

## A Study of Determinants of Consumers' Perceived Risk in E-Banking Services

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### Abstract

The study concluded that different age group of customers has different view towards e-banking services and the usage level of these banks' customer is different so bank should concentrate on all the age group of customers for betterment of e-banking. It has also revealed that different education group of customers and occupation group of customers have different awareness towards the e-banking services. There are good number of customer in every group like student, service class, business class and professionals, it shows that each and every one are interested in using the e-banking services. The banker should take care of the medium people in his/her task, reduce drudgery and at the same time efficiently discharge his functions. These technological aids not only take care of some of the physical routine tasks but also contribute proficient housekeeping functions and also render services that are in turn will fulfill the customer needs and satisfaction.

**Keywords:** E-Banking, socio economic factors, perception, risk, age

### Introduction

The growth of technology has changed payment systems the world over during the past two decades. More and More innovations are being introduced in both the cash payments system and non-cash payment systems. Cash in the form of notes and coins was the principal method of payment before the introduction of the 'Banking' paper instruments such as 'cheques' and credit transfer now have become a part of the payment system with a popularity of banking. With the introduction and implementation of the recent technology in banking, electronic devices are making the job of cash payment as well as non cash payments easy and efficient (Kapoor., 2011). This study involved the collection of both primary and secondary data. The primary data was collected with the help of a questionnaire by adopting personal interviews. The secondary data was collected from books, published journals, magazines and articles from various newspapers. The scaling technique adopted was summated rating scale.

### Percentage analysis

Percentage analysis is used to compare between the attributes. The percentages are calculated based on the following formula.  
Percentage = Number of respondents / Total Number of respondents

### Chi – Square Test

Chi – Square Test is a very strong tool for testing the significance between the observed and expected values.

$$X^2 = \sum (O-E)^2/E$$

### Hypotheses of the study

1. There is no relationship between the age and usage of respondents.
2. There is no relationship between the education and usage of respondents.
3. There is no relationship between the occupation of the respondents and Action taken by the bank due to misrepresentation if any.
4. There is no relationship between the education of the respondents and privacy in transactions

### Review of Literature

The internet banking is a new delivery channel for banks in India. The Internet banking

channel is both an informative and a transactional medium. Internet Banking and Mobile Banking made it convenient for customers to do their banking from geographically diverse places. However, Internet banking has not been popularly adopted in India as expected. Being a savings based culture still, Indian consumers are cautious about their financial assets. They are also relatively recent entrants to internet based services. Design of these systems must therefore be based on an understanding of these users' outlook and priorities through task centric, security assured and service oriented solutions minus the technological challenges. The objective of this paper is to find the perception of Internet banking users. The profiles may be used to target and attract potential customers to adopt Internet banking **Varsha Kuchara., (2012)**. The advances in electronic banking technology have created new ways of handling banking transactions, especially via the online banking channel. In Saudi Arabia, internet banking is still in its early stages and it is not utilised as a considerable savings tool in operating costs for banks and in improving customer relationships. The intent of this research is to identify the factors affecting the adoption of Internet banking by customers in Saudi Arabia in the light of the technology acceptance model (TAM). The model was tested with a survey sample (n = 202). The findings of the study indicate that the security, quality of the Internet connection and awareness about Internet banking and its benefits have significant effects on the perceived usefulness (PU) and perceived ease of use (PEOU) of Internet banking acceptance. It was revealed that the effects of education and trust also have significant impact on the attitude towards the acceptance Internet banking. Overall, the results of this study are vital to both researchers and practitioners and it allowed us to understand TAMs validity in technology acceptance research (**Sabah Abdullah Al-Somali., 2011**). The factors affecting the customers demand for E-Banking services, by analyzing a sample of 450 consumers' responses who have been interviewed personally through structured questionnaire in 3 districts of Uttar Pradesh, India, namely Lucknow, Kanpur and Varanasi. The factor analysis using principal component

