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An Explorative Study of Satisfaction Level of Cyber-crime Victims with Respect to E-services of Banks

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Abstract

It is important for the organizations to make sure that how far the customers are satisfied with the services they offer. This has directed to a surge in the popularity of measuring customer satisfaction in last few years. (Rexha et al. 2003) revealed that the satisfaction of corporate clients with their bank does not directly affect their propensity to use electronic banking. However, satisfaction does have a significant impact on trust and commitment, both of which do affect the likelihood that corporate clients will use electronic banking. The research paper attempts to study the assurance and responsiveness of public and private sector banks with respect to their customers exclusively cyber-crime victims. Most of the customers use electronic banking for their routine transactions and practice the various electronic services provided by banks. The paper further highlights the satisfaction level of cyber-crime victims with regard to the e-services of banks. This paper presents the preliminary findings of a research study to identify the essential ingredients of successful BCM implementation based on experiences of banks in India.

Keywords: **Cyber-crime, E-services, Cheque Book Reconciliation, Confidentiality, Reliability**

INTRODUCTION

Cyber-crime is emerging as a challenge for national and economic security. Many industries, institutions and public and private sector organizations (particularly those within the critical infrastructure) are at significant risk. Comparatively some organizations have identified organized cyber-criminal networks as its most potential cyber security threat and some are ready to defend such security threats. The complexity of modern enterprises, their reliance on technology and the heightened interconnectivity among organizations have created widespread opportunities for theft, fraud and other forms of exploitation by offenders both outside and inside an organization. With the growth of e-business, internal and external perpetrators can exploit traditional vulnerabilities in seconds. They can also take advantage of new weaknesses in the software and hardware architectures that now form the backbone of most organizations (KPMG 2000). In a networked environment, such crimes can be committed on a global basis from almost any location in the world (Armstrong 2000), and they can significantly affect an organization's overall work culture. Network and computer attacks have become common issues in today's world. Any online computer is under threat from viruses, worms and attacks from hackers.

Public users as well as business users are attacked on a regular basis. As organizations develop and refine their e-business strategies, they need to consider the issues that influence the Confidentiality, Integrity and Availability of their data. In this context, they need to know how they can be affected by the new risks of e-crime and how inadequate preparation could leave them open to an attack that could easily degrade the value of their businesses. Thus, the need to fight computer and network challenges in form of cyber-attacks is becoming progressively more critical for security professionals (Hansman & Hunt 2005).

Electronic banking, with its inherent advantages for the banking industry as well as the customer, is an area with tremendous growth potential. This field has also seen a corresponding rise in network security breaches, data thefts, data losses, identity thefts and other white collar crimes resulting in huge losses to the banking industry. Losses by the banking industry worldwide due to white collar crimes are in huge amounts and far outstrip conventional methods of bank robbery. The exponential speed at which internet banking has evolved, the ubiquitous and global nature of open networks and the overwhelming reliance on IT has all added up to provide a platform for enhanced security challenges. Amendments in the IT act, banking regulations and the various wireless networking issues that need to be taken into account by the industry.

When a bank's system is connected to the internet or intranet, an attack could originate anytime, anywhere. Some essential level of security must be established before business on the internet can be reliably conducted. An attack might be inform of unauthorized access, destruction, corruption or alteration of data or any type of malicious procedure to cause network failure, reboot or hang. Modern security techniques have made cracking very tedious but not impossible. Furthermore, if the system is not configured properly or the updated patches are not installed then hackers may crack the system using security hole. A wide array of information regarding security hole and their fixes is freely available on the web.

REVIEW OF LITERATURE

Customer satisfaction is one of the vital constituents of any organization's strategies, as the customer is the vital source of income for any industry. The organizations are focusing on customer satisfaction to expand their product line. Majority of the banks consider customer satisfaction as its critical success factor, which is due to stiff competition in banking industry. That's why with the competition mostly the ultimate customer benefited (Khattak and Kashif 2010). Now, many financial institutions are trying to increase the customer satisfaction and their retention toward the financial institution through improving the quality of the services and the products they offered to its customers.

