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CUSTOMER PERCEPTION AND ADOPTION OF BANKING TECHNOLOGIES

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ABSTRACT

Electronic Banking incorporates a variety of platforms such as internet banking, automated teller services and mobile phone banking to deliver banking products to the customer. The proposed study focuses on impact of banking technologies among banking customers including students. The study has its theoretical foundation on the 'Technology Acceptance Model' developed by Fred Davis and Richard Bagozzi. A variant of this model was proposed in this work. The study attempts to throw light into reasons for use and non - use of banking technologies, the extent of utilization, problems faced during use of banking technologies and so on. The study will also try to throw light on loss of personal attention after the implementation and use of banking technologies and the change in the frequency of customer visits to bank branches.

Key Words: Electronic Banking, Automatic Teller Machine, Internet Banking, Mobile Banking, Technology Acceptance Model.

1.0 Introduction:

Electronic Banking is the automated delivery of new and traditional banking products and services directly to the customer through electronic communication channels. Electronic banking incorporates systems that enable individual customers to access their accounts, transact with speed and obtain current and updated information on latest financial products

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and services through public or private networks. It accommodates a variety of platforms such as internet banking, telephonic and television based banking, automated teller services, mobile phone banking as well as PC based and offline banking services. As most of these technology services have become popular in our country, customers now have the opportunity to enjoy the benefits offered by advanced electronics such as automatic teller machines, mobile phones, personal digital assistants and personal computers and experience electronic banking services through privileges and features offered by advanced information technologies. Banks will have to incur capital costs for various technology costs to save on operating costs, but must derive maximum returns from such assets while cutting down operating expenses at the same time.

2.0 Objective of the study:

The proposed study focuses on impact of banking technologies on banking customers including students. The study has its theoretical foundation on the 'Technology Acceptance Model' developed by Fred Davis and Richard Bagozzi and variants of the proposed model as suggested by other researchers. The study will attempt to probe into reasons for use and non - use of banking technologies, the extent of utilization, problems faced during use of banking technologies and so on. The study will also try to throw light on loss of personal attention after the use of technologies and the attitude of customers towards visit to the bank branches.

3.0 Research Methodology:

Preliminary literature surveys were conducted to analyse the current status of use and adoption of banking technologies through online and offline search for articles, white papers and research papers published in various magazines and journals. Questionnaire in hard copy was prepared and a survey was conducted using the questionnaire so prepared and distributed to the sample population in a professional college at Kochi. The questionnaire helped gather data from a sample size of 172 respondents on variables captured by the proposed extended TAM model. The sampling methodology adopted was convenience sampling. Areas of investigation included ATMs, Mobile banking, Mobile wallets, online banking as well as payment services through banks. Responses were then analyzed using statistical tools.

4.0 Contribution from the study:

The study aimed to identify most popular electronic banking services among customers, their adoption, customer use of E-Banking technologies and security concerns with respect to technologies used. The study also tried to analyze customer readiness and

adoption of banking technologies. Again, this study has also attempted to identify positive and negative perceptions and the impacts of banking technologies as well as the reasons for customer adoption of E-Banking Technologies.

5.0 Literature Review:

Literature survey for secondary data included articles and research papers available both online and offline. The conceptual and original TAM proposed by Fred Davis and their limitations have been elaborated by M Yasser Chuttur[5] in his paper. The paper focused on historical origin of TAM, its major applications, validations, extensions and criticisms. Janelle Rose et al[6] in their paper have commented that a number of influential models investigating intentions to adopt technology have emerged, many of them have their origins in the disciplines of psychology, information systems and sociology. Rose et al also proposes to extend the model by drawing on constructs from a range of theories - namely subjective norms, self-efficacy, perceived risk, technology discomfort and personal contact - to improve our understanding of the antecedents of the TAM constructs, perceived usefulness and perceived ease of use. According to them, extending the TAM promises to assist in predicting attitude and acceptance and thereby provides meaningful information that can serve as a basis for designing educational and communication strategies to foster greater acceptance of self service technologies among customers. Montana Intana et al in their article[7] realizes an urgent need to understand the reasons behind the reluctance of potential users to adopt Internet Banking so that service providers can improve their Internet Banking services. A conceptual framework model for Internet Banking adoption has also been proposed by Montana Intana et al in their article. An extended TAM Model for M-Banking has been proposed by Ali AlSoufi et al[8]. An extended model of TAM was used in this work also.