extraction method with Varimax rotation has extracted 4 factors which explained the 62.84 percent of the variance. All the four factors - ambiance and infrastructures, technology and innovation, services and security, and consumer support and timings - represent different banking attributes important to customers. This provides a basis for the banks in order to modify and offer demanding services to the banks **Shariq Mohammed., (2013)**. The bank fees often strike fear in the heart of the average banking customer. According to a survey by Bank-rate, a company that reports on banks and banking, customers continue to get smashed with higher fees, ranging from ATM charges to minimum-balance fees. In addition, some customers are even charged a commission fee just to speak to a real live bank teller! In a recent checking account pricing study, it was found that interest-bearing checking account customers charged the worst. The average interest charging checking account earns only 0.27 percent interest while account holders pay \$10.86 on average in monthly fees. This review in internet banking seeks to show an alternative to banking through "bricks and mortar" and provide an understanding of the pros and cons of going online. Many traditional banks offer some online services, but the very cheapest choices some will find are internet-only banks, which operate specifically online. Customers can get the same services online that are used to from traditional banks, such as checking and savings accounts, CDs, and other financial products and services. Those who are interested in paying lower fees for better customer service; they should investigate internet banking (**Loannis Koskosas., 2011**). The internet is perhaps one of the most useful tools to businesses and individuals in contemporary world economies. Its use has touched virtually every aspect of human endeavour including banking. Technological breakthroughs and product designs have led to the emergence of e-banking services which, in recent time has become globally popular except in developing countries including Nigeria. The Central Bank of Nigeria (CBN) recently released a circular on the introduction of 'cashless' policy which sets cash deposit and withdrawal limits. The success of this policy requires the increased use of alternative payment systems including e-

banking. However, despite the growing popularity of e-banking in the world, its rate of adoption in Nigeria has been relatively slow. It has therefore become imperative to study the underlying determinants of acceptance e-banking in order to understand and remove the inhibitions surrounding its use and enhance its popularity. The study takes a cross sectional analysis of determinants of acceptance of e-banking in Nigeria using a modified Technology Acceptance Model (TAM) as research framework. Four hundred questionnaires were distributed customers of different banks to elicit relevant data out of which two hundred and forty nine (249) were found to be useful. These questionnaires were designed using the 5- point Likert scale and the Cronbach Coefficient Alpha was used to test for reliability and consistency of research instrument. Linear Multiple Regression Analysis was employed to determine the effect of Age (A), Educational Background (PB), Income (Y), Perceived Benefits (PB), Perceived Ease of Use (PEOU), Perceived Risk (PR) and Perceived Enjoyment (PE) on Acceptance of E-banking (AI). The Statistical Package for Social Sciences (SPSS) was used for computation. The result shows that acceptance of e-banking in Nigeria is significantly influenced by Age, Educational Background, Income, Perceived Benefits, Perceived Ease of Use, Perceived Risk and Perceived Enjoyment (**James A. Odumeru.,2012**). The Internet banking is booming in Jordan and it is time for banks and customers to reap the benefits from such technology. Bank customers' propensity to use internet banking is dependent on their attitudes towards such technology. This work validates an Arabic technology acceptance instrument through a rigorous process so that banks can better understand the factors that affect the customer's intention to use the internet banking technology. The work utilized the backward translation method and developed an Arabic instrument for eleven constructs that yielded an acceptable level of reliability (**Emad Abu-Shanab., 2012**). The operational issues related to e-banking as well as customer's perception on usage of e-banking a case study of Askari Bank, Pakistan. 40 staff members and four customers are selected as sample for this study. Both qualitative and quantitative methods are used to

present the results. Descriptive statistics is applied to describe the demographic variables while for operational problems correlation was used. Finally cross case analysis present customers' perception about e-banking practices. Analysis shows that customer is not ready to adopt new technology that why their satisfaction level with e-banking is low. Internet speed and government policies are not supportive for e-banking in Pakistan. Due to lack of trust on technology and low computer literacy rate, customer hesitates to adopt new technology. : In order to promote IT culture in Pakistan, government has to reduce the internet rate. to promote the benefits of e-banking on media so that more user get facilitated from e-banking services (**Muhammad Shakil Ahmad., 2011**). The measurement of customer perception towards E-Banking which is becoming very popular and convenient method of dealing with banks now-a-days. E-Banking denotes the provision of banking and related service through Extensive use of information technology without direct recourse to the bank by the customer. In this paper consumer perception toward the usefulness and willingness to use e- banking are identified and measured. Customer satisfaction level towards the E- Banking has been identified. DESIGN/METHODOLOGY: A Questionnaire has been designed to collect the data from the respondents. Our survey is undertaken in Ferozepur District (Fazilka, Jalalabad and Ferozepur Cities in particular) as these cities are underdeveloped and very less studies have been conducted there; so to understand the potential of E-banking in this area this study has been conducted. Convenient sampling design has been used. ANOVA and percentage methods have been used to analyze the data. FINDINGS: The data showed that about 60% people have positive perception about E-Banking. In spite of having positive perception about E-banking services only 52.9% respondents are using it frequently. Consumers are using various services provided by their respective banks and the highest used services are the ATM and bill payment across various income groups followed by viewing of the account history (**Malika Rani., 2012**). The factors affecting adoption of Internet banking in India. The data for this study is based upon a survey of bank customers using a convenience

