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Customer and Employee Perception towards Internet Banking Risk Assessment

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ABSTRACT: Today's world is one with increasing online access to services. One part of this which is growing rapidly is Internet Banking. The quick spread of Internet banking everywhere throughout the world is its acceptance as an extremely cost. Successful conveyance channel of banking services when contrasted with other existing channels. However, internet is not an unmixed blessing to the banking sector. Along with reduction in cost of transactions, Proceeding with innovation advancements and developments are having noteworthy effect in transit banks cooperate with their clients, suppliers and counterparties, and how they attempt their operations. Banks confront the test of adjusting, enhancing and reacting to the open doors postured by PC frameworks, media communications, systems and other innovation related answers for drive their organizations in an undeniably aggressive residential and worldwide business sector.

The growth of electronic banking has created a new basis with regard to the degree of exposure to the risk and therefore consequently the need of not only a differentiated regulating frame, but also mechanisms of monitoring to be formed, which has already begun to be shaped in the fields of Basle Committee of Banking Supervision. The above research paper focused on technological risk assessment from customer and employee point of view.

KEYWORDS: Technological risk, Internet banking, Risk assessment, Risk analysis.

I. INTRODUCTION

As the banking industry is increasingly making use of technology to deliver services to customers. Today's world is one with increasing online access to services. One part of this which is growing rapidly is Internet Banking. Internet banking involves the delivery of financial services through technological means. Every coin has two sides. Every good thing has bad side, or benefits have disadvantageous side. Technology is a basic need of modern life, but it should be not neglected that there are some risks in using technology; especially there is the most considered risk in Internet banking. Risk associated with Internet banking is Strategic risk, Business risk, Credit risk, Liquidity risk, Security risk, Reputational risk, legal risk. Above research focused on technological risk assessment form employee as well as customer point of view. This risk has been tested separately by using Chi-square test.

II. TYPES OF RISK

Researcher categorized six types of technological risk, such as:

- a) Performance risk characterized as the likelihood of the results not being as they were intended to be and consequently neglecting to convey the considered necessary benefits.
- b) Money transfer risk arises during the potential monetary failure from the primary purchase of the product and its subsequent maintenance.
- c) Psychological risk characterized as the risk that the performance of the product will have a negative impact on the customer's peace of mind and the potential loss of self-respect from the dissatisfaction of not attaining a purchasing objectives.
- d) Social risk arises during the potential loss of status in a community assembly, as a consequence of receiving a product or service.
- e) Security risk is the prospective failure of control over individual, transaction information, such as when information about an individual is used by fraudsters without that person's knowledge. Reduce the reliability and integrity of the system.



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- f) Operational risk arises due to loss of resulting data due to unreliable system work. Loss arises due to failure of internal systems of the organization or breakdown controls, operations or procedures of the firm.

III. RISK ASSESSMENT FROM CUSTOMER POINT OF VIEW

These six types of risk can be assessed with the help of 24 parameters.

Table 1-Parameters used to assess technological risk of Internet banking and non-Internet banking in customer point of view

Type of risk	Parameter used	Content
Security	Var 1	I am worried about unauthorized access of my bank transactions
	Var 2	I am worried about integrity, privacy, confidentiality of my personal data
	Var 3	I am worried about the cancellation of incorrectly entered transactions
	Var 4	A bank cannot provide standardized new technologies and innovative services to me
	Var 5	I am worried that the data can be modified in an unauthorized manner
Operational	Var 6	I am worried about spending more time & effort to complete transaction
	Var 7	I am worried about low speed and low Internet bandwidth for doing the transaction
	Var 8	Millions of queries can block computer network when doing the transaction.(Denial of service)
	Var 9	When handling bank software, weaknesses in system design and implementation is observed
	Var 10	I am worried that the data may be modified in an unauthorized manner(Data Didling)
Psychological	Var 11	In case of any failure or fault, I am worried about making wrong decision while using banking services
	Var 12	I think using banking services can cause stress and anxiety
	Var 13	Literacy is a barrier to me for fast acceptance of technological banking.
	Var 14	Awareness of banking services is not a great extent
Social	Var15	I am worried about losing my friends and my family support in case of any failure doing banking transaction
	Var16	Not encouraged by others to use technology in banking transaction
	Var17	I am afraid to get help from bank employee in case of any failure during banking transactions
Money transfer	Var 18	I am worried about being cheated during banking transactions
	Var 19	I am worried about the high risks during money transfers
	Var 20	The bank has not provided adequate information to me about bank facility and for resolving the problems
Performance	Var21	I am worried about non-access to the Internet banking Web due to poor maintenance
	Var 22	I am worried about non-access to the Internet banking Web due to slow Internet connection speed
	Var 23	I am worried about transactions left incomplete
	Var 24	The communication network problem may cause discontinuation of the use of banking services.