6.0 Technology Acceptance Model:

The acceptance and rejection of technology can be predicted by using the Technology Acceptance Model (TAM, Fig. 1), which demonstrates the relationship connecting customer belief, attitude and action purpose. The original Technology Acceptance Model formulated by Davis (1989) consists of two constructs; perceived usefulness and perceived ease of use. Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance their performance, whilst perceived ease of use (PEOU) is defined as the degree to which a person believes that using a particular system would be free of physical and mental effort (Davis, 1989). Later studies demonstrate that the constructs of

PU and PEOU are positively related to behavioural intention to adopt mobile banking. However, there have been arguments that, it will not be sufficient to rely only on these two constructs of perceived usefulness (PU) and perceived ease of use (PEOU) in investigating user's technology acceptance. Studies by several eminent personnel suggest that there are other possible factors that might affect technology adoption such as perceived risk or uncertainty, social norms, financial cost, demographic factors.

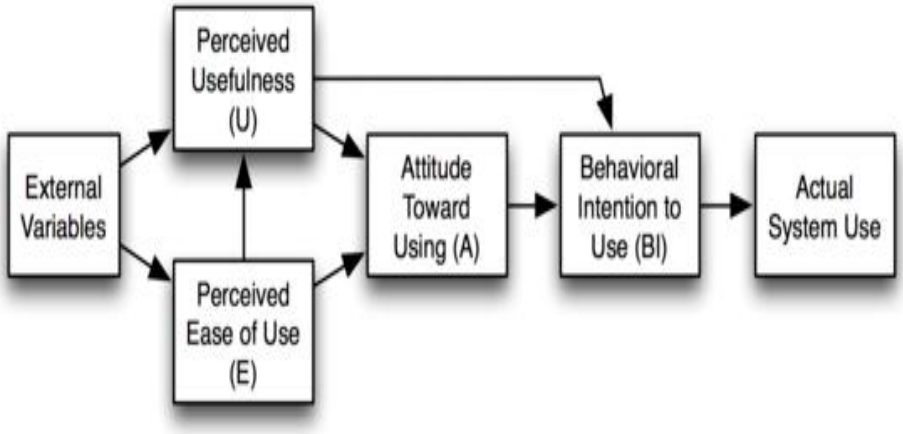

Fig. 1: Technology Acceptance Model

In the proposed model (Fig. 2), other factors such as Perceived Risks and Fears, Perceived Reliability and Efficiency and Perceived Readiness to use have been taken into account. The adoption of electronic banking forces consumers to raise a few concerns about password integrity, privacy, data encryption, hacking, and the protection of personal information. Perceived risks of information loss during electronic banking transactions is hence an important factor that customers might consider while accessing electronic banking services. Reliability and Efficiency of services experienced and often heard through word-of-mouth opinion will also influence customer decision making towards the use of E-Banking services. Technology may change with time, some existing technologies will become obsolete or non-existent with the passage of time and introduction of new technologies, and so do the tastes and preferences of customers change with time. Technology Readiness indicates the extent to which consumers are prepared to use new technologies than their actual ability and influences E-Banking customers to a great extent. Technology Readiness[10] may be defined as people's propensity to embrace and use new technologies for accomplishing goals in home life and at work.

