



The Role of Security And Technology Support in The Adoption of E-Banking

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ABSTRACT

Banking is Information challenging business and information technology (IT) plays a key role in it. The growing competitive situations in the financial services market have forced to broaden and activate other delivery channels. The latest delivery channel to be set off is the electronic banking. This paper discusses the effect of security on the adoption of e banking. It also discusses how technology support offered to the respondents leads to a rise in customer adoption of e banking. The study was conducted among 346 respondents in Chennai city. The respondents were e banking users and comprised of both males and females. All respondents had graduation as their minimum qualification level. It was revealed from the study that both gender and occupation does not influence the technology support. On the other hand there is a significant difference in the age groups regarding the technology support in the usage of e banking. The study also reveals that there is significant correlation among security, Technology support and customer adoption.

KEYWORDS : Security, Technology Support, Customer adoption, Internet banking.

1. INTRODUCTION

Service Industries have seen an incredible growth with the usage of Information Technology (IT) mostly referring to computers and peripheral equipments in the recent past. Banking industry considered the future evolution of the financial services industry, is inclined by the most recent developments in the Information Technology. Latest business thinking, joined with technology is rapidly changing the way personal financial are designed and delivered. Banking is Information challenging business and information technology (IT) plays a key role in it. The growing competitive situations in the financial services market have forced to broaden and activate other delivery channels. The latest delivery channel to be set off is the electronic banking. The use of technology in the delivery of banking services is becoming well-known as it is being engaged to cut down costs and eliminate uncertainties (Mathew Joseph, Cindy McClure, Beatriz Joseph, 1999).

1.1 E – BANKING

E – Banking is the most recent delivery channel of banking services which is used for both business-to-business (B2B) and business-to-customer (B2C) transactions. However, in factual sense, activities like payment of bills and invoices, transfer of funds between accounts, applying for a loan, payment of loan instalments, sending funds to third parties via emails or internet connections regardless of where the client is located is included in e banking. Services through which a bank customer can request information and carry out most retail banking services via computer, or mobile phone is referred to as e – banking. (Daniel 1999; Molls 1998; Sathye 1999). Burr (1996) represent e-banking as an electronic connection between the bank and customer in order to organize, manage and control financial transactions. The various ways which includes PC banking, online banking, Internet banking, telephone banking or mobile banking in which customer can contact their banks without having to be actually present at the bank branch is referred as e banking. Leow, Hock Bee (1999). Therefore, e banking includes all these ways of banking business electronically. The banking has observed a major change with the creation of e-Banking. E-Banking is a web based service, which facilitates the customer of the banks to make use of the bank's services through web.

2. REVIEW OF LITERATURE

2.1 Security

The customer's perception of security and privacy are the two important causing factor of belief or trust on e – banking from the past literature. The Fundamental essentials for any business transactions are to guarantee security and privacy before passing through any sensitive information. In fact the major barrier to electronic commerce is been caused by the non existence of privacy and security (Adam et al. 1999). (Chen and Barnes, 2007; Sathye, 1999) revealed that the

usage of online banking is considerably affected by the non availability of security and privacy in banks. Even though the customers know about these risks they have a poor perceptive about these risks (Roboff and Charles (1998). Though they had a high level of confidence towards their bank, on the other hand it was very low towards the technology aspect (Howcroft et al., 2002).

2.2 Technology Support

When an easy access of technological infrastructure and technological resources is available, it is said to be technologically supportive condition. (Goh 1995). He also revealed that when these resources are easily accessible banking services through these technological ways will also be more viable. With an easy access provided, it would definitely increase the number of users of Internet banking. (Goh 1995) also suggested that support can be rendered even from the government which would be an added advantage in providing the technological support.

3. RESEARCH FRAMEWORK

The objective of this research is to study whether age gender and occupation has an influence on Security & Technology support and whether there is significant relationship between Security, technology support and the adoption of internet banking. The data was collected among 346 respondents who have hands on experience on internet banking form Chennai city.

3.1 Sample

This study aims to find out respondents' perceptions on technology support towards the usage of internet banking services based on the age, gender and occupation of the respondents. Primary data was collected from potential internet banking users in Chennai city. The survey yielded 346 usable responses among the responses 68.8% were males and 31.2% were females. The demographic profile showed that users are relatively young and generally well educated. The reliability of all instruments was assessed by the Cronbach alpha reliability coefficient. The coefficient alphas (Cronbach alphas) for Security was 0.867, for Technology support was 0.854 and for customer adoption was 0.825 which revealed an acceptable level of reliability (alpha >0.70).

3.2 Profile of the respondents

41.9% of the respondents were in the age group of 41-60 years of age. Most (52.3%) of the respondents belong to 21-40 age group. only 5.8% of the respondents were above 60 years. 39.3% of the respondents were post graduates, followed by Professionals (32.1%) and 28.6% of the respondents were graduates. Majority (90.5) of the respondents were working with private organisations. 3.5% of the respondents were doing their own business, 1.7% of the respondents

with government sector and 4.3% of the respondents were unemployed.

