhumani, 1996, Cockburn and Wilson, 1996; Quelch and Klein, 1996).

Trust and perceived risk reduction are very critical factors in electronic banking since they reduce the social complexity for the internet banking and drive to the achievement of electronic goals and without them, there is a failure of such goals and relations. (Morgan and Hant, 1994).

Trust is the belief and confidence that consumers have about the other party i. e. about banks and services they offer through the internet, (Pavlou, 2003).

Internet trust enables favourable expectations that the internet is reliable and predictable that no harmful consequences will occur if the online consumer uses the internet as a transaction medium for his/her financial transaction (Pavlou and Fygenson, 2006).

Cheung (2000), defined complexity as the degree to which an innovation is considered relatively difficult to understand and use and found it to negatively influence the adaptation of internet.

Complexity is also considered as the exact opposite of ease of use, which has been found to directly impact the adoption of the internet (Lederer et al., 2000).

According to Tan and Teo (2000) if customers are given the chance to try the innovation it will minimize certain unknown fears, especially when customers found that mistakes could be rectified and thus providing the predictable situation.

The concept of consumer-perceived risk has been widely dealt within the literature and has been shown the influence consumer behaviour to varying degrees and in varying contexts (Cunningham *et al*, 2005; Mitchell, 1998).

Consumer behaviour researchers most often define perceived risk in terms of consumers perceptions of the uncertainty and potential adverse consequences of buying a product or service (Littler and Melanthiou, 2006).

Sathye(1999) investigates internet banking adoption by Australian consumers and identifies security concerns and lack of awareness as the main obstacles to adoption.

Gerrard and Cunningham (2003) found security concerns over internet banking high in both adopters and non-adopters in Singapore.

Research by Lee, (2005) on USA consumers showed greater concern among prospective adopters than current adopters over transaction security and monetary benefits when choosing an internet based banking service.

Cheng, (2006) found perceived web security to be a significant determinant of consumers' acceptance of online banking.

Aladwani's study (2001) found that potential online banking customers ranked internet security and customers' privacy as the most important future challenges facing banks.

The uncertainty regards the value of services, concerns about the reliability of internet and related infrastructure and the spatial and temporal separation between users and bank personnel (Flavia'n, 2006).

In the case of internet banking the time risk may be related to the time involved in dealing with erroneous transactions. Furthermore, website download speed is another factor influencing online banking adoption (Jayawardhena and Foley, 2000).

The decision to adopt technology by men are mainly determined by the perceived usefulness of technology use, whereas women, in contrast, are more influenced by their perceptions about a system's ease of use and social influences (Venkatesh and Morris, 2000).

(Karjaluoto, et al. 2002, Matilla et al. 2003, Sathye, 1999) show that those who belong to upper and middle class and have high level occupations are more likely to use internet banking.

Dickson, (2000) suggests that income and education levels are especially relevant in explaining the use of internet services and other technological devices for instance, the adoption of home internet services involves several costs, both in terms of the financial resources and skills needed for the use of new technologies.

Burke, (2002) suggests that education is positively related to an individual's level of internet literacy. People who buy financial services over the internet have higher incomes and greater ICT use those who do not.

It is also found that prior computer experience and expertise have indirect effect on perceptions of users. (Petrus Guriting and Nelson Olyndubisi, 2006)

Risk Dimensions

The concept of risk perception was introduced by Baur in 1960, refers to the perceived dangers and uncertainty during and after purchases. Research on consumer risk perceptions and risk dimensions continues, and different researchers have categorized this in different ways:

Jacoby and Kalpan (1972) have put risk dimensions into six groups:

1. Financial
2. Performance
3. Psychological
4. Physical
5. Social
6. Time

Stone and Mason (1995), determined that risk perception had six dimensions:

1. Financial
2. Social
3. Time
4. Performance
5. Psychological
6. Physical

Roselius (1971) classified risk types as:

1. Performance
2. Physical

- 3. Socio-Psycological
- 4. Time

Lovelock, et. al., (1999) suggest seven risk types in the services sector:

- 1. Financial
- 2. Time
- 3. Functional
- 4. Psychological
- 5. Physical
- 6. Social
- 7. Sensorial

Littler and Melanthiou (2006), mention six types of risks perceived by consumers of internet banking:

- 1. Financial
- 2. Performance
- 3. Time
- 4. Social
- 5. Psychological
- 6. Security

Of the above mentioned risk dimensions researcher has identified following four risk dimensions as: **financial risk, security risk, time risk and performance risk.**

DATA ANALYSIS & INTERPRETATION

H01: Customer’s perception of various risk dimensions in the usage of E-banking is independent of Gender.

Table 1: Hypothesis Test Summary- Risk Dimensions * Gender

Sr. No.	Null Hypothesis	Test	Z-Value	Sig,	Decision
1.	The distribution of Financial Risk is the same across categories of Gender	Independent Samples Mann-Whitney U Test	-11.708	.000	Reject the null hypothesis
2,	The distribution of Security Risk is the same across categories of Gender	Independent Samples Mann-Whitney U Test	-1.77	.077	Retain the null hypothesis
3.	The distribution of Time Risk is the same across categories of Gender	Independent Samples Mann-Whitney U Test	-0.45	.650	Retain the null hypothesis
4.	The distribution of Performance Risk is the same across categories of Gender	Independent Samples Mann-Whitney U Test	-0.255	.799	Retain the null hypothesis

Asymptotic significant are displayed. The significance level is .05.