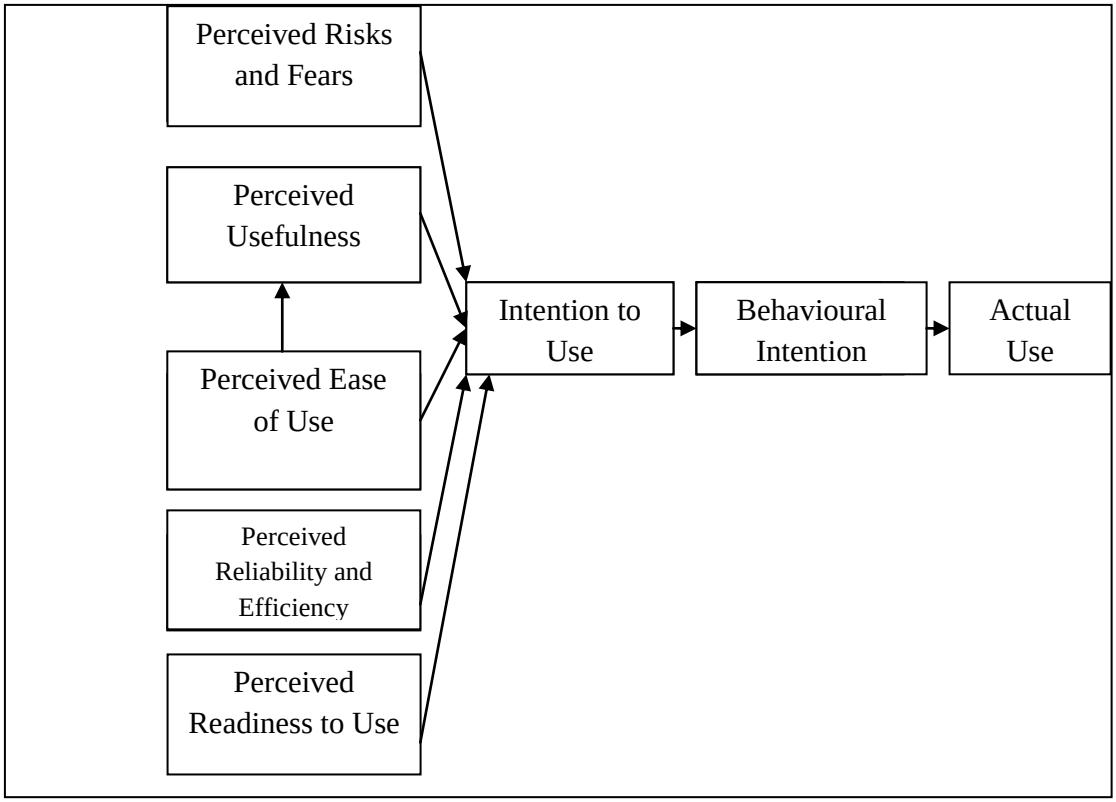

Fig. 2: Proposed Technology Acceptance Model

7.0 Respondent Demographics:

As many as 172 valid responses were received which represented a population of 1230. 74 male respondents and 98 female respondents participated in the survey as shown in Fig 3. Out of 172 responses received, 152 were earning income below Rs. 25,000/- 6 were earning between Rs. 25,000/- and Rs. 40,000/- and 14 were earning income above Rs. 40,000/- as shown in Fig 3.

Figure 3: Gender wise and Income wise distribution of respondents

111 of the respondents were undergraduates while 61 of the respondents had qualifications of graduation and above (see Fig. 4). 117 of the respondents held their bank accounts in Public Sector Banks alone including State Bank of India, their associate banks and other Public Sector Banks as well. 28 respondents held their accounts in Private Sector Banks alone while 21 respondents held their accounts in both Public Sector and Private Sector banks. 6 respondents declined to reveal information on banks where they hold their bank accounts (Fig. 4).