3.3. Measures

Respondents were asked to state the extent to which they agree with the statements using a five-point Likert scale which ranged from 5 = 'strongly agree' to 1 = 'strongly disagree'. To measure the level of customer adoption, a five item scale developed by (Shih & Fang 2004) was used. Tan & Teo (2000) five item scale was used to measure security. To measure the Technology support a five point scale developed by Goh (1995) was used.

3.4 Hypotheses for the Study

- There is no significant difference in the perception of technology support of the respondents towards internet banking between different age groups.
- There is no significant difference in the perception of technology support of the respondents towards internet banking based on occupation of the respondents.
- There is no significant difference in the perception of technology support of the respondents towards internet banking between different genders.
- There is no significant correlation between Security & Technology support.
- There is no significant correlation between Security & Customer adoption.
- There is no significant correlation between Technology support and Customer adoption.

3.5 Tools Used For Analysis

To find out the significant difference in the technology support based on Age and Occupation Analysis of Variance was used. t – test was used to find out the significant difference in the technology support between male and female respondents. Correlation was used to find out the significant relationship between the variables.

4 RESULTS

Table 1 Influence of Age on Technology Support

	Age groups			F- value	p value
	21-40	41-60	>60		
Technology support	8.607 ²	8.455 ²	7.850 ¹	4.584	0.011*

Source: Primary Data Note * denotes significance at 5 per cent level

The ANOVA table reveals that there is significant difference in the perception of Technology support (at 5 per cent level of significance) of the respondents belonging to different age group. We can infer that age significantly influences the perception towards the technology support of the respondents.

The Duncan post-hoc analysis shows that the perception towards the technology support of the respondents belonging to >60 age group was lower and significantly different from the other groups. The highest mean value (8.607) in the 21-40 age groups signifies that the perception towards the technology support is highest in this group.

Table 2 Influence of Occupation on Technology support

	Occupation				F- value	p value
	Unemployed	Business	Private	Retired		
Technology support	8.60	8.50	8.51	7.50	1.727	0.161

Source: Primary Data

The ANOVA table reveals that there is no significant difference in the perception towards technology support of the respondents based on occupation. We can infer that the occupation of the respondents does not significantly influences the perception towards technology support among respondents.

Table 3 Independent Sample t-test – Influence of Gender on Technology support

Variable	Gender	N	Mean	SD	t-value	Sig Value
Technology support	Male	238	8.49	1.10	0.316	0.790
	Female	108	8.53	1.09		

Source: Primary Data

An independent sample t-test (Table 5) was conducted to find out the difference in the technology support based on gender. There is no significant difference in the scores of Technology support of male respondents (Mean=8.49, SD=1.10) and female respondents (Mean=8.53, SD=1.09); t = 0.316, P value = .790. The t- test results suggest that gender does not have an effect on the technology support.

Table 4 Correlation between Security, Technology Support & Customer adoption

	Mean	SD	Security	Technology Support	Customer Adoption
Security	17.3028	2.7253	1	0.773**	0.307**
Technology Support	12.5632	1.7802	0.773**	1	0.492**
Customer Adoption	11.8239	1.7464	0.307**	0.492**	1

Note: ** Correlation is significant at 0.01 level (2-tailed)

The correlation analysis reveals that there is a significant positive correlation between Technology support and security(r = 0.773, p<0.01) and customer adoption (r = 0.492 p<0.01). We can infer that when Technology support increases, security towards internet banking and customer adoption increases. There is a positive correlation between security and customer adoption (r = 0.307 p<0.01). When security of internet banking increases, the level of customer adoption in using internet banking increases. Perception about security is positively correlated with customer adoption(r = 0.307 p<0.01).

5. DISCUSSIONS

Most of the respondents have used almost all the internet banking services provided by their banks. There is significant difference in the perception of technology support of the respondents belonging to different age group. We can infer that age significantly influences the perception towards technology support of the respondents. People who are in the old age group will be very much cautious in using these technology services, as they are used to the traditional physical banking and their age does not permit to cope with the advancement in technology. On the other hand young age group people who have started their carrier have high hands on experience on these technology services and wish to carry out all their transactions through these to avoid wastage of time and carry out their transactions in a simple and easy way. The mediocre age group tries to strike a balance between the two age groups and try to cope with these technological changes. Occupation has no role to play in the availability of technology support. It does not influence the perception of respondents towards technology support. When considering about the perception towards the technology services, same services are offered to people who might be in any occupation. There is no influence of occupation on the perception of technology support offered by their banks. This might be due to the awareness created by the respondents' banks. The t- test results suggest that gender does not have an effect on technology support. With regard to the technology support there isn't much difference as both genders are employed and have a varied knowledge on these services offered by their banks. There is a positive correlation between Technology support and customer adoption. With the advent in the technology customers adopt these services more. A support of technology services will increase the customer adoption of internet banking. With an increase in the technology support the respondents' share sense of security in the usage of internet banking. A rise in the support of technology services provides more security in using these internet banking services. There is a positive correlation between security and customer adoption. When the respondents have a positive perception on security aspects of internet banking, it increases customer adoption. Banks can create

more awareness campaigns on their services offered to their customers. Banks can also improve their security part of their services which will enable more customers to make use of these technological services.

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