

International Journal of Advance Research in Computer Science and Management Studies

Research Article / Survey Paper / Case Study

Available online at: www.ijarcsms.com

Awareness & Usage of E-Banking Instruments in Semi-Rural Area around Ahmedabad

Neha Shorff¹

Professor

Dept. of Mathematics & Statistics

G.L.S(J.P.Shah) Institute of Business Administration
Ahmedabad, India.

Maitrey Bhagat²

Professor

Dept. of Mathematics & Statistics

G.L.S(J.P.Shah) Institute of Business Administration
Ahmedabad, India.

Abstract: The world is changing at a staggering rate and technology is considered to be the key driver for these changes around us. An analysis of technology and its uses show that it has permitted in almost every aspect of our life. Many activities are handled electronically due to the acceptance of information technology at home as well as at work place. Slowly but steadily, the Indian customer is moving towards the internet banking. The ATM and the Net transactions are becoming popular. But the customers clear on one thing that he wants net-banking to be simple and the banking sector is matching its steps to the march of technology. E-banking or Online banking is a generic term for the delivery of banking services and products through the electronic channels such as the telephone, the internet, the cell phone etc. The government of India enacted the IT Act, 2000, which provides legal recognition to electronic transactions and other means of electronic commerce. The RBI has been preparing to upgrade itself as regulator and supervisor of the technologically dominated financial system. It issued guidelines on the risks and controls in computer and telecommunication systems to all banks, advising them to evaluate the risks inherent in the systems and put in place adequate control mechanisms to address these risks. The said paper is an attempt to find awareness, different purposes to use, frequency of using and overall satisfaction about different E-Banking Instruments among the semi-rural people around Ahmedabad city.

Keywords: E-banking, ATM, Debit Card, Credit Card, Tele Banking or Phone Banking, Mobile Banking, Internet Banking

I. WHAT IS E-BANKING?

Electronic banking is one of the truly widespread avatars of E-commerce the world over. Various authors define E-Banking differently but the most definition depicting the meaning and features of E-Banking are as follows:

- » Banking is a combination of two, Electronic technology and Banking.
- » Electronic Banking is a process by which a customer performs banking Transactions electronically without visiting a brick-and-mortar institutions.

II. NEED FOR E-BANKING

One has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts. In true Internet banking, any inquiry or transaction is processed online without any reference to the branch (anywhere banking) at any time. Providing Internet banking is increasingly becoming a "need to have" than a "nice to have" service. The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services. Banks have traditionally been in the forefront of harnessing technology to improve their products, services and efficiency. They have, over a long time, been using electronic and telecommunication networks for delivering a wide range of value added products and services. The delivery channels include direct dial – up connections, private networks, public networks etc. and the devices include telephone, Personal Computers including the Automated Teller Machines, etc.

With the popularity of PCs, easy access to Internet and World Wide Web (WWW), Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers.

III. HISTORY OF E- BANKING

The precursor for the modern home online banking services were the distance banking services over electronic media from the early '80s. The term online became popular in the late '80s and refers to the use of a terminal, keyboard and TV (or monitor) to access the banking system using a phone line. 'Home banking' can also refer to the use of a numeric keypad to send tones down a phone line with instructions to the bank. Online services started in New York in 1981 when four of the city's major banks (Citibank, Chase Manhattan, Chemical and Manufacturers Hanover) offered home banking services using the videotext system. Because of the commercial failure of videotext these banking services never became popular except in France where the use of videotext (Mintel) was subsidized by the telecom provider and the UK, where the Pestle system was used.