sampling technique with the aid of a structured self-administered questionnaire. The survey was conducted during the period of April 2012. Chi square test and Principal component factor analysis is employed to explore the factors affecting the adoption of Internet banking in India. The results show that the demographic factors particularly age; qualification, profession, income and no. of banks dealing with are the significant variables affecting usage of internet banking. Factor analysis results show that prior computer experience, prior technology experience, personal banking experience, and reference group influence, affect attitude towards online banking as well as online banking usage. The purpose of this study is to help fill significant gaps in knowledge about the inhibitors of Internet banking in India. The findings of this study are expected to be of great use to the bank marketers. An understanding of the factors identified in this study allows bank managers to direct efforts and resources in the most effective and efficient way to increase bank business in the long run and encourage their bank customers' to adopt Internet banking (Neetu Jain., 2012). The traditional function of banking is limited to acceptance of Deposits and providing the credit in the market. Today's banking is known as Innovative banking. The coming together of information technology, communication and entertainment (ICE) has given rise to new innovations in the product

The researcher has gathered the details about socio economic profile of the respondents and presented in the following Table.

**Table 1.1**  
**Socio Economic Profile of the respondents**

Variable	Category	Total respondents (N = 180)	Percentage
Sex	Male	122	67.78
	Female	58	32.22
Age of the respondents	Below 25 years	54	30.00
	25-35 years	48	26.67
	35-45 years	62	34.44
	Above 45 years	16	8.89
Educational Qualification of the respondents	SSLC	16	8.89
	HSC	14	7.78
	UG DEGREE	84	46.67
	PG DEGREE	48	26.66
	Diploma Course	18	10.00
Occupation of the respondents	Government	35	19.44
	Employee		

design and their delivery in the banking and finance industry. Driven by new technologies, changing customer preferences, and increased competition, banks have taken to heavy investments in new distribution channels like advance automated teller machines, telephone systems, and on-line banking, one of the reasons for internet applications not to have picked up as expected so far have been the concerns about the security and lack of the legal framework related to such transactions. This hurdle has been reduced to a large extent in the recent past with framing of laws enabling financial transactions through electronic media. The most of the private and nationalized Indian banks have entered in the technology age and providing various types of electronic products and services to their customer. The objective of this paper is to analysis the implementation of technology in Indian banks and understanding the customers' perception. This study is based on the survey and the data which is collected through the issue of questionnaire to the bank's customer. The results show that customers are satisfied with technology oriented banks products and services. The empirical findings not only determine the different parameters also provide guidelines to bankers to focus on the parameters on which they need to improve and spread the awareness of electronic banking products and services to each and every section of the society (Syed Abdul Mannan., 2010).

	Private employee	57	31.67
	Self employee/student	39	21.67
	Business /retired	49	27.22

Source: Primary Data

### Gender

The researcher has classified the respondents based on their gender and it is found that out of 180 respondents, 122 respondents (67.78 per cent) are male and the remaining 58 respondents (32.22 per cent) are female. It is found that majority (67.78 per cent) of the respondents are male.

### Age

It is found that (62) 34.44 per cent of the respondents are in the age group between 25 years and 35 years, (54) 30.00 per cent of the respondents are below 25 years, (48) 26.67 per cent of the respondents are between 35 and 45 years, (16) 8.89 per cent of the respondents are above 45 years of age. It is understood that most of the respondents (34.44 per cent) are in the age group between 35 and 45 years.

### Educational Qualification

Educational qualification is an important factor used to analyse the E-Banking Services. Hence, the researcher has classified the respondents based on their educational qualification. It is observed that out of 180 respondents, (84) 46.67 per cent of the respondents have taken up graduate level education, (48) 26.67 per cent of the respondents have taken up post graduate level education, (16) 8.89 per cent of the respondents have cleared secondary level education, (14) 7.78 per cent of the respondents have qualified upto higher secondary level and the remaining (18) 10.00 per cent of the respondents have got diploma. It is understood that most of the respondents 46.67 per cent of the respondents have taken up graduate level education in the study area.