(Source:-Primary data)



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For checking technological risk, researcher are using twenty four parameters and selecting education wise and age wise samples of male and female (100 for both).

Table 2 Demographic male samples education wise

Education-wise	Banking service	Risk	Security	Operational	Psychology	Social	Money transfer	Performance
High school (10)	With IB	Y	50.00	40.00	47.50	33.33	26.67	20.00
		N	50.00	60.00	52.50	66.67	73.33	80.00
	Without IB	Y	26.00	30.00	20.00	30.00	30.00	0.00
		N	74.00	70.00	80.00	70.00	70.00	100.00
H.S.C./12th (15)	With IB	Y	37.33	21.33	50.00	46.67	53.33	26.67
		N	62.67	78.67	50.00	53.33	46.67	73.33
	Without IB	Y	21.33	13.33	25.00	26.67	40.00	6.67
		N	78.67	86.67	75.00	73.33	60.00	93.33
Graduation (35)	With IB	Y	40.57	14.29	35.00	17.14	27.62	16.43
		N	59.43	85.71	65.00	82.86	72.38	83.57
	Without IB	Y	24.57	6.29	17.14	7.62	20.95	6.43
		N	75.43	93.71	82.86	92.38	79.05	93.57
Post-graduation (35)	With IB	Y	53.71	17.14	42.86	20.00	16.19	5.71
		N	46.29	82.86	57.14	80.00	83.81	94.29
	Without IB	Y	33.71	9.71	22.86	17.14	21.90	2.14
		N	66.29	90.29	77.14	82.86	78.10	97.86
Ph.D. (5)	With IB	Y	40.00	36.00	40.00	40.00	20.00	40.00
		N	60.00	64.00	60.00	60.00	80.00	60.00
	Without IB	Y	20.00	32.00	10.00	53.33	40.00	40.00
		N	80.00	68.00	90.00	46.67	60.00	60.00

(Source:-Primary data)

Table 2 table shows six types of major risk faced by the customers when they are using the Internet banking service. Demographic male 100 samples are categorized education wise as a high school (10 samples), 12th Standard (15 samples), graduation (35 samples), post-graduation (35 samples) and Ph.D. (5 samples). According to the male customer point of view security risk is more. To take a review of customers of high school, graduation, post-graduation,



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and the Ph.D. educations, security risk is 50%, 40.57%, 53.71%, and 40%, respectively, and according to review of customers of 12th standard educations Money transfer risk is more means 53.33%. According to PhD male customer security, psychological, social and performance risk is more with 40%.

