# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT



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# A STUDY ON ADOPTION OF INTERNET BANKING AMONG STUDENTS IN INDORE

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## **ABSTRACT**

The use of internet banking is very essential especially when the entire world is shifting to electronic devices leaving pen and paper behind. The purpose of this study is to identify the factors that affect the use of internet banking among college students and to analyse their preference towards internet banking. The paper presents the analysis of 200 customers (students) of three segments i.e. undergraduate, graduate and post graduate in the city of Indore. It has been observed that all the three segments were almost equal in number when it comes to usage of internet banking. Factor analysis has been applied for analysis in order to explore the result. It is seen that the usage of internet banking services among young generation is on a growing stage and the number of internet banking users have increased in number. The five major factor seen is perceived ease of use, trust, perceived usefulness, promptness and perceived enjoyment that impacts the behaviour of an individual on adoption of internet banking services.

#### **KEYWORDS**

Factor analysis, Indore, Internet banking, Students.

#### INTRODUCTION

he improvement and up gradations in the technology has helped the user for easy access to the internet. Today students are interested in using a technology that helps them to save their time, cost and energy. Internet banking has emerged as an effective tool to provide them with the needful. Internet banking has a simple meaning at the basic level. Internet banking can mean the setting up of a web page by a bank to give information about its product and services (Jasimuddin, 2000). At an advance level, it involves provision of facilities such as accessing accounts, funds transfer, booking an air or rail ticket and much more.

Internet banking nowadays can be seen as an interesting area to be studied upon. Over the years several studies have been conducted on the adoption of internet banking a few of the studies on internet banking reviewed here indicates a lot of progress on the nature and scope of online banking. Ample research has been done in different nations regarding the adoption of internet banking.

Initialising the research regarding adoption of internet banking Tan and Teo (2000) in their title 'Factors Influencing the Adoption of Internet Banking' worked upon the theory of planned behaviour that included attitude, subjective norms and perceived behavioural control. The findings revealed that attitudinal and perceived behavioural control are the two factors that have a positive impact on a customers' intention to use Internet banking services whereas subjective norms that largely depend upon social influence that may affect a person's intention to use Internet banking has no significant impact on the adoption of internet banking. With the passage of time various researches have been done in order to understand the adoption of an emerging new technology called as internet banking.

Amin (2007) in his title, "Internet banking adoption among young intellectuals" studies acceptance of internet banking among undergraduate students in Malaysia. This study worked upon a Technology acceptance and the results indicate that perceived usefulness, perceived ease of use have positive effect on behavioural intention. It also suggested that internet banking should be free from effort. Sufficient guidelines are needed to make sure the customers feel convenient while using internet banking. Further improvement in the quality of security and privacy should be done in order to increase the usage of internet banking.

In the same year when Amin (2007) worked upon a model, Keffala (2007) in his title 'Barriers to the Adoption and the Usage of Internet Banking by Tunisian Consumers' worked upon extension of the technology acceptance model that involves perceived usefulness, perceived ease of use, intention, trust, and awareness. According to him these factors are responsible for the usage and non usage of internet banking in Tunisia, also perceived risk and security did not made any effect on the usage of internet banking. Like Hanudin (2007) Tat et al.(2008) in their title 'Predictors of Intention To Continue Using Internet Banking Services' also tries to find out the factors that may affect usage of internet banking among existing customers. They revealed that trust has the strongest positive impact among the three factors studied, followed by compatibility and ease of use with reference to customers' intention of using internet banking services.

Researchers have been watchful in developing countries too as Qureshi (2008) in his title 'Customer Acceptance of Online Banking in Developing Economies' states that there has been a tremendous growth in internet banking seen these days. The Customers' acceptance rate of internet banking is very high in Pakistan. Majority of the banks provide internet banking services. Banking websites provide information regarding internet banking. He applied TMQ model in evaluating factors that manipulate the nature of customers towards internet banking. The amount of information provided to the customers through various media is useful in deciding the adoption for internet banking. As half of the customers shifted from traditional banking to online banking, therefore it is proved that perceived usefulness, ease of use, security and privacy plays a vital role in acceptance of internet banking.