Customer satisfaction has increasingly been recognized as an important component of contemporary marketing thought, particularly in case of service industries (Bejou, Ennew and Palmer 1998). It is generally argued that if customers are satisfied with the product and/or service received after its use, then it is likely that they would engage in a repeat purchase and try line extension. In other words, it is the feeling or attitude of a customer toward a product and/or service after it has been used (Wells and Prensky 1996). (Parasuraman, Zeithaml and Berry 1988) used their service quality (SERVQUAL) instrument to operationalize customer satisfaction with service quality by depicting the

said satisfaction as a five-factor structure construct, comprising tangibles, responsiveness, empathy, reliability and assurance. A satisfied customer conveys positive messages about it to others. An unsatisfied customer, on the other hand, is likely to switch to a substitute product and/or service the next time when he/she feels the same need. The same customer will also engage in a negative word of mouth, causing a serious damaging effect on the business (Naser, Jamal and Al-Khatib 1999; Metawa and Almossawi, 1998). Therefore, it is vital that companies make sure their customers are satisfied with the products/services they offer. This has led to an increase in the popularity of measuring customer satisfaction in recent years (Gulledge 1996). (Rexha et al. 2003) revealed that the satisfaction of corporate clients with their bank does not directly affect their propensity to use electronic banking. However, satisfaction does have a significant impact on trust and commitment, both of which do affect the likelihood that corporate clients will use electronic banking. Satisfaction therefore tortuously affects the customer's preference to use electronic banking.

Customer satisfaction has been traditionally studied in marketing area as one of the critical attitudinal variables that may influence customer behavior. Best of the studies of satisfaction in marketing literature follow the disconfirmation theory. It assumes that satisfaction results through appraisal between perceptions of a product's performance and expectations (Oliver and Swan 1989). This theory, representing psychological evaluation processes, provides an understanding of expectations, desires, experiences and performances that may affect customer attitudes. Based on this theory, the study made by (Mckinney, Yoon and Zahedi 2002) suggested that the difference between expectations and actual performance on system quality and information quality is likely to determine Web customer satisfaction. Similarly, (Khalifa and Liu 2002) posed that confirmation/ disconfirmation of pre-adoption expectations and desires, upon adoption, could influence overall customer satisfaction. While many researchers have supported the disconfirmation theory, it is hard to operationalize the theory consistently for all product categories (Churchill and Suprenant 1982).

Several approaches have been employed to assess satisfaction (Spreng, Mackenzie and Olshavky 1996). (Giese and Gote 2000) summarized more than 20 definitions of satisfaction from prior studies in the marketing area. They criticized a lack of consensus about the process leading to satisfaction and the satisfaction construct, and favoured the development of context-specific satisfaction measures. These approaches rely on a customer's affective or emotional response as forming the basis for the measurement of customer satisfaction specific to a context, rather than assessing disconfirmation. Information systems research has also employed a related construct as user satisfaction. Marketing based views consider an Internet shopping store to be a type of shopping store, and suggest obtaining higher customer satisfaction through improvements in conventional factors such as delivery, store image, and service quality (Liau 2002).

Negative impacts such as banking scandals, closure programs due to poor management, and security problems with Internet banking are all undermining credit cardholders' trust in banks (Hwang, Yeh and Li 2003). Based on the above mentioned literature, it can be concluded that various studies have been performed to measure the satisfaction level of customers, but there is an ample scope to conduct research on the satisfaction level of cyber-crime victims specially in banking sector.

OBJECTIVES OF THE STUDY

- To study the responsiveness and assurance of public and private sector banks with cyber-crime victims
- To study the satisfaction level of cyber-crime victims of with their banks' e-services.

RESEARCH METHODOLOGY

The study pertains to satisfaction level of cyber-crime victims with towards e-services in public and private sector banks in Uttarakhand. Survey methodology is used to collect the primary data. The primary data was collected on the basis of questionnaires administered to various respondents in the state of Uttarakhand. The customers who had been the sufferer of cyber-crime have been chosen as the respondents of the survey. The secondary data was collected from various published reports available nationally or internationally. It also includes portals of Reserve Bank of India, Antiphishing Working Group, Deloitte, KPMG, Ministry of Information Technology (Government of India), Cert-in, State bank of India, Punjab National bank, Union Bank of India, ICICI and HDFC.