Table 3 Demographic female samples education wise

Education wise	Banking service	Risk	Security	Operational	Psychology	Social	Money transfer	Performance
High school (10)	With IB	Y	46.00	40.00	35.00	56.57	36.67	25.00
		N	54.00	60.00	65.00	43.33	63.33	75.00
	Without IB	Y	44.00	60.00	15.00	50.00	40.00	0.00
		N	56.00	40.00	85.00	50.00	60.00	100.00
H.S.C./ 12 th (15)	With IB	Y	36.00	25.33	50.00	53.33	71.11	35.00
		N	64.00	74.67	50.00	46.67	28.89	65.00
	Without IB	Y	32.00	13.33	28.33	28.89	40.00	10.00
		N	68.00	86.67	71.67	71.11	60.00	90.00
Graduation (35)	With IB	Y	44.57	16.57	36.43	20.00	25.71	18.57
		N	55.43	83.43	63.57	80.00	74.29	81.43
	Without IB	Y	26.29	7.43	19.29	12.38	20.00	7.14
		N	73.71	92.57	80.71	87.62	80.00	92.86
Post-graduation (35)	With IB	Y	53.14	24.57	42.14	25.71	25.71	15.71
		N	46.86	75.43	57.86	74.19	74.29	84.29
	Without IB	Y	37.71	13.71	22.14	18.10	18.10	4.29
		N	62.29	86.29	77.86	81.90	81.90	95.71
Ph.D.(5)	With IB	Y	40.00	40.00	50.00	40.00	40.00	35.00
		N	60.00	60.00	50.00	60.00	60.00	65.00
	Without IB	Y	24.00	48.00	40.00	53.33	40.00	40.00
		N	76.00	52.00	60.00	46.67	60.00	60.00

(Source:-Primary data)

Table 3 shows six types of major risk faced by the customers in Internet banking service. Demographic female 100 samples are categorized education wise as high school (10 samples), 12th Standard (15 samples), graduation (35 samples), post-graduation (35 samples) and Ph.D. (5 samples). According to the female customer point of view security risk is more with Internet banking. According to a review of customers of high school level education samples point of view social risk is more with percentage 56.67%. Graduation and post-graduation education customers' point of view security risk is more with percentage 44.57% and 53.14%. Ph.D. educations customer point of view psychological risk is more with percentage 50%. According to review of customers of 12th



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standard educations Money transfer risk is more means 71.11%. Hence, analysis shows that security, Money transfer, psychological and social risk is more from female customer point of view.

Table 4 Demographic male and female sample's age wise

Age wise	Banking service	Risk	Security	Operational	Psychological	Social	Money transfer	Performance
Male 18 to 40 age (50)	With IB	Y	53.2	20	27.5	26.0	17.3	4.5
		N	46.8	80	72.5	74.0	82.7	95.5
	Without IB	Y	48	16	22	26.7	6.7	0
		N	52	84	78	73.3	93.3	100
Male 40 or above age (50)	With IB	Y	40	20.8	44.5	29.3	24.7	8
		N	60	79.2	55.5	70.7	75.3	92
	Without IB	Y	32.8	17.2	37	36.0	10.7	2
		N	67.2	82.8	63	64.0	89.3	98
Female 18 to 40 age (50)	With IB	Y	53.2	20.8	27.5	26.0	17.3	4
		N	47.2	79.2	72.5	74.0	82.7	96
	Without IB	Y	45.2	16	22.5	26.7	6.7	0
		N	54.8	84	77.5	73.3	93.3	100
Female 40 or above age (50)	With IB	Y	47.2	19.2	42	27.3	24.0	10
		N	52.8	80.8	58	72.7	76.0	90
	Without IB	Y	40	16.8	36	26.7	20.7	5
		N	60	83.2	64	73.3	79.3	95

(Source:-Primary data)

Table 4 shows six types of major risk faced by the customers when they are using the Internet banking service. Demographic male, female separately 100 samples is categorized age wise as 18 to 40 age (50 samples), 40 or above age (50 samples). According to review of male customers with age between 18 to 40 years, the security risk is high with 53.2%(with IB),48%(without IB). According to the female customers' point of view security risk is more with 53.2 % (with IB), 45.2 % (without IB). Review of customers having an age group of 40 or above. Male customers' point of view psychological risk is more with 44.5%(with IB) and 37% (without IB) and in female customers' point of view security risk is more with percentage 47.2%(with IB) and 40%(without IB) Hence to attract more and more male and female customers' banks must concentrate on to remove the security risk.