Various researches held in India also contributed towards the perception of internet banking. Srivastava (2007) in his title 'Customer's perception on usage of internet banking' believes that internet banking is at its starting stage in India. The study revealed that education, gender, income plays an important role in usage of internet banking. Trust is the major factor which helps to use internet banking. The perception of the consumers can be improved by organising various awareness programs, charging less, improving security. The customer that do not use internet can be converted into potential customers if proper guidance is provided to them.

While Srivastava (2007) stated that internet is in the initial stage, Singhal and Padhmanabhan (2008) states that now customers have started perceiving internet banking services as a prime feature when compared to other features of the bank. Study revealed that internet banking is convenient, flexible, has transaction related benefits and also digital signature is the best way of providing security. Factor analysis results indicate that 'utility request', 'security', 'utility transaction', 'ticket booking' and 'fund transfer' are major factors that saves time and provides security to the customers and also contribute to the usage of internet banking. Similarly, Sudeep (2008) is of the view that Internet is one of the latest technologies for customers to interact with their banks. A model developed in order to explain the behavioural intention that influence internet banking adoption proved that perceived usefulness, perceived ease of use, consumer awareness, quality of facilities and subjective norms help in the acceptance of internet banking use.

Whereas Gupta and Islamia (2008) in their title 'Internet banking in India' tried to examine the consumers behaviour with respect to Internet banking in comparison to conventional banking. Their study revealed that foreign banks are superior in providing services that private banks lack. Conventional banking

lacks speed especially in case of public sector banks. Trust is the most important factor followed by accuracy and confidentiality that effect usage of internet banking. Safety and speed is a matter of concern whereas accuracy is not a concern. Providing a different prospect on internet banking current scenario in India Khan et al. (2009) says that less number of studies have been done in India on the concept of internet banking as compared to other countries. They found that customers are satisfied with the reliability of the services provided by internet but are not satisfied with the user-friendliness of the services; also privacy and security are the two factors that are not contributing towards the service quality of internet banking. They concluded that the service quality provided by internet banking in India is still in its initial stage and lot of homework is to be done by banks in order to improve the customer's satisfaction level that they have towards internet banking in India.

Different from the view given by Khan and Mahapatra (2009), Safeena and Abdullah (2010) in their title 'Customer Perspectives on e-business value' says that many people are shifting to online banking and are readily accepting the usefulness of this improvement in technology. Customers are more likely to use internet banking when it is easy to use and when it is perceived as useful. Adding utilities to their previous research Safeena et al. (2011) in their present title 'Internet Banking Adoption in an Emerging Economy' aims at examining the impact of perceived usefulness, perceived ease of use and perceived risk on the acceptance of internet banking among customers. Perceived usefulness and perceived ease of use have positive effect on the use of internet banking and perceived risk have negative effect on the use of internet banking. Individuals are reluctant to adopt the system because of the risk associated with it. Customers are not ready to take any risk on using this new system. Banks need to make the customers aware about the system by providing them about the benefits associated with it and also ensuring security of the system.

Internet Banking is one of the best alternative channels available to customers for quick, correct and efficient service at anytime and anywhere (Uppal 2011). The whole study focused on five categories of banks where new private sector banks have highest number of computerised branches offering internet banking and also the number of customers using internet banking followed by foreign banks, SBI & associate banks, old private sector banks and other nationalised banks. Foreign banks have the highest profit per employee, followed by new private sector banks, Other Nationalized Banks, Old Private Sector Banks and SBI associate banks. Among various bank groups, new private sector banks and foreign banks are on the top position in providing more internet banking services and their efficiency is also high as compared to other bank groups.

Putting emphasis on cost incurred when using internet banking Kumbhar (2011) in his title 'Determinants of internet banking adoption' tried to identify and understand the attitudinal, behavioural, cost, service quality and awareness factors that are significant in explaining intentions to adopt internet banking services in India. In recent day's internet banking has become more popular service because of its utility and convenience. Results show that gender, age, level of education, level of income, profession, level of IT literacy are the demographic factor which influence adoption of internet banking. Customers' education for using internet banking and their awareness towards internet banking should also be increased. Reflecting on utilities and convenience internet banking provides Sharma (2011) in his title 'Concentration of online banking' stated that internet banking helps in performing banking transactions anytime and anywhere. His study revealed that people believe that online transactions are secure, advantageous, trust worthy and are available in understandable language. Banks must make their services customized in order to make their customers committed to deal online. A problem solving approach should be followed by banks for their customers.