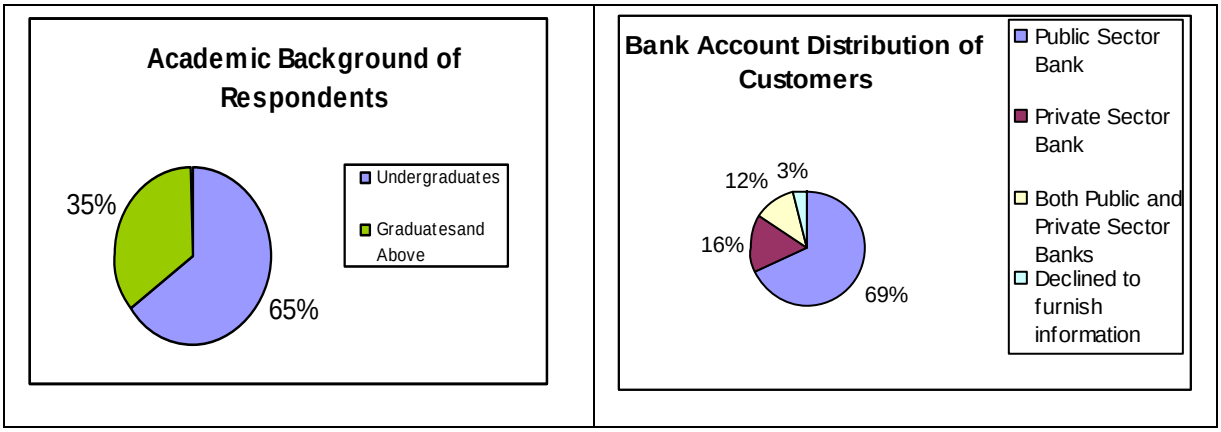

Figure 4: Academic Background and Distribution of Bank Accounts of Respondents

8.0 Results:

The respondents were asked to rank their preferred method of banking transactions among Automatic Teller Machine, Internet Banking, Mobile Banking and Branch Banking. Out of 172 respondents, 115 (ie; 66.86%) consider ATM as their most preferred method of banking transactions. 47 (ie; 27.33%) of the respondents consider Internet Banking as the most preferred method of banking transactions, 7 (ie; 4.07%) respondents consider Mobile Banking as their most preferred method of banking transactions while 3 (ie; 1.74%) of the respondents consider Branch banking as the most preferred method of banking transactions. 34 respondents consider ATM as their next preferred method of banking transactions, 65 respondents consider Internet Banking as their next preferred method of banking transactions, 44 respondents consider Mobile Banking as their next preferred method of banking transactions while 29 respondents consider Branch banking as their next preferred method of banking transactions. Respondent rankings (Table 1) give a clear indication of the preference and popularity of ATM (Fig. 5) and Internet Banking for E-Banking services among banking customers.

Rank	ATM	Internet Banking	Mobile Banking	Branch Banking
1	115	47	7	3
2	34	65	44	29
3	20	56	57	39
4	3	4	64	101

Table 1: Respondent Distribution of Preferred Method of Banking Transactions

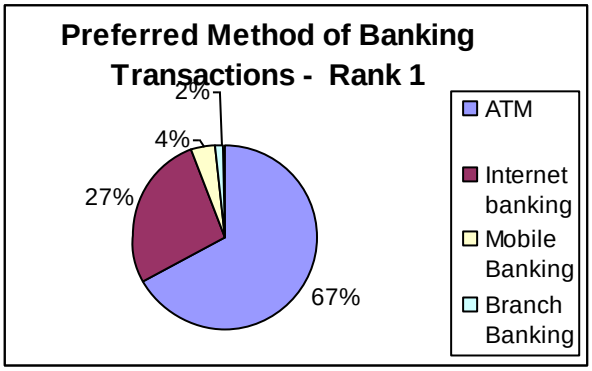

Figure 5: Respondent's most preferred method (Rank 1) of banking transactions

The respondents were also asked to rank the factors they would consider while choosing a bank for E-Banking services. The eight factors chosen for respondent consideration are listed in Figure 6 along with the frequency of responses and distribution of responses. Around 20.48% of the respondents considered Reputation of the Branch and Word of mouth opinion on the bank as the dominating factor they would consider while choosing a bank for E-Banking services. 19.88% of the respondents consider Proximity to Branch Services as the dominating factor they would consider while choosing a bank for E-Banking services while 18.93% of the respondents consider Promptness, Service Quality and Responsiveness of services as the dominating factor they would consider for their choice.