Sampling design

In this research probability sampling procedure has been used. In this study, I have applied Stratified Random sampling. Since Uttarakhand is a newly born state and most of the population reside in remote areas where the concentration of electronic banking is either nil or not distributed uniformly, hence the universe is heterogeneous. In this case, stratified random sampling is used to stratify the sample on the basis of name of bank, age, gender, highest qualification, income, job type and dealing with bank/ experience with bank.

Universe

Geographical region is divided on the basis of different districts of Uttarakhand. The total no. of sample size is 100. In this research, sample size selected randomly on the basis of Cyber Crime victims of selected public and private sector banks. The entire Universe includes population of people in the selected districts on which the study is focused. Dehradun, Haridwar, Chamoli, Nainital and Pauri districts have been selected for study purpose on the basis of electronic services usage and cyber-crime victimization.

Tools for Analysis

The data has been analyzed keeping the objective of the study in view. The analysis is finally based on data on several aspects in tabulated form, besides making use of simple descriptive tools of statistics such as mean percentage and standard deviation, possible relationship have been brought out through cross sectional analysis wherever necessary feasible. These relationships have been highlighted by computing the Chi-square & Karl Pearson coefficient of correlation.

Questionnaire

The data is collected by means of a structured questionnaire with five point Likert scale (1-5). It was based on literature review and developed in a close cooperation with experts from different research fields. The questionnaire is divided in three sections namely Respondent`s Details, Cyber Crime Handling (further subdivided in Database

Management, Cyber Crime Occurrence, Complaint Handling, Feasibility and Support) and Organizational Strategy (further subdivided in Employee Training, Customer Awareness Program, Security Policy, Data Classification Policy, Access Control Policy, Virus Prevention Policy, Intrusion Detection Policy, System Security, Acceptable Use Policy, Government Policy).

ANALYSIS OF RESULTS

Demographic profile constitutes age, gender, qualification, income, bank type, name of bank, job type and dealing with bank (in years). The Table 1 shows the demographic distribution of population used in the study.

Demographic Profile		Frequency	%
Type of bank	Public	78	78%
	Private	22	22%
Name of bank	State Bank of India	50	50%
	Punjab National Bank	18	18%
	Union Bank of India	10	10%
	ICICI	14	14%
	HDFC	8	8%
Gender	Male	74	74%
	Female	26	26%
Qualification	Masters	51	51%
	Bachelors	31	31%
	Diploma	4	4%
	Others	14	14%
Income	Less than 15000	32	32%
	15001-30000	24	24%
	More than 30000	22	22%
	Nil	22	22%
Age	20-30	67	67%
	31-40	24	24%
	41-50	4	4%
	>50	5	5%
Job Type	Government	45	45%
	Private	23	23%
	Business	2	2%
	Student	28	28%
	Others	2	2%
Dealing with Bank (in Years)	0-10	81	81%
	11-20	10	10%
	21-30	5	5%
	More than 30	4	4%

Table1: Demographic Profile of Customers

Hypothesis 1 (H1): There is no significant difference between responsiveness and assurance of public and private sector banks.

Majority of the respondents (77%) agree that they can rely on the bank for not misusing their information available in the documents and systems among which 60% respondents are having transactions with Government Banks while 17% respondents use private Banks for transactions (Table 2). The value of Karl Pearson coefficient of correlation is -0.02 which concludes that there is a negative correlation between assurance and type of banks. Calculated value of χ^2 for 4 degrees of freedom at 5% level of significance is +1.78 and tabulated value of χ^2 is 9.488. Since calculated value of chi-square is less than tabulated value therefore null hypothesis is accepted, which concludes that there is no impact of type of bank on reliance on the bank for not misusing their information.