**Table 1.2**  
**E – Banking Services**

Variable	Category	Total respondents (N = 180)	Percentage
<b>Usage of E-Banking Services</b>	Daily	16	8.89
	Weekly	57	31.67
	Monthly	63	35.00
	Any Time	44	24.44
<b>Operational Problems</b>	Yes	123	68.33
	No	57	31.67
<b>Privacy in transactions</b>	Highly Secured	46	25.56
	Secured	53	29.44
	Unsecured	42	23.33
	Highly Unsecured	39	21.67
<b>Instructions given to access the E-Banking</b>	Highly satisfied	68	37.78
	Satisfied	41	22.78
	Unsatisfied	55	30.55
	Highly unsatisfied	16	8.89
<b>Action taken by the bank due to misrepresentation if any</b>	Highly satisfied	72	40.00
	Satisfied	69	38.33

	Unsatisfied	29	16.11
	Highly unsatisfied	10	5.56

Source: Primary Data

**Usage of E-Banking Services**

Regarding the usage of e-banking services about (16) 8.89 per cent of the customers have responded that they utilize the e-banking services on a daily basis. About (57) 31.67 per cent of the customers utilize on a weekly basis. About (63) 35.00 per cent of the customers on a monthly basis and (44) 24.44 per cent of them utilize the e-banking services at any time. It is understood that most of the customers (35.00 per cent) have responded that they utilize the e-banking services on a daily basis.

**Operational Problems**

Regarding the operational problems only (123) 68.33 per cent of the customers agreed that they have faced this problem. The remaining (57) 31.67 per cent of the customers have agreed that they have not faced such a problem. It is found that majority (123) 68.33 per cent of the customers agreed that they have faced this problem.

**Privacy in transactions**

Regarding privacy in transactions nearly (46) 25.56 per cent of the customers by using e-banking services they have privacy in their transactions and it also highly secured. About (53) 29.44 per cent of the customers expressed as secured this feature and nearly (42) 23.33 per cent of the customers that they are

**Chi-Square Test**

**Hypothesis No: 1**

**H0 : There is no relationship between the age and usage of respondents.**

unsecured for this facility and (39) 21.67 per cent of the customers expressed as highly unsecured for this security feature. It is found that most 29.44 per cent of the customers expressed as secured this feature.

**Instructions given to access the E- Banking**

About (68) 37.78 per cent of the customers are highly satisfied with the instructions given to utilize the e-banking services. Nearly (41) 22.78 per cent of the customers that they are satisfied. (55) 30.55 per cent of the customers expressed as unsatisfied and the remaining (16) 8.89 per cent of the customers expressed as highly satisfied for this feature. It is understood that most 37.78 per cent of the customers are highly satisfied with the instructions given to utilize the e-banking services.

**Action taken by the bank due to misrepresentation if any**

Regarding the action taken by the bank due to any crime, nearly (72) 40.00 per cent of the customers are highly satisfied. About (69) 38.33 per cent of the customers satisfied for this service. About (29) 16.11 per cent of the customers are unsatisfied and the remaining (10) 5.56 per cent of the customers are highly unsatisfied. It is found that most 40.00 per cent of the customers are highly satisfied.

Age/Usage	Daily	Monthly	Weekly	Anytime	Total
Below 25	4	10	24	16	<b>54</b>
25-35	3	21	23	1	<b>48</b>
35-45	5	16	16	25	<b>62</b>
45-65	4	10	0	2	<b>16</b>
<b>Total</b>	<b>16</b>	<b>57</b>	<b>63</b>	<b>44</b>	<b>180</b>

Chi- Square Test

Table value @ 1% level of significance	Table value @ 5% level of significance	Computed value	Degrees of Freedom
21.67	16.92	44.37	9

**Test Result**

The table value for 1% level of significance is 21.67, 5% level of significance is 16.92. The computed value is 44.37. Since, the

computed value is more than both the table values the H0 is rejected. Hence there is a relationship between the age and usage of the customers.