The UK's first home online banking services were set up by the Nottingham Building Society (NBS) in 1983 ("History of the Nottingham" Retrieved on 2007-12-14.). The system used was based on the UK's Pestle system and used a computer, such as the BBC Micro, or keyboard (Tan data Td1400) connected to the telephone system and television set. The system (known as 'Home link') allowed on-line viewing of statements, bank transfers and bill payments. In order to make bank transfers and bill payments, a written instruction giving details of the intended recipient had to be sent to the NBS who set the details up on the Home link system. Typical recipients' were gas, electricity and telephone companies and accounts with other banks. Details of payments to be made were input into the NBS system by the account holder via Pestle. A cheque was then sent by NBS to the payee and an advice giving details of the payment was sent to the account holder. BACS was later used to transfer the payment directly. Stanford Federal Credit Union was the first financial institution to offer online internet banking services to all of its members in Oct, 1994.

IV. USAGE OF E-BANKING

The rise in the e-commerce and the use of internet in its facilitation along with the enhanced online security of transactions and sensitive information has been the core reason for the penetration of online banking in everyday life. The fundamental shift towards the involvement of the customer in the financial service provision with the help of the technology especially internet has helped to reduce the costs of financial institutions as well as helped client to use the service at any time and from virtually anywhere with access to an internet connection. The use of electronic banking has removed personnel that facilitate the transactions and has placed additional responsibilities on the customers to transact with the service. The computerization of the banking operations has made maximum impact on:-

- » Internal Accounting System
- » Customer service
- » Diversification of system

V. E-BANKING INSTRUMENTS

A. *Automated Teller Machine (ATM):*

These are cash dispensing machine, which are frequently seen at banks and other locations such as shopping centers and building societies. Their main purpose is to allow customer to draw cash at any time and to provide banking services where it would not have been viable to open another branch e.g. on university campus. An **automated teller machine** or **automatic teller machine**. **ATM** is a computerized telecommunications device that provides a financial institution's customers a method of financial transactions in a public space without the need for a human clerk or bank teller. On most modern ATMs, the customer identifies him or herself by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains his or her card number and some security information, such as an expiration date or CVC (CVV). Security is provided by the customer entering a personal identification number (PIN). Using an ATM, customers can access their bank accounts in

order to make cash withdrawals (or credit card cash advances) and check their account balances. Many ATMs also allow people to deposit cash or checks, transfer money between their bank accounts, pay bills, or purchase goods and services.

B. Debit Card

An electronic card issued by a bank which allows bank clients access to their account to withdraw cash or pay for goods and services. These removes the need for bank clients to go to the bank to remove cash from their account as they can now just go to an ATM or pay electronically at merchant locations. This type of card, as a form of a payment, also removes the need for checks as the debit card immediately transfer money from the clients account to the business account.

C. Credit Card

A credit card is a payment card issued to users as a system of payment. It allows the card holder to pay for goods and services based on the holders promise to pay for them. The issuer of the card creates a revolving account and grants a line of credit to the consumer from which the user can borrow money for payment to a merchant or a cash advance to the users.

D. Tele Banking or Phone Banking:

Telephone banking is relatively new Electronic Banking Product. However it is fastest becoming one of the most popular products. Customer can perform a number of transactions from the convenience of their own home or office; in fact from anywhere they have access to phone.

E. Mobile Banking:

Mobile banking comes in as a part of the banks initiative to offer multiple channels banking providing convenience for its customer. A versatile multifunctional, free service that is accessible and viewable on the monitor of mobile phone. Mobile phones are playing great role in Indian banking- both directly and indirectly. They are being used both as banking and other channels.

F. Internet Banking:

The advent of the Internet and the popularity of personal computers presented both an opportunity and a challenge for the banking industry. For years, financial institutions have used powerful computer networks to automate millions of daily transactions; today, often the only paper record is the customer's receipt at the point of sale. Now that their customers are connected to the Internet via personal computers, banks envision similar advantages by adopting those same internal electronic processes to home use. Bank's views on online banking as a powerful "value added" tool to attract and retain new customers while helping to eliminate costly paper handling and teller interactions in an increasingly competitive banking environment. In India first one to move into this area was ICICI Bank. They started web based banking as early as august 1997.