Bank provides financial security and confidentiality, 85% customers opine). The Karl Pearson coefficient of correlation is - 0.017 shows a negative correlation between assurance and type of banks. Calculated value of χ^2 is +2.003 and tabulated value of χ^2 is 9.488, therefore null hypothesis is accepted or it can be concluded that there is no impact of type of bank on provision of financial security and confidentiality. Existing systems are highly reliable as per the opinion of majority of cybercrime victims (54%) among which 40% respondents are having transactions with Government Banks while 14% use private Banks for transactions (Table 2). The coefficient of correlation, -0.167 shows a negative correlation between assurance and type of banks. Calculated value of χ^2, i.e., 7.56 concludes that there is no impact of type of bank on high reliability of existing systems. 73 % respondents agree that the bank fosters a positive reputation in minds of public. The value of Karl Pearson coefficient of correlation is +0.02 which concludes that there is a positive correlation between assurance and type of banks. Calculated value of chi-square is less than tabulated value, therefore null hypothesis is accepted or it can be concluded that there is no impact of type of bank on high reliability of existing systems (Table 2).

Assurance			Type of bank			
			Government	Private	Total	Value
I can rely on the bank for not misusing my information available in the documents and systems (A)	Agree	Count	60	17	77	χ^2 = **1.78**
		%	60%	17%	77%	
	Undecided	Count	7	3	10	
		%	7%	3%	10%	
	Disagree	Count	11	2	13	R= - 0.02
		%	11%	2%	13%	
	Total	Count	78	22	100	
		%	78%	22%	100 %	
The bank provides financial security and confidentiality (A)	Agree	Count	65	20	85	χ^2 = **2.003**
		%	65%	20%	85%	
	Undecided	Count	9	1	10	
		%	9%	1%	10%	
	Disagree	Count	4	1	5	R= - 0.017
		%	4%	1%	5%	
	Total	Count	78	22	100	
		%	78%	22%	100 %	
The existing systems are highly reliable (A)	Agree	Count	40	14	54	χ^2 = **7.56**
		%	40%	14%	54%	
	Undecided	Count	15	6	21	

		%	15%	6%	21%	
	Disagree	Count	23	2	25	R= -0.167
		%	23%	2%	25%	
	Total	Count	78	22	100	
		%	78%	22%	100%	
The bank fosters a positive reputation in minds of public (A)	Agree	Count	55	18	73	χ^2=5.35
		%	55%	18%	73%	
	Undecided	Count	13	1	14	
		%	13%	1%	14%	
	Disagree	Count	10	3	13	R= 0.02
		%	10%	3%	13%	
	Total	Count	78	22	100	
		%	78%	22%	100%	

Table 2: Cross tabulation of assurance attributes and type of banks

67% respondents agree that bank and its associates provide true and meaningful information, while 22% respondents disagree with the facility (Table 3). The value of Karl Pearson coefficient of correlation is -0.102, which shows a negative correlation between provision of all true and meaningful information by bank associates & type of banks. The calculated value of χ^2 is less than tabulated value therefore null hypothesis is accepted or it can be concluded that there is no significant difference between type of banks and provision of all true and meaningful information by bank associates.

Majority of the respondents (40%) agree that the delivery of services are unique and as per expectations, while 24% are disagreed from the same. The correlation coefficient -0.178 shows a negative correlation between uniqueness in delivery of services and type of banks. 57% respondents opine that the bank is responsive to the various problems occur during electronic transactions among which 48% respondents are having transactions with Government Banks while 9% respondents use private Banks for transactions (Table 3). The value of Karl Pearson coefficient of correlation, i.e., -0.077 shows a negative correlation between responsiveness of banks towards the various problems occurs during electronic transactions & type of banks. Calculated value of χ^2 is 6.033 results in no any difference between responsiveness of banks towards the various problems occur during electronic transactions and type of banks.

Out of total respondents 40% respondents are agreed that IT Unit provides sufficient support after a new system or enhancement is introduced (Table 3), while 28% respondents are undecided about the statement and 32% respondents are disagreed with Support on new system enhancement among which 26% respondents use Government Banks while 6% use Private Banks for their operations. The value of Karl Pearson coefficient of correlation is -0.007 resulting into a negative correlation between support on new system enhancement & type of banks. Calculated value of χ^2 for 4 degrees of freedom at 5% level of significance is 3.908, which shows that there is no difference between support on new system enhancement & type of banks (Table 3).

The three variables 'Reliance on the bank for not misusing their information', 'Provision of financial security and confidentiality' & 'High reliability of existing systems' are

negatively correlated with type of banks and the variable 'fostering a positive reputation in minds of public' is positively correlated with type of banks.