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IV TECHNOLOGICAL RISK ASSESSMENTS FROM EMPLOYEE POINT OF VIEW

Table 5 Parameters used to assess technological risk of Internet banking and Non- Internet banking from employee point of view

Sr. No.	Parameter Used	Technological risk assessment parameters from employee point of view
1	Var 1	Occasionally data loss risk arises in banking service
2	Var 2	The Possibility of fraud arises in banking service
3	Var 3	Lack of information security chances are increased
4	Var 4	The cross border risk arises due to different laws in different country
5	Var 5	The technological illiteracy problem arises
6	Var 6	Less operational consistency found
7	Var 7	The cost of adopting technology is more
8	Var 8	Occasionally government access found
9	Var 9	Service charges for updating technology is more
10	Var 10	Reputation, the capital adequacy, risk arises

(Source: - Primary data)

For checking the technological risk from an employee point of view researcher selected 10 parameters. Parameters are tested with 74 samples of employees which is the manager of selected banks.

Table 6 Technological risk assessment of Internet banking and non- Internet banking from an employee point of view.

Sr. No.	Parameters	with IB %		without IB %	
		Y	N	Y	N
1	Var 1	55.71	50.00	41.43	64.29
2	Var 2	61.43	44.29	48.57	57.14
3	Var 3	55.71	50.00	50.00	55.71
4	Var 4	67.14	38.57	75.71	30.00
5	Var 5	41.43	64.29	27.14	78.57
6	Var 6	54.29	51.43	58.57	47.14
7	Var 7	40.00	65.71	25.71	80.00
8	Var 8	18.57	87.14	31.43	74.29
9	Var 9	30.00	75.71	17.14	88.57
10	Var 10	50.00	55.71	35.71	70.00

(Source: - Primary data)



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Table 6 shows technology risk from an employee point of view. Here researcher selected bank managers as a sample for study. From an employee's point of view the cross border risk arises more because different country laws are different with percentage of 67.14% (with IB) and 75.71 % (without IB). From other side 87.14 % employee's point of view less risk of occasionally government access arises with IB and without IB 88.57% employee's point of view service charges for updating technology is not more.

V. FINDINGS

According to education wise categories the male respondent's point of view security, psychological, social, performance and money transfer risk is more. According to the female respondent's point of view, security risk, psychological, social and money transfer risk is more. So banks need to concentrate on these risks and provide a safe environment to customers for the increase use of Internet banking services. The researcher takes age wise categories. The age from 18 to 40 years, the male and female respondent's point of view security risk with percentage 53.2% is more. Age from 40 or above years, the male respondent's point of view psychological risk is more with percentage 44.5% and female respondent's point of view security risk is more with percentage 47.2%. So the banks should provide major attention towards this risk and provide secure and rigorous atmosphere for customers to boost use of Internet banking services.

The researcher selected the bank managers as a sample for study to assess technological risk from an employee point of view. Researcher finds that with Internet banking cross border risk is more due to laws in different countries are different with percentage of 67.14% (with IB) and 75.71 % (without IB). Less risk in government access in banking working with percentage 87.14%. In case of without Internet banking service charges for updating technology is not more with percentage 88.57%.

VI. CONCLUSION

The study suggested that if the banks want to increase their customers, it should enhance the level of services in the dimensions like online purchase of goods and services, decrease in e-payment cost, up to date information, sophisticated information to well-educated customers, more accuracy in billing, Money transfer security and privacy in transactions. The bank should invest a large amount in the training of employees to provide up to date and sophisticated information to consumers. All modern facilities should be provided to the customer and banks should also invest substantial amounts on the webpage designing to provide up to date information. Banks should provide Internet and ATM password to the customers in such way that the Money transfer security of the transaction can be retained and their loyalty and trust can be increased. Always bank top management associates them as an IT user to monitor daily updates and threats in the technology.

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