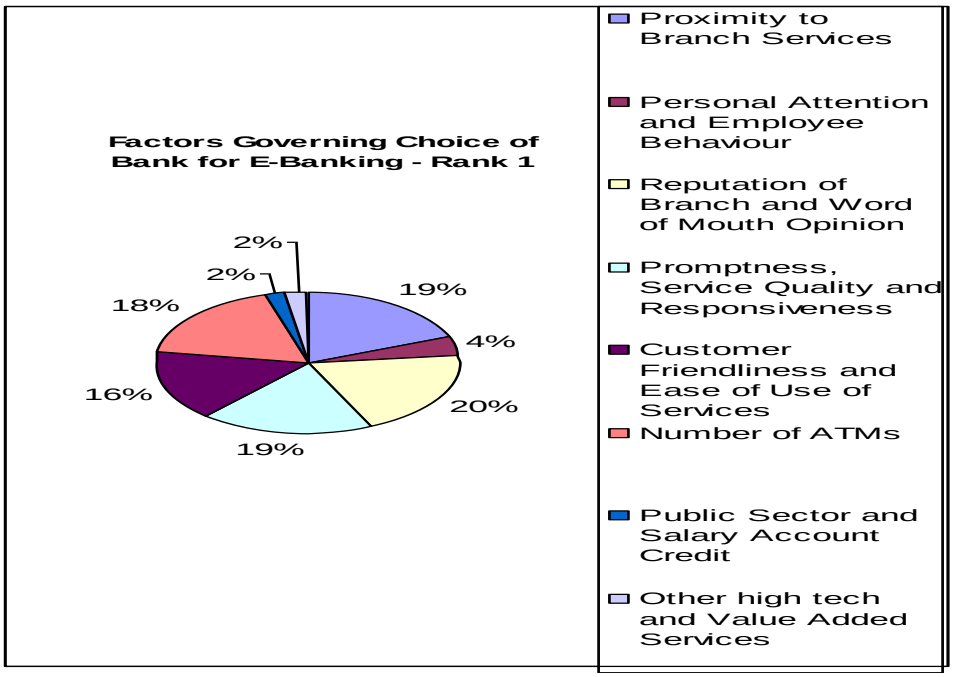

Figure 6: Dominant Factor governing the choice of a bank for E-Banking Services.

Respondent responses for each question (Tables 2, 3, 4 and 5) in the questionnaire were analyzed based on measures of central tendency such as Mean and Standard Deviation on a five-point Likert scale with scores ranging from 1 to 5**.** The mean values (Table 2) indicate that customers predominantly use ATM services for cash withdrawals and to check account balance. Internet Banking as the table suggests, is mainly used by the customers for online shopping, ticket reservation and fee or bill payments. Mobile Banking as the mean values suggest has not gained much popularity among customers, but has found acceptance to some extent for mobile phone recharge and ticket reservation. Table 3 lists down the statistical parameters highlighting the reasons for adoption of E-Banking services by the customers. Mean values indicate anytime, anywhere/proximity banking and speed of service as some of the major reasons for perceived usefulness of E-Banking services among customers. Values of mean and standard deviation indicate customer experience of ease of use of E-Banking services. E-Banking customers seem to be attracted by the simplicity in operation, menu driven and user friendly nature and low levels of skills required to use E-Banking services. The values of mean and standard deviation also indicate the customer perception regarding the security aspects of E-Banking services. Customers do value security in transactions through E-Banking services and the confidentiality of personal records. A majority of customers do not seem to have a memorable record of loss of security over E-Banking services, as the mean values indicate. Table 3 also indicates acceptance of cost structures of E-Banking services provided to customers as one of the major reasons for adoption of E-

Banking services. E-Banking customers consider service charge structures as affordable with no hidden charges and without heavy demands on the customers for additional investments. Values of mean and standard deviation again indicate reliability and efficiency as one of the other reasons for customer adoption of E-Banking services. A majority of customers of E-Banking services found that their bank keeps promises and seems dependable for them. Banks issue timely and accurate information to the E-Banking customers, as they find.

Not all customers seem to enjoy using E-Banking services, as Table 4 quotes a few reasons. There are customers who still prefer branch banking. There are a good number of customers who are not satisfied with the complaint management offered by the banks for E-Banking services. A mean value of 3.14 indicates priority of some customers to human interaction over machine guidance. Again, a mean value of 3.669 indicates that since branch is closer and at a convenient location, there are a good number of customers who do not perceive the need to use all offered E-Banking services. For many customers, their requirements for all financial services are not met through E-Banking services. Mean value again points out that many customers feel inaccessibility to E-Banking services since network problems outweigh advantages. Risks and fears of money loss, identity thefts and loss of password and privacy haunt E-Banking customers, as the statistical parameters shown in the Table 4 point out. Low mean values indicate that inertia as well as language and knowledge aspects of the customer do not significantly influence customer use of E-Banking services.

Technology has undoubtedly proved beneficial to mankind. E-Banking Technologies however, are not without problems as respondents point out through survey results. Minimum balance requirements and associated deductions imposed by many banks do not amuse E-Banking customers as pointed out by the mean value. Besides, respondents feel that communications from the banks on changes in service charge structures and procedures are not intimated in time. Many customers do not face difficulty in remembering PIN/Passwords. Customers do perceive some problems with ATM services such as unexpected service failure of ATMs as well as inconveniences related to limited denomination withdrawals, amount restriction per withdrawal and the fee levied on card usage in other machines, as the mean values indicate. Customers identify slow internet connection and server busy response as some of the major problems associated with internet banking services. Many customers feel that demo and assistance provided through internet banking services are insufficient for beginners. The small size of the key board and limited size of display of their mobile phones do not inhibit customer use of Mobile Banking

services, as respondents indicate. Mobile banking customers however consider intermittent and distractive connection as provided by the service providers, drain of battery of their mobile device and restriction in services as well as transaction amount as some of the major problems associated with mobile banking services, as indicated by the mean values.