Being focused on customer satisfaction Sehgal and Chawla (2011) in their title 'Impact of internet banks on customer satisfaction' suggested that customers want improved, convenient, and easy service. The study worked upon all age groups and at all educational levels from students to retired persons in order to arrive at a generalised result. Maximum respondents believe that the service quality and satisfaction level of their respective service providers is at its maximum and excellent level. Their study also revealed that there are customers who use internet banking almost every day. There is no significant relation that can be seen between age and choice of bank of customers and also it is proved that there is no significant relation between occupation and choice of bank of customers. Majority believes and prefers internet banking to traditional banking.

#### **NEED OF THE STUDY**

Indore is a major city and commercial centre of the state of Madhya Pradesh in central India. It is the largest city of Madhya Pradesh, the 15<sup>th</sup> largest city in India and the 147<sup>th</sup> largest city in the world. Also known by the name of Ahilyanagri, the city of Indore has an average literacy rate of 87.38 percent, higher than the national average of 74 percent. Male literacy is 91.84 percent, and Female literacy is 82.55 percent. With latest technological advancements, city is about to become the IT hub of the state of Madhya Pradesh. The perception of students residing in Indore is different regarding internet; they witness the technological updates in various aspects ranging from an electronic ticket they get while travelling in a city bus to the usage of internet services at information technology centre located in the University campus. As most of the students studying in Indore are basically from other cities residing far from their home town therefore their banking need is high. The study therefore tries to study the adoption and preference of students in Indore towards internet banking.

## **OBJECTIVES OF THE STUDY**

The major objectives of this research are as follows:

- 1. To identify the factors affecting the adoption of internet banking among students in the city of Indore
- 2. To analyze and understand the usage of internet banking among students
- 3. To identify the major purpose of internet banking usage among young generation
- 4. To identify the scope of internet banking services among students in the city of Indore

# RESEARCH METHODOLOGY

## **SELECTION OF THE SAMPLE**

While selecting the sample all students were taken into consideration in order to constitute the total population. The sample comprised of under-graduates, graduates and post graduates. The students who use internet banking were taken as the sample size. A convenience sampling is used to gather response from 200 students residing in Indore who use internet banking.

# SOURCE AND COLLECTION OF DATA

The present study is based upon primary as well as secondary data

**SECONDARY SOURCES**: Secondary sources provided the required information and reference to work on the objectives of the study. The various secondary information sources used for the present research include various businesses, commerce, international, global and national journals. Further the secondary data was collected from various websites such as www.arraydev.com, www.mendeley.com, www.ssrn.com

**PRIMARY SOURCES:** A well structured questionnaire was prepared and distributed to selected students of different colleges in the city of Indore. The students selected were those who use internet banking at least four to five times in a month. The survey was conducted among 200 students of different management colleges in the city of Indore. The questionnaire contained demographic details of the respondent as well as questions in order to measure the efficiency and performance of their internet banking services provided by the banks. All items were measured on a five-point likert scale in agreement/ relevance with statements, ranging from 1= strongly disagree/ completely Irrelevant to 5= strongly agree/ completely relevant.

**TOOLS USED FOR DATA ANALYSIS:** The present study has analyzed internet banking services by using factor analysis as a tool to identify the different factors that are responsible for the adoption of internet banking among the respondents. Factor analysis helped in the process of factor loading, a process that helps to remove all the insignificant items from the study. Factor loading removes the items whose values are less than 0.5 in the rotated component matrix. Factor analysis in this study also helped in identifying the number of factors that are responsible for the adoption of internet banking.