VI. ADVANTAGES OF E-BANKING

- » *Convenience*
- » *Ubiquity*
- » *Transaction speed*
- » *Efficiency*
- » *Effectiveness*

VII. DISADVANTAGES OF E-BANKING

- » *Server Problem*
- » *Proximity*

- » *Lack Of Awareness*
- » *Imitation*

VIII. HOW E-BANKING CAN EASE OUR LIFE

Indian banks are trying to make your life easier. Not just bill payment, you can make investments, shop or buy tickets and plan a holiday at your fingertips. You can avail the following services.

A. Bill payment service

Each bank has tie-ups with various utility companies, service providers and insurance companies, across the country. It facilitates the payment of electricity and telephone bills, mobile phone, credit card and insurance premium bills. To pay bills, a simple one-time registration for each biller is to be completed. Standing instructions can be set, online to pay recurring bills, automatically. One-time standing instruction will ensure that bill payments do not get delayed due to lack of time. Most interestingly, the bank does not charge customers for online bill payment.

B. Fund transfer

Any amount can be transferred from one account to another of the same or any another bank. Customers can send money anywhere in India. Payee's account number, his bank and the branch is needed to be mentioned after logging in the account. The transfer will take place in a day or so, whereas in a traditional method, it takes about three working days.

C. Credit card customers

Credit card users have a lot in store. With Internet banking, customers can not only pay their credit card bills online but also get a loan on their cards. Not just this, they can also apply for an additional card, request a credit line increase and God forbid if you lose your credit card, you can report lost card online.

D. Investing through Internet banking

Opening a fixed deposit account cannot get easier than this. An FD can be opened online through funds transfer. Online banking can also be a great friend for lazy investors. Now investors with interlinked demat account and bank account can easily trade in the stock market and the amount will be automatically debited from their respective bank accounts and the shares will be credited in their demat account. Moreover, some banks even give the facility to purchase mutual funds directly from the online banking system. So it removes the worry about filling those big forms for mutual funds, they will now be just a few clicks away. Nowadays, most leading banks offer both online banking and demat account. However if the customer have their demat account with independent share brokers, then need to sign a special form, which will link your two accounts.

E. Recharging your prepaid phone

Now there is no need to rush to the vendor to recharge the prepaid phone, every time the talk time runs out. Just top-up the prepaid mobile cards by logging in to Internet banking. By just selecting the operator's name, entering the mobile number and the amount for recharge, the phone is again back in action within few minutes.

F. Shopping at your fingertips

Leading banks have tie ups with various shopping websites. With a range of all kind of products, one can shop online and the payment is also made conveniently through the account. One can also buy railway and air tickets through Internet banking.

IX. OBJECTIVES

To know about the awareness and usage of E – Banking Instruments in Semi-Rural Area. Also to know whether awareness about E-Banking depends on various factors such as gender, income, education, occupation, bank account holders or not.

Moreover to know whether the overall satisfaction of customer towards E-Banking instruments depends upon the various factors such as gender, income, education, occupation or not.

X. HYPOTHESIS OF STUDY

- » H₁: Awareness about E-Banking does not depends on various factors such as gender, income, education, occupation, bank account holders.
- » H₂: Overall satisfaction of customer towards E-Banking instruments does not depends upon the various factors such as gender, income, education, occupation.

XI. RESEARCH METHODOLOGY

A. Research Instrument

The instrument used for collecting data was questionnaire.

B. Data Collection

Keeping in view the nature of requirements of the study to collect all the relevant information regarding the extent of awareness of the people of semi-rural area using E-banking facilities offered by bank, direct personal interview method with structured questionnaire was adopted for the collection of primary data.

C. Primary Data:

Questionnaire was used to collect primary data from respondents. The questionnaire was structured type and contained questions relating to different dimensions of e-banking preferences among service class such as level of usage, factors influencing the usage of e-banking services, benefits accruing to the users of e-banking services, problems encountered. An attempt was also made to elicit reasons for its non-usage. The questions included in the questionnaire were open-ended, dichotomous and offering multiple choices.