Sl. No	Question	Particulars	Mean	Standard Deviation
1	How frequently do you use ATM for the following services?	Check Account Balance	3.390	1.126
		Account Statement	2.692	1.1
		Cash Withdrawals	4.203	0.997
		Fee/Bill Payments	2.599	1.396
		Money Transfer	2.151	1.19
		Shopping	2.860	1.386
		Mobile Phone Recharge	2.343	1.465
		Ticket Reservation	2.401	1.485
2	How frequently do you use Internet Banking for the following services?	Check Account Balance	2.512	1.524
		Account Statement	2.203	1.368
		Fee/Bill Payments	2.680	1.536
		Money Transfer	2.401	1.425
		Shopping Online	3.006	1.535
		Investments and Investment Related	1.640	1.002
		Ticket Reservation	2.855	1.585
		Service Requests and Information	2.209	1.399
3	How frequently do you use Mobile Banking the following services?	Check Account Balance	2.331	1.483
		Account Statement	1.924	1.233
		Service Requests and Information	1.936	1.262
		Fee/Bill Payments	1.826	1.268
		Money Transfer	1.767	1.121
		Mobile Wallet /Shopping	1.953	1.260
		Mobile Phone Recharge	2.25	1.459
		Ticket Reservation	1.971	1.318

Table 2: Statistical parameters - Frequency of use of E-Banking Technologies

Sl. No	Parameter	Particulars	Mean	Standard Deviation
1	Perceived Usefulness	Anywhere /Proximity Banking	4.012	0.741
		Anytime Banking	4.180	0.755
		Better Control over Transactions	3.773	0.845
		Ready Availability of Information	3.860	0.847
		Quick Service	4.035	0.967
2	Perceived Ease of Use	Operation is simple	4.128	0.738
		Menu Driven and User Friendly	3.977	0.717
		Low Skill Levels Required	3.75	0.866
3	Security Aspects	Transaction security	3.959	0.933
		Confidentiality of Records	3.826	0.945
		No proven history of loss of security	3.703	1.043
4	Cost structure	No hidden charges	3.581	1.159
		No extra investment requirements/demands	3.610	1.029
		Affordable transaction and Service Charges	3.657	1.1
5	Reliability and Efficiency	Bank keeps promises and seems dependable	3.884	0.724
		Bank issues timely information on changes	3.698	0.803
		Precautions taken against network issues	3.401	0.842
		Employee co-operation and timely help	3.523	0.834
		Prompt services offered to match requirements	3.453	0.867
		Information provided is accurate and timely	3.576	0.845
		Technical difficulties resolved in time	3.436	0.919
		Timely settlement of complaints & grievances	3.39	0.964
		Bank compensates for machine errors	3.465	0.97

		Bank guides and resolves customer mistakes	3.517	0.901
		Bank arranges demonstrations when needed	3.32	0.995

Table 3: Statistical Parameters - Reasons for Adoption of E-Banking Services

Sl. No	Parameter	Particulars	Mean	Standard Deviation
1	Lack of human interaction	Personally prefers branch banking	3.372	0.992
		Complaint Management not satisfactory	3.291	0.778
		Machine Guidance not precise	3.14	0.926
2	No Perceived need	Branch is closer and at a convenient location	3.669	1.1
		Requirement of all financial services not met	3.477	0.895
3	Inaccessibility	Network Problems outweigh advantages	3.413	0.910
		No personal computing and internet facility	2.860	0.932
		ATM facility at a far / inconvenient location	2.91	1.181
4	Risks and fears	Fear of money loss	3.529	1.073
		Fear of identity thefts and loss of password	3.593	0.99
		Fear of loss of privacy	3.442	1.077
5	Inertia	Not interested in experiencing new technologies	2.360	1.081
		Feels no special benefit in use of technologies	2.267	0.960
		Technical complexity and time consuming	2.453	1.136
6	Language and knowledge aspects	No regional language display options	2.837	1.158
		Lack of computer knowledge and internet usage	2.541	1.067
		Lack of interest to know about services and procedures	2.622	1.083

		No training provided by the bank	3.006	1.073
7	Cost Aspects	Hidden Costs	3.395	1.023
		Non agreeable Service Charges	3.360	0.904
		Investment required on purchase of equipments/software	3.058	0.903
		Fee for non usage and accidental wrong usage	3.32	1.04