Responsiveness	Type of bank					Value
			Government	Private	Total	
Bank and its associates provide all true and meaningful information (R)	Agree	Count	51	16	67	$\chi^2 =$ **2.76**
		%	51%	16%	67%	
	Undecided	Count	5	3	8	
		%	5%	3%	8%	
	Disagree	Count	22	3	25	R= -0.102
		%	22%	3%	25%	
	Total	Count	78	22	100	
		%	78%	22%	100%	
The delivery of the services is unique and match my expectations (R)	Agree	Count	40	13	53	$\chi^2 =$ **7.55**
		%	40%	13%	53%	
	Undecided	Count	14	6	20	
		%	14%	6%	20%	
	Disagree	Count	24	3	27	R= -0.178
		%	24%	3%	27%	
	Total	Count	78	22	100	
		%	78%	22%	100 %	
Bank is responsive to the various problems occur during electronic transactions (R)	Agree	Count	48	9	57	$\chi^2 =$ **6.033**
		%	48%	9%	57%	
	Undecided	Count	12	8	20	
		%	12%	8%	20%	
	Disagree	Count	18	5	23	R= -0.077
		%	18%	5%	23%	
	Total	Count	78	22	100	
		%	78%	22%	100 %%	
IT Unit provides sufficient support after a new system or enhancement is introduced (R)	Agree	Count	33	7	40	$\chi^2 =$ **3.908**
		%	33%	7%	40%	
	Undecided	Count	19	9	28	
		%	19%	9%	28%	
	Disagree	Count	26	6	32	R= -0.007
		%	26%	6%	32%	
	Total	Count	78	22	100	
		%	78%	22%	100 %	

Table 3: Cross tabulation of responsiveness attributes and type of banks

All the variables 'Bank and its associates provide true information', 'unique delivery of services', 'Responsiveness towards/ problem handling & 'Support on new system enhancement" are negatively correlated with type of banks (Table 4). On the basis of chi square results, it can be concluded that there is no significant difference between assurance and responsiveness of public and private sector banks.

	Proposed Relationship	Results
1	Reliance on the bank for not misusing their information (A) – Type of banks	-ve, accepted
2	Provision of financial security and confidentiality (A) – Type of banks	-ve, accepted

3	High reliability of existing systems (A) – type of banks	-ve, accepted
4	Fostering a positive reputation in minds of public (A) - type of banks	+ve, accepted
5	Bank and its associates provide true information (R) – Type of banks	-ve, accepted
6	Unique delivery of services (R) – Type of banks	-ve, accepted
7	Responsiveness towards problem handling (R) – type of banks	-ve, accepted
8	Support on new system enhancement (R) - type of banks	-ve, accepted

Table 4: Summary of results for Hypothesis 1

Hypothesis 2 (H2): There is no significant difference between electronic services of banks and gender of the cyber-crime victims.

90% respondents are agreed that Account Balance enquiry service of their bank is excellent among which 65% respondents are males while 25% respondents are females (Table 5). The value of Karl Pearson coefficient of correlation is -0.092 which shows a negative correlation between excellence of account balance enquiry service of their bank & gender. Calculated value of χ^2, i.e., 2.35 concludes that there is no difference between excellence of account balance enquiry service of the bank & gender. 69% respondents are agreed that Bill Payments service of their bank is excellent among which 50% respondents are males while 19% respondents are females, while 8% respondents disagreed with excellence of bill payments service of their bank among which 7% respondents are male and 1% respondents are female. The coefficient of correlation is -0.108 which shows a negative correlation between excellence of Bill Payments service of their bank & gender.

Out of total respondents 29% male respondents and 19% female respondents agreed that Ordering checks/ drafts online from their bank is excellent. The value of Karl Pearson coefficient of correlation is -0.114 results in a negative correlation between excellence of Ordering checks/ drafts online & gender. Calculated value of χ^2 for 4 degrees of freedom at 5% level of significance is 5.33, i.e., there is no difference between excellence of Ordering checks/ drafts online of the bank and gender.