## **DATA ANALYSIS AND INTERPRETATION**

The introduction section of this paper had stated various empirical studies that show a strong relationship between demographic factors and adoption of internet banking across the globe. The current section therefore firstly tries to test this relationship for the students of Indore city.

## Distribution of educational qualification of respondents using internet banking

The educational qualification details of respondents have been presented in **Table 1.**The perusal of the data reveals that out of the total respondents, the percentage of under graduates using internet banking is 32, the percentage of graduates using internet banking is 33 and the percentage of post graduates using internet banking is 35. The percentage of internet banking users is almost equal; this is a favourable indication towards the adoption of internet banking service as there is a contribution made by respondents with different levels of educational qualification with them. It indicates that internet banking is used by almost all who are taking education.

## Distribution of sex of respondents using internet banking

The gender of 200 respondents described in **Table 2** depicts that out of the total respondents, the percentage of males using internet banking is 60 percent whereas the percentage of females using internet banking is 40 percent. This figure indicates that the usage of internet banking is not limited to male only, these services are also utilised by female. This may be due to the fact many students reside far from their homes and internet banking services provide an easy and convenient method to perform cash as well as non cash transactions. It also indicates that the time spent in visiting bank for each and every transaction is a lengthy and time consuming process for students.

## Distribution of name of banks of respondents

Table 3 depicts that out of total respondents 102 students use SBI, 34 student use AXIS Bank, 24 student use ICICI, 20 student use IDBI whereas 20 student use HDFC for accessing internet banking services. State bank of India due to its vast presence across the nation over the years has gained its share in providing internet banking services. The other five banks have a respectable amount of share with them and are giving a tough competition to each other when it comes to providing internet banking services. It is interesting to see that there is a wide range of banks providing internet banking services. Therefore it is important that banks improve upon their services in order to increase their market share.

#### Distribution of frequency of usage by respondents using internet banking

Table 4 throws light upon the fact that out of total respondents 130 respondents are those who use internet banking services up to 5 times in a month, 48 respondents are those who use internet banking services 5-10 times in a month and 22 respondents are those who use internet banking services more than 10 times in a month. There is a reasonable number of respondents using internet banking services between 5-10 times in a month and also there are 1/9 of the users that use the services for more than 10 times in a month, this signifies that the internet banking services is gaining its popularity day by day and respondents have started perceiving it as an effective tool to save time and energy. The figure also indicates that students are willing to use internet banking services whenever they have some transaction to be done.

#### Distribution of length of Usage by respondents using internet banking

On one hand where **Table 4** shows that frequency of usage is increasing, **Table 5** observes that the number of respondents who started using internet banking services recently are large in number. Out of total respondents the number of respondents using internet banking from less than 3 months are 90, those using from last 3-12 months are 60 whereas those using from more than a year are 50. It is seen clearly that the respondents have started increasing in number from past three months when it comes to internet banking. There are respondents who are using these services from last 3- 12 months and also there are respondents using these services from more than 12 months. It indicates a growing market for these services in the future.

## Distribution of different purpose of use by respondents using internet banking

Complementing to **Table 4** and **Table 5** which shows growth seen in frequency and length of usage, **Figure 1** highlights the different purpose of using internet banking. There were respondents who used internet banking for a single purpose and also there were ample number of respondents who used internet banking for more than a single purpose. There are majority of respondents' who use internet banking especially for booking their railway tickets, this is due to the fact that majority of the students reside away from their home and always seek an opportunity to visit their homes by using trains as a means of transport. The purpose to use internet banking services also involves getting information about the accounts, funds transfer and making utility payments; also there are a reasonable number of respondents using services such as trading activity, requesting and maintaining Demat account.

The table suggest that there is a diversified objective that can be fulfilled once a person starts using internet banking services. Initially the study comprised of 30 items that were included in order to test and analyse the various parameters of internet banking services including availability, convenience, ease, and reliability and satisfaction level of the user. Before the principal component analysis Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity were performed with the help of SPSS 16.0. The K-M-O test and Bartlett's Test of Sphericity found that all extractions values are as per the expected values; therefore all items were used for further analysis. Item communalities also found good in the data set. Item communalities are considered "High" if they are all 0.8 or greater although this is unlikely to occur in the social Sciences. **Table** 6 indicates K-M-O test is significant (because test value is greater than .700 at .926) and Bartlett's Test of Sphericity was also found significant ( $\chi$  = 3.232E3 DF = 435 P < .001.) This indicates that the data set was adequate to perform factor analysis.