**Chi- Square Test**

**Hypothesis No : 2**

**H0 : There is no relationship between the education and usage of respondents.**

Education/Usage	SSLC	HSC	UG DEGREE	PG DEGREE	Professional	Total
Daily	0	3	5	4	4	16
Monthly	0	6	21	17	13	57
Weekly	16	4	22	20	1	63
Any time	0	1	36	7	0	44
Total	16	14	84	48	18	180

**Chi- Square Test**

Table value @ 1% level of significance	Table value @ 5% level of significance	Computed value	Degrees of Freedom
21.67	16.92	74.69	12

**Test Result**

The table value for 1% level of significance is 21.67, 5% level of significance is 16.92. The computed value is 74.69. Since, the

computed value is more than both the table values the H0 is rejected. Hence there is a relationship between the education and usage of the customers.

**Chi- Square Test**

**Hypothesis No : 3**

**H0 : There is no relationship between the occupation of the respondents and Action taken by the bank due to misrepresentation if any.**

Occupation/Service	Highly Satisfied	Satisfied	Unsatisfied	Highly Unsatisfied	Total
Government Employee	13	12	6	4	35
Private employee	34	18	2	3	57
Self employee/Student	14	23	1	1	39
Business /retired	11	16	20	2	49
Total	72	69	29	10	180

**Chi- Square Test**

Table value @ 1% level of significance	Table value @ 5% level of significance	Computed value	Degrees of Freedom
21.67	16.92	46.73	9

**Test Result**

The table value for 1% level of significance is 21.67, 5% level of significance is 16.92. The computed value is 46.73. Since, the computed value is more than both the table

### Chi- Square Test

Hypothesis No: 4

H0: There is no relationship between the education of the respondents and privacy in transactions

Education / Privacy in transactions	SSLC	HSC	UG DEGREE	PG DEGREE	Professional	Total
Highly Secured	3	3	25	8	7	46
Secured	9	7	32	0	5	53
Unsecured	2	2	23	12	3	42
Highly Unsecured	2	2	4	28	3	39
<b>Total</b>	<b>16</b>	<b>14</b>	<b>84</b>	<b>48</b>	<b>18</b>	<b>180</b>

### Chi- Square Test

Table value @ 1% level of significance	Table value @ 5% level of significance	Computed value	Degrees of Freedom
21.67	16.92	70.23	12

### Test Result

The table value for 1% level of significance is 21.67, 5% level of significance is 16.92. The computed value is 46.73. Since, the computed value is more than both the table values the H0 is rejected. Hence there is a relationship between the education of the respondents and privacy in transactions.

### Findings of the study

1. It is found that majority (67.78 per cent) of the respondents are male.
2. It is found that most of the respondents (34.44 per cent) are in the age group between 35 and 45 years.
3. It is found that most of the respondents 46.67 per cent of the respondents have taken up graduate level education in the study area.
4. It is found that most of the customers (35.00 per cent) have respondent that they utilize the e-banking services on a daily basis.
5. It is found that majority (123) 68.33 per cent of the customers agreed that they have faced this problem.

values the H0 is rejected. Hence there is a relationship between the occupation of the respondents and usage of the customers.

6. It is found that most 29.44 per cent of the customers expressed as secured this feature.
7. It is found that most 37.78 per cent of the customers are highly satisfied with the instructions given to utilize the e-banking services.
8. It is found that most 40.00 per cent of the customers are highly satisfied.

### Suggestions

This study refers that the private sector banks customers are more happier than the public sector banks regarding e-Banking services. Different age group customers have different awareness towards the e-banking services, mainly the old age group of people are having the unwillingness for using e-banking facilities, so the proper training on the usage of e-banking services is necessary for all age groups. Majority of the customers prefer e-banking for quickness. So banks should try in all the ways that e-banking is working 24 hour round the clock and service is available to customers without any hassles. Online Customers are mainly concerned on safety

issues so the banks should educate their customers on the safety use of their passwords and pin numbers and it should insist the customers that they should change the passwords and pin numbers frequently so no unauthorized fraudulent practices happen in the e-banking.

### Conclusion

The study concluded that different age group of customers have different view towards e-banking services and the usage level of these banks' customer is different so bank should concentrate on all the age group of customers for betterment of e-banking . It has also revealed that different education group of customers and occupation group of customers have different awareness towards the e-banking services. There are good number of customer in every group like student, service class, business class and professionals, it shows that each and every one are interested in using the e-banking services. The banker should take care of the medium people in his/her task, reduce drudgery and at the same time efficiently discharge his functions. These technological aids not only take care of some of the physical routine tasks but also contribute proficient housekeeping functions and also render services that are in turn will fulfil the customer needs and satisfaction.

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