Electronic Services			Gender			
			Male	Female	Total	Value
Account Balance Enquiry	Agree	Count	65	25	90	χ^2= **2.35**
		%	65%	25%	90%	
	Undecided	Count	4	0	4	
		%	4%	0%	4%	
	Disagree	Count	5	1	6	R= -0.092
		%	5%	1%	6%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Bill Payments	Agree	Count	50	19	69	χ^2= **2.27**
		%	50%	19%	69%	
	Undecided	Count	17	6	23	
		%	17%	6%	23%	
	Disagree	Count	7	1	8	R= -0.108
		%	7%	1%	8%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Ordering checks/ drafts online	Agree	Count	29	13	42	χ^2= **5.33**
		%	29%	13%	42%	

	Undecided	Count	31	12	43	
		%	31%	12%	43%	
	Disagree	Count	14	1	15	R= -0.114
		%	14%	1%	15%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Credit card account information	Agree	Count	33	14	47	χ^2= **2.62**
		%	33%	14%	47%	
	Undecided	Count	31	11	42	
		%	31%	11%	42%	
	Disagree	Count	10	1	11	R= - 0.144
		%	10%	1%	11%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Transfer of funds	Agree	Count	52	15	67	χ^2= **2.15**
		%	52%	15%	67%	
	Undecided	Count	17	8	25	
		%	17%	8%	25%	
	Disagree	Count	5	3	8	R= 0.105
		%	5%	3%	8%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Cheque book Reconciliation	Agree	Count	35	16	51	χ^2= **4.64**
		%	35%	16%	51%	
	Undecided	Count	30	9	39	
		%	30%	9%	39%	
	Disagree	Count	9	1	10	R= - 0.177
		%	9%	1%	10%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Viewing digitals checks online	Agree	Count	29	11	40	χ^2= **2.59**
		%	29%	11%	40%	
	Undecided	Count	33	13	46	
		%	33%	13%	46%	
	Disagree	Count	12	2	14	R= - 0.038
		%	12%	2%	14%	
	Total	Count	74	26	100	
		%	74%	26%	100%	
Stop Payments	Agree	Count	34	7	41	χ^2= **13.42**
		%	34%	7%	41%	
	Undecided	Count	34	12	46	
		%	34%	12%	46%	
	Disagree	Count	6	7	13	R= 0.206
		%	6%	7%	13%	
	Total	Count	74	26	100	
		%	74%	26%	100%	

Table 5: Cross tabulation of electronic services of bank and gender

33% male and 14% female respondents agreed that Credit card account information of their bank is excellent, while 11% respondents are disagreed that Credit card account information of the bank is excellent (Table 5). The Karl Pearson coefficient of correlation, -0.144, results in a negative correlation between excellence of Credit card account

information & gender. Calculated value of χ^2 comes out to be 2.62, i.e., there is no difference between excellence of Credit card account information of the bank and gender. Out of total respondents 52% male respondents and 15% female respondents agreed that transfer of funds between accounts is excellent. The value of Karl Pearson coefficient of correlation is +0.105 which concludes that there is a positive correlation between excellence of transfer of funds between accounts & gender. 51% respondents agree that Checkbook Reconciliation of the bank is excellent. Since calculated value of chi-square is less than tabulated value therefore null hypothesis is accepted or it can be concluded that there is no difference between excellence of Checkbook Reconciliation of the bank and gender (Table 5).

Out of total respondents 29% male respondents and 11% female respondents agreed that viewing digitals checks online service of the bank is excellent, while 46% respondents are undecided opinions about the service. The value of Karl Pearson coefficient of correlation is -0.038 which concludes that there is a negative correlation between excellence of viewing digitals checks online service of the bank & gender. Calculated value of χ^2 is less than tabulated value therefore null hypothesis is accepted or it can be concluded that there is no difference between excellence of viewing digitals checks online service of the bank and gender. 41% respondents agree that stopping payments service of the bank is excellent, while 46% respondents have no opinions about the e-service. Calculated value of χ^2 for 4 degrees of freedom at 5% level of significance is 13.42 and tabulated value of χ^2 is 9.488 (Table 5). Since calculated value of chi-square is more than tabulated value therefore null hypothesis is rejected or it can be concluded that there is a difference between excellence of stopping payments service of the bank and gender.