# PRINCIPAL COMPONENT ANALYSIS

In the process of factor analysis of the scale, the Varimax rotation technique was employed to examine the obtained factors and all items with loadings above 30. **Table 7**, labelled "Total Variance Explained," shows total variance of the observed variables as is explained by each of the principal components. The first principal component explains the largest part of the total variance, this account to 40.21% of the total variance, second component explains 6.23% of the total variance, third component explains 4.9% of the total variance, fourth component explains 4.3% of the total variance and fifth component explains 3.76% of the total variance. A component that displays an eigenvalue greater than 1.00 is accounting for a greater amount of variance therefore, only those components are considered as principal components which are having eigenvalue greater than 1.00. Thus the five factors were identified and had been taken for further research.

Initially the study comprised of 30 items that were included in the questionnaire but after performing factor analysis, the result that came in factor loading removed the items whose VALUES were less than 0.5 in the rotated component matrix as seen in **TABLE 9**. The rotated component matrix describes the situation loading; the total items removed due to insignificancy from the study were seven in numbers and the study was left with 23 items that were used for further research work. These 23 items were then combined in five factors with the help of rotated component matrix. The five factors were taken because there were five values that fulfilled the criteria of EIGEN VALUES greater than 1 and also with the help of the scree plot that suggested that there are five factors explaining the study.

The reliability of the data is also tested with the help of Cronbach's alpha (Table 8), a popular method use to check the internal reliability of the data collected from the respondents. It takes all the values above 0.6 as significant and reliable values. The data was found to be significant and reliable. The results are in line with the findings made by Safeena, Date and Kammani (2010), Keffala (2007), Qureshi (2008) where they found that perceived ease of use, perceived usefulness and trust play an important part in adoption of internet banking.

## FRAMEWORK OF THE FACTORS

The five factors that were taken to measure the perception of respondents towards internet banking are:

- 1. **Perceived ease of use**: Perceived ease of use refers to the degree to which a user believes that a service is simple to use and free of effort. Study reveals that students are able to use the services provided by their banker with ease. They have easy access to the website all round the clock.
- 2. **Trust**: Trust can be defined as the degree to which the user believes that the security of the system; private information is kept safe by the bank, free from any internal and external threats. Students are ready to provide their personal information as they have full trust on their banks.

- 3. **Perceived Usefulness:** Perceived usefulness refers to the degree to which a user believes that a service is useful and fruitful and supports the cause for which the service was taken. It is seen with the help of present study that students are making use of different services provided by internet banking range from getting information to transfer of funds
- 4. **Promptness**: Promptness is the degree to which a user believes that the services are provided timely and any error made is immediately made known and are rectified. Students are of the opinion that any failed transaction if charged is refunded back into the accounts in less than 72 hours.
- 5. **Perceived Enjoyment**: Perceived enjoyment refers to the degree to which a user believes that services are enjoyable. It can also refer to a situation when person using the service is overjoyed with the level and type of services he is getting. Students are taking great pleasure in making use of internet banking services to the fullest.

#### **FINDINGS**

- 1. Students have good and sound knowledge of internet banking services
- 2. The ratio of usage of internet banking between males and females is in the ratio of 3:2
- 3. Internet banking services are getting recognized by the students as almost 45 percent of them started using internet banking services from less than 3 months
- 4. There are many banks that provide internet banking services these days
- 5. Internet banking is commonly used by students specially for booking railway tickets, getting information, transferring funds and making utility payments
- 6. Out of total number of students surveyed almost half of them make use of State bank of India for getting internet banking services.