Table 4: Statistical Parameters - Reasons for not using all offered E-banking services

Sl. No	**Parameter**	**Particulars**	**Mean**	**Standard Deviation**
1	General Issues	Limited services offered through E-Banking	2.948	1.027
		Difficulty in remembering PIN/Passwords	2.89	1.079
		Lengthy, Complex Transactional procedures	2.942	0.978
		Minimum balance requirements/associated deductions	3.314	1.023
		No timely communication on changes in service charge structures, procedures	3.233	0.987
2	Problems in ATM Transactions	Withdrawal only in limited denominations	3.5	1.231
		Card cannot be used at all ATMs	3	1.238
		Loss of ATM card and money	3.169	1.06
		Unexpected service failure of ATMs	3.622	1.198
		Long queues and cramped space at ATM Counters	3.366	1.103
		Amount restriction per withdrawal	3.558	1.099
		Complex procedures for redressal of wrong debits	3.203	0.961
		Wrong debit in account due to machine problem	3.221	0.990
		Fee levied on card usage in other machines	3.541	1.126

		Machines do not offer quick response	2.884	1.133
3	Problems in Internet Banking	Slow internet connection and server busy response	3.506	1.152
		Higher Operating costs	2.878	1.027
		Complicated instructions and missing links	3.07	0.995
		Demo and assistance are insufficient for beginners	3.25	0.986
		Restricted delivery of services especially during off time	3.227	0.943
4	Problems in Mobile Banking	Small key board and limited size of display	2.971	1.182
		Higher transaction and communication costs	3.105	0.937
		Restricted services and transaction amount	3.256	1.005
		Mobile connection is intermittent and distractive	3.343	0.982
		Drain of battery during transaction	3.32	1.08

Table 5: Statistical Parameters - Problems faced by E-Banking Customers

9.0 Hypothesis Testing:

One Tailed Hypothesis were conducted for a level of significance $\alpha = 0.05$ for the formulated set of null and alternate hypotheses. The value of $|Z_\alpha|$ for the level of significance of 0.05 was found to be equal to 1.645 from standard statistical tables. The value of $Z_{\bar{x}}$ was computed using the standard expressions. The value of finite population multiplier was found to be 0.8609 for convenience sampling The computed value of $Z_{\bar{x}}$ was compared with $Z_{-\alpha}$ to determine whether null hypothesis can be accepted or not. Out of 24 null hypothesis statements formulated, 18 were accepted and 6 were rejected after hypothesis testing. Hypothesis test reveals that the frequency of bank visits of the respondents has reduced since the arrival of E-Banking Technologies. Again, respondents have not felt loss of personal attention of bank employees since the arrival of E-Banking Technologies. Further, respondents feel that the performance of bank employees has improved since the arrival of E-Banking Technologies. Respondents are of the opinion that the arrival of E-Banking Technologies has speeded up customer services. However, respondents are of the opinion that the frequency of customer use of E-Banking services has not increased considerably. Perceived usefulness and ease of use have positively influenced respondent attitude towards

use of E-Banking services. However, factors such as perceived security aspects coupled with risks and fears, cost and fee structure and lack of human interaction along with network inaccessibility at times have negatively influenced respondent attitude towards use of E-Banking services. Respondents are of the opinion that customer inertia has no negative influence on the attitude of customers towards use of E-Banking Technologies. Respondents feel that limitations in regional language display options and lack of knowledge and interest of customers do not negatively influence customer attitude towards use of E-Banking Technologies. Respondents are of the opinion that cost and service charge structures and investment demands associated with E-Banking negatively influence customer attitude towards use of E-Banking Technologies. Respondents reveal that E-Banking customers face significant general, administrative and technical problems during the use of E-Banking services. However, they seem to be satisfied with the competency and efficiency of E-Banking services they experience. Respondents further affirm that E- Banking services are very much needed and have become inevitable part of their lives.