	Proposed Relationship	Results
1	Account Balance Enquiry – Gender	-ve, Accepted
2	Bill Payments – Gender	-ve, Accepted
3	Ordering checks/ drafts online – Gender	-ve, Accepted
4	Credit card account information – Gender	-ve, Accepted
5	Transfer of funds – Gender	+ve, Accepted
6	Checkbook Reconciliation – Gender	-ve, Accepted
7	Viewing digitals checks online – Gender	-ve, Accepted
8	Stop Payments – Gender	+ve, Rejected

Table 6: Summary of results for Hypothesis 2

All the variables 'account balance enquiry', 'bill payments', 'ordering checks/ drafts online', 'credit card account information', 'Cheque book reconciliation' & 'viewing digital checks online' are negatively correlated with gender, while 'transfer of funds' & 'stop payments service' are positively correlated with gender (Table 6). On the basis of chi square results, there is a significant difference between stop payments e-service of banks and gender of the customer, while there is no significant difference between gender of the cyber-crime victims and electronic services of banks, viz., 'account balance enquiry', 'bill payments', 'ordering checks/ drafts online', 'credit card account information', 'Cheque book reconciliation', 'transfer of funds' & 'viewing digital checks online'. Hence, it can be concluded that there is no significant difference between electronic services of banks and gender of the cyber-crime victims (Table 6).

CONCLUSION

The various 'assurance' attributes, viz., reliance on the bank for not misusing their information, Provision of financial security and confidentiality & high reliability of existing systems are negatively correlated with type of banks, while the attribute positive reputation in minds of public is positively correlated with type of banks. The various 'responsiveness' attributes, viz., bank and its associates provide true information, unique delivery of services & responsiveness towards problem handling and support on new system enhancement are negatively correlated with type of banks. So, it can be concluded that there is no significant difference between assurance and responsiveness of public and private sector banks.

The various electronic services, viz., account balance enquiry, bill payments, ordering checks/ drafts online, credit card account information, Cheque book reconciliation & viewing digital checks online are negatively correlated with gender, while transfer of funds & stop payments service are positively correlated with gender. A significant difference has been found between stop payments e-service of banks and gender of the customer, while there is no significant difference between gender of the cyber-crime victims and electronic services of banks, viz., account balance enquiry, bill payments, ordering checks/ drafts online, credit card account information, Cheque book reconciliation, transfer of funds & viewing digital checks online. Hence, it can be concluded that there is no significant difference between electronic services of banks and gender of the cyber-crime victims.

RECOMMENDATIONS

Survey results reveal that electronic services of the banks are not widely adopted by the customers. The online account balance enquiry and bill payments services are the only services which most of the customers make use of (90 % and 69% respectively). On the other hand, more than 35% of the respondents are not aware about the e-services as ordering checks/ drafts online, credit card account information, stop payments online, viewing digital checks online and online Cheque book reconciliation. 56% of the customers are satisfied that the website of the bank provides all the relevant information of every product or service. 53% customers are satisfied with the services and availability of the ATMs while 42% customers are dissatisfied. In order to facilitate the customer, there is an urge to aware the customers regarding the electronic services introduced by bank to save time and manpower.

The website of the banks should provide all the relevant information on every product or service, what customers are required. Banks have to arrange certain seminars to inform the customers about different products and services. The services as well as operability of ATMs are revealed too pathetic. In order to retain the customer, ATMs should be in operation all round the clock and updated with latest software and features. 53% of the customers are satisfied that the delivery of the services are unique and match their expectations, while 27% are dissatisfied with delivery of services. The reliability of the systems satisfies 54% customers while 25% customers are dissatisfied. The half of the respondents opines that web Links are problem free accurate and pages download quickly. A number of customers are not satisfied with the information provided through bank associates.

Banks should take care of the web designers while selecting the platform to develop web portal. Due care should be taken during testing of links as well as color combination and download time of the web page as per the latest technology available. With concentration on and more attention to add the abilities of the employees through educating, providing suitable incentives as well as increasing inclination to answering and guiding the customers, the customer satisfaction can be increased.

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