# **CONCLUSION**

There are various banks providing internet banking services to students. The study reflects that the students have high knowledge and awareness towards internet banking services. The factors responsible for the scope of Internet banking had been analyzed with the help of factor analysis. It can be concluded from the study that students demand ease, trust, usefulness, promptness and enjoyment while using their internet banking services. The Study reveals the fact that there is a growing demand towards this wireless technology, unlike past trends students nowadays do not worry to keep their personal information with the bank. Thus it could be concluded that students are of the opinion that these services are efficient and help in saving time; they feel satisfied while using the internet banking services.

#### **REFERENCES**

- 1. Amin (2007), "Internet banking adoption among young intellectuals", Journal of Internet Banking and Commerce, Vol. 12, No.3
- 2. Gupta and Islamia (2008), "Internet banking in India", Global journal of business research Volume 2 Number 1
- 3. Khan, Mahapatra, and Sreekumar (2009) 'Service quality evaluation in internet banking: an empirical study in India', Int. J. Indian Culture and Business Management, Vol. 2, No. 1, pp.30–46.
- 4. Kumbhar (2011), "Determinants of internet banking adoption", Indian Journal of Commerce & Management Studies, Vol.2, Issue -4
- 5. Qureshi (2008), "Customer Acceptance of Online Banking in Developing Economies", Journal of Internet Banking and Commerce, vol. 13, No.1
- 6. Safeena and Kammani (2010), "Customer Perspectives on e-business Value", Journal of Internet Banking and Commerce Vol. 15, No.1
- 7. Safeena, Date and Kammani (2011), "Internet Banking Adoption in an Emerging Economy", International Arab Journal of e-Technology, Vol. 2, No. 1
- 8. Sehgal and Chawla (2011), "Impact of internet banking on customer satisfaction", International journal of research in commerce, I.T & management, Volume: 1, issue No. 2
- 9. Sharma (2011), "Concentration of online banking", Sri Krishna International Research & Educational Consortium Vol. 1, Issue 1
- 10. Singhal and Padhmanabhan (2008), "A Study on Customer Perception towards Internet Banking", the Journal of Nepalese Business Studies, Vol. 1, No. 1
- 11. Srivastava (2007), "Customer's perception on usage of internet banking", Innovative Marketing, Volume 3, Issue 4
- 12. Tan and Teo (2000), "Factors Influencing the Adoption of Internet Banking", Journal of the Association for Information Systems, Volume 1, Article 5
- 13. Tat, Yang, Yong (2008), "Predictors of Intention to Continue Using Internet Banking Services", International Journal of Business and Information, Vol. 3, No.2
- 14. Uppal (2011), "Internet banking in India", Business Administration and Management Vol. 1 No.3

# **ANNEXURE**

TABLE 1: DISTRIBUTION OF EDUCATIONAL QUALIFICATION OF RESPONDENTS USING INTERNET BANKING

<b>Educational qualification</b>	No of respondents	Percentage
Under-graduate	64	32
Graduate	66	33
Post- graduate	70	35

# TABLE 2: DISTRIBUTION OF SEX OF RESPONDENTS USING INTERNET BANKING

Sex	No of respondents	Percentage
Male	120	60
Female	80	40

## **TABLE 3: DISTRIBUTION OF NAME OF BANKS OF RESPONDENTS**

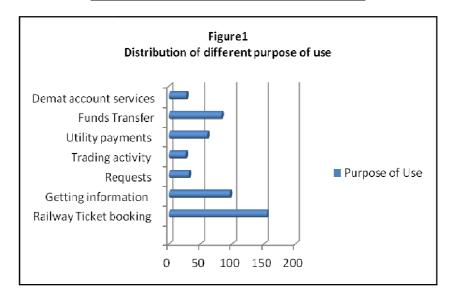
TABLE 5: DISTRIBUTION OF MAINE OF BANKS OF RESPONDENTS							
Name of bank	No of customer	Percentage					
State bank of India	88	44					
Axis Bank	30	15					
Industrial credit and investment corporation of India	22	11					
Industrial development bank of India	20	10					
Housing development financial corporation	20	10					
Punjab National Bank	20	10					

TABLE 4: DISTRIBUTION OF FREQUENCY OF USAGE IN A MONTH BY RESPONDENTS USING INTERNET BANKING

Frequency of usage in a month	No of respondents	Percentage
Up to 5 Times	130	65
5-10 Times	48	24
more than 10 Times	22	11