Null Hypothesis $H_{Ø<\#>}$	**Statement**	**Accepted**	**Rejected**
$H_{Ø1}$	There is significant difference in the frequency of Bank visits of customers since the arrival of E-Banking Technologies	X	
$H_{Ø2}$	There is significant difference in the personal attention of Bank employees since the arrival of E-Banking Technologies		X
$H_{Ø3}$	There is significant difference in the performance of Bank employees since the arrival of E-Banking Technologies	X	
$H_{Ø4}$	There is significant difference in the speed of Banking services since the arrival of E-Banking Technologies	X	
$H_{Ø5}$	There is significant difference in the frequency of use of ATM services for Banking transactions.		X
$H_{Ø6}$	There is significant difference in the frequency of use of Internet Banking services for Banking transactions.		X
$H_{Ø7}$	There is significant difference in the frequency of use of Mobile Banking services for Banking transactions.		X

$H_{Ø8}$	There is significant difference in the adoption of E-Banking Technologies on account of its perceived usefulness.	X	
$H_{Ø9}$	There is significant difference in the adoption of E-Banking Technologies on account of its perceived ease of use.	X	
$H_{Ø10}$	There is significant difference in the adoption of E-Banking Technologies on account of banking security features.	X	
$H_{Ø11}$	There is significant difference in the adoption of E-Banking Technologies on account of its cost and fee structure.	X	
$H_{Ø12}$	There is significant difference in the adoption of E-Banking Technologies on account of its reliability and efficiency.	X	
$H_{Ø13}$	There is significant difference in the use of E-Banking Technologies due to lack of human interaction.	X	
$H_{Ø14}$	There is no significant difference in the perception of need for E-Banking services.	X	
$H_{Ø15}$	There is significant difference in the use of E-Banking services due to network inaccessibility.	X	
$H_{Ø16}$	There is significant difference in the use of E-Banking services on account of risks and fears associated with technologies.	X	
$H_{Ø17}$	There is significant difference in the use of E-Banking services on account of customer inertia.		X
$H_{Ø18}$	There is significant difference in the use of E-Banking services on account of limitations in regional language display options and lack of knowledge and interest of customers.		X
$H_{Ø19}$	There is significant difference in the use of E-Banking services on account of its cost and service charge structures and investment demands on the customer.	X	
$H_{Ø20}$	E-Banking customers face significant general and administrative problems during the use of E-Banking services.	X	
$H_{Ø21}$	E-Banking customers face significant problems during the use of ATM services.	X	
$H_{Ø22}$	E-Banking customers face significant problems during internet banking transactions.	X	

$H_{Ø23}$	E-Banking customers face significant problems during mobile banking transactions.	X	
$H_{Ø24}$	There is significant difference in the level of satisfaction of E-Banking customers on account of the competency and service efficiency of E-Banking	X	
Total #	24	18	6

Table 6: Summary of Null Hypothesis Statements

10.0 Limitations of the study:

Due to convenience sampling methodology adopted, the entire population of banking customers was not reflected in the study. The study focused mainly on customers within a locality including students in one environment. This can have impact on the representation in the results of the survey. The study however, can be extended to accommodate all categories of customers in all areas. A follow up study may also be planned in future to compare the new results with those obtained from the study. Generalisation of the findings to the whole population can then be made with more accuracy and acceptability.

11.0 Conclusions and Recommendations:

Core banking solutions have enabled banks to extend full benefits of ATM services, mobile and internet banking solutions to all the customers. Core banking solutions offer a package of benefits to customers on a 24x7 basis from a single centralized location through all possible delivery channels. Such a centralized approach has made a 'one – stop solution' for all financial services a possibility. Results of the survey do indicate customer inclination towards the use of ATM services when compared to other technology counterparts. But this phenomenon may not continue indefinitely. The dynamic nature of technology and time may lead to change in customer preferences. Again, customers will be forced to review their preferences with changes in policies and regulations of the ruling elite. The impact of demonetisation is being felt at large in our country. With the centre announcing its policies and imposing withdrawal limits on the 8th of November, 2016, our country may experience a rapid change over to digital modes of transactions. The centre had also unveiled discounts to fuel alternative methods of payment following its decision to withdraw currency notes of higher denominations. Demonetisation may be a one-time activity. Its impact on market and economy may be temporary, but there exist every opportunity for mobile and internet banking transactions to flourish in our country along with new technologies to come. Use of mobile payment app is being heavily promoted and publicized through mass media. But cashless economy does not necessarily mean cashless

ATMs. Banks must accommodate the happenings and tune themselves to the situation. Changes in the size of currency notes coupled with cash crunch have put the business of banks and ATM service providers in distress. Banks will have to associate with outsourced agencies in handling reconfiguration and recalibration issues. The issue of cash crunch at ATM counters will have to be resolved through appropriate measures to retain the confidence of customers.

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