From table 1, it can be concluded that there is no statistically significant difference found in male and female respondents with regards to security risk, time risk and performance risk ($P > 0.05$) except financial risk ($P < 0.05$).

H02: Customer’s perception of various risk dimensions in the usage of E-banking is independent of Age.

Table 2: Hypothesis Test Summary- Risk Dimensions * Age

Sr. No.	Null Hypothesis	Test	Chi-Square	Df	Sig,	Decision
1.	The distribution of Financial Risk is the same across categories of Age	Independent Samples Kruskal-Wallis Test	1.568	3	.667	Retain the null hypothesis
2,	The distribution of Security Risk is the same across categories of Age	Independent Samples Kruskal-Wallis Test	12.36	3	.006	Reject the null hypothesis
3.	The distribution of Time Risk is the same across categories of Age	Independent Samples Kruskal-Wallis Test	13.57	3	.004	Reject the null hypothesis
4.	The distribution of Performance Risk is the same across categories of Age	Independent Samples Kruskal-Wallis Test	5.123	3	.163	Retain the null hypothesis

Asymptotic significant are displayed. The significance level is .05.

From table 2, it can be concluded that there is no relevance of age on risk dimensions associated with the usage of e-banking in case of financial and performance risks ($p > 0.05$). However in case of time and security risks there is significant difference ($p < 0.05$).

H03: Customer’s perception of various risk dimensions in the usage of E-banking is independent of Occupation.

Table 3: Hypothesis Test Summary- Risk Dimensions * Occupation

Sr. No.	Null Hypothesis	Test	Chi-Square	Df	Sig,	Decision
1.	The distribution of Financial Risk is the same across categories of Occupation	Independent Samples Kruskal-Wallis Test	15.82	3	.001	Reject the null hypothesis
2,	The distribution of Security Risk is the same across categories of Occupation	Independent Samples Kruskal-Wallis Test	4.76	3	.190	Retain the null hypothesis
3.	The distribution of Time Risk is the same across categories of Occupation	Independent Samples Kruskal-Wallis Test	2.38	3	.497	Retain the null hypothesis
4.	The distribution of Performance Risk is the same across categories of Occupation	Independent Samples Kruskal-Wallis Test	5.31	3	.150	Retain the null hypothesis

Asymptotic significant are displayed. The significance level is .05.

From table 3, it can be concluded that there is no relevance of occupation on risk dimensions with the usage of e-banking in case of security risk, time risk and performance risk ($P > 0.05$), except financial risk ($P < 0.05$).

H04: Customer’s perception of various risk dimensions in the usage of E-banking is independent of Monthly Income.

Table 4: Hypothesis Test Summary- Risk Dimensions * Monthly Income

Sr. No.	Null Hypothesis	Test	Chi-Square	Df	Sig.	Decision
1.	The distribution of Financial Risk is the same across categories of Monthly Income	Independent Samples Kruskal-Wallis Test	0.65	3	.885	Retain the null hypothesis
2,	The distribution of Security Risk is the same across categories of Monthly Income	Independent Samples Kruskal-Wallis Test	1.66	3	.646	Retain the null hypothesis
3.	The distribution of Time Risk is the same across categories of Monthly Income	Independent Samples Kruskal-Wallis Test	1.96	3	.573	Retain the null hypothesis
4.	The distribution of Performance Risk is the same across categories of Monthly Income	Independent Samples Kruskal-Wallis Test	1.48	3	.688	Retain the null hypothesis

Asymptotic significant are displayed. The significance level is .05.

From table 4, it can be concluded that there is no statistically significant difference found in the opinion of respondents having different level of monthly income with regards to various risk dimensions in the usage of E-banking (P > 0.05).

H05: Customer’s perception of various risk dimensions in the usage of E-banking is independent of Education.

Table 5: Hypothesis Test Summary- Risk Dimensions * Education

Sr. No.	Null Hypothesis	Test	Chi-Square	Df	Sig.	Decision
1.	The distribution of Financial Risk is the same across categories of Education	Independent Samples Kruskal-Wallis Test	10.40	3	.016	Reject the null hypothesis
2,	The distribution of Security Risk is the same across categories of Education	Independent Samples Kruskal-Wallis Test	6.73	3	.081	Retain the null hypothesis
3.	The distribution of Time Risk is the same across categories of Education	Independent Samples Kruskal-Wallis Test	6.56	3	.086	Retain the null hypothesis
4.	The distribution of Performance Risk is the same across categories of Education	Independent Samples Kruskal-Wallis Test	4.96	3	.175	Retain the null hypothesis

Asymptotic significant are displayed. The significance level is .05.

From table 5, it can be concluded that there is no significant difference in the opinion of respondents with different educational background with regard to security risk, time risk and performance risk (P > 0.05), except financial risk (P < 0.05).

CONCLUSION

The study revealed that demographic characteristics plays a very important role in understanding the various risk dimensions associated with the usage of e-banking services. Findings of the study show that except monthly income all the other demographic characteristics such as gender, age, education, occupation etc. have significant impact on the risk dimensions associated with the usage of e-banking. Except financial risk, male and female respondents shows significant difference in opinion in security, time and performance risk. There is no relevance of age on financial and performance risk, except security and time risk. Except financial risk, there is no relevance of occupation on security, time and performance risk. There is no significant difference found in the opinion of respondents having different level of monthly income with regards to various risk dimensions in the usage of e-banking. Except financial risk, there is no significant difference in the opinion of respondents with different educational background with regard to security, time and performance risk.

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