TABLE 5: DISTRIBUTION OF LENGTH OF USAGE BY RESPONDENTS USING INTERNET BANKING

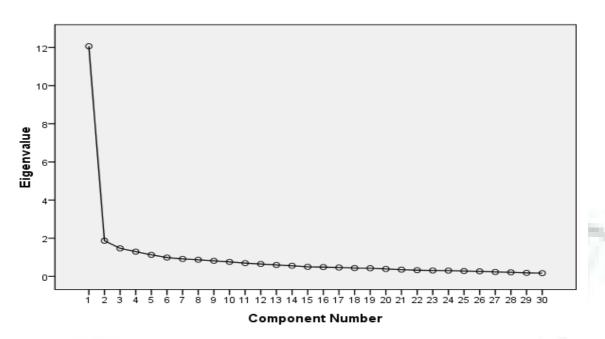
Length of usage	No of respondents	Percentage
Less than 3 months	90	45
Between 3- 12 months	60	30
More than 12 months	50	25



**TABLE 6: KMO AND BARTLETT'S TEST** 

Kaiser-Meyer-Olkin Measure of	.926	
Bartlett's Test of Sphericity Approx. Chi-Square		3.232E3
df		435
	.000	

Figure 2 EIGEN VALUES
Scree Plot



**TABLE 7 TOTAL VARIANCE EXPLAINED** 

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.064	40.215	40.215	12.064	40.215	40.215
2	1.869	6.230	46.445	1.869	6.230	46.445
3	1.470	4.900	51.345	1.470	4.900	51.345
4	1.296	4.320	55.665	1.296	4.320	55.665
5	1.130	3.765	59.430	1.130	3.765	59.430
6	.986	3.287	62.717			
7	.914	3.047	65.764			
8	.872	2.907	68.671			
9	.814	2.714	71.386			
10	.761	2.536	73.922			
11	.692	2.308	76.230			
12	.648	2.159	78.389			
13	.598	1.993	80.381			
14	.556	1.853	82.234			
15	.499	1.663	83.897			
16	.487	1.622	85.519			
17	.464	1.547	87.065			
18	.437	1.456	88.521			
19	.428	1.426	89.948			
20	.387	1.291	91.239			
21	.352	1.174	92.413			
22	.325	1.082	93.496			
23	.308	1.027	94.523			
24	.302	1.007	95.530			
25	.279	.931	96.460			
26	.264	.880	97.340			
27	.231	.770	98.110			
28	.214	.715	98.825			
29	.182	.608	99.433			
30	.170	.567	100.000			

**Extraction Method: Principal Component Analysis.** 

TABLE 8 RELIABILITY STATISTICS (CRONBACH'S ALPHA)

	TABLE 8 RELIABILITY STATISTICS (CRONDACTY SALTTIA)								
Construct	Perceived ease of use	Trust	Perceived Usefulness	Promptness	Perceived Enjoyment				
Items	10	6	3	2	2				
Alpha	997	001	710	612	712				



		TABLE 9:	ROTATED CO	MPONENT	MATRIX	
	Component					
	1	2	3	4	5	Labelled as
PEOU 1	.706					
PEOU 2	.669					
PEOU 3	.660					
PEOU 4	.622					
PEOU 5	.608					PERCEIVED EASE OF USE
PEOU 6	.607					
PEOU 7	.593					
PEOU 8	.582					
PEOU 9	.520					
PEOU 10	.515					
T1		.816				
T 2		.756				
Т3		.747				TRUST
T 4		.674				
T 5		.639				
Т6		.512				
PU 1			.744			
PU 2			.711			PERCEIVED USEFULNESS
PU3			.508			
P 1				.733		PROMPTNESS
P 2				.656		
PE 1					.723	PERCEIVED ENJOYMENT
PE 2					.677	
	1	2	3	4	5	Labelled as
% of Variance	40.215	6.230	4.900	4.320	3.765	
Extraction Metho						
Rotation Method	l: Varimax wit	h Kaiser Nor	malization.			



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