D. Sample Design And Size

In this research project Descriptive research design is used. Judgment and Convenience sampling method will be used to get the information about e-banking. This method is used because we are interested in exploring gender, age, occupation disparities in terms of online banking in the population. For conducting this research, a structured questionnaire is prepared and sample of 300 people is taken.

E. Sampling Size

It indicates the numbers of people to be surveyed. Though large samples give more reliable results than small samples but due to constraint of time and money, the sample size was restricted to 300 respondents. The respondents belong to different income group and profession.

F. Sampling Unit

It defines the target population that will be sampled i.e. it answers who is to be surveyed. In this study, the sampling unit is the people from semi-rural area.

XII. DATA ANALYSIS & CONCLUSIONS

Data collected has been analyzed using different statistical tools. SPSS 22 was used this purpose. The frequency distribution is given in Table 1. To know whether awareness about E-Banking depends on various factors such as gender, income, education, occupation, bank account holders or not, we apply Chi-Square Test at 5% level of significance and finding the P values for each comparison. These values are shown in Table 2. In this Table 2 we see that in case of comparing

awareness of E-Banking with gender we find that P values is more than level of significance 5% so we conclude that awareness of E-Banking does not depend upon gender. Whereas in comparison with income, education, occupation and bank account holders we got P values less than level of significance 5% so we conclude that awareness of E-Banking highly depends upon the income, education, occupation and having bank accounts. To know whether the overall satisfaction of customer towards E-Banking instruments depends upon the various factors such as gender, income, education, occupation or not, we apply Chi-Square Test at 5% level of significance and finding the P values for each particular comparison. There values are shown in Table 3. In this Table 3 we see that in case of comparing overall satisfaction of customers with gender and occupation we find that P values is more than level of significance 5% so we conclude that overall satisfaction of customers towards different E-Banking Instruments does not depend upon gender and occupation. Whereas in comparison with income and education we got P values less than level of significance 5% so we conclude that satisfaction of customers towards different E-Banking Instruments highly depends upon the income and education.

Table – 1

Characteristics		Percentage of Respondents (in %)
<u>Gender</u>		
1.	Male	50
2.	Female	50
<u>Income(in Rs. Per Month)</u>		
1.	Not Earning(Housewives)	13.3
2.	Below 10000	21
3.	10,000 – 20,000	20.7
4.	20,000 – 30,000	15
5.	Above 30,000	30
<u>Education</u>		
1.	Uneducated	9.3
2.	Primary	9
3.	Secondary	13
4.	Higher Secondary	19
5.	Graduate	38
6.	Post Graduate	11.7
<u>Occupation</u>		
1.	Business	22
2.	Service	52.7
3.	House Wife	25.3
<u>Bank Account Holders</u>		
1.	Own Bank Account	94.3
2.	Other Family Member's Account	5.7
<u>Aware about E-Banking Instruments</u>		
1.	Aware	91.7
2.	Not Aware	8.3
<u>Awareness about different E-Banking Instruments</u>		
1.	Debit Card	69

2.	Credit Card	47.7
3.	Phone Banking	7.7
4.	Internet Banking	32.3
5.	Mobile Banking	44.3
<u>Usage of E-Banking Cards</u>		
1.	Credit Card	35
2.	Debit Card	65
<u>Reasons for using E-Banking Cards</u>		
1.	Shopping	16.7
2.	Withdraw Cash	78
3.	Others (To know balance, paying bill, request for service etc.)	17.7
<u>Users of E-Banking Instruments</u>		
1.	Internet Banking	46.3
2.	Mobile Banking	26.7
3.	Phone Banking	11
<u>Purpose of Using E-Banking Instruments</u>		
1.	Fund Transfer	10
2.	Balance Inquiry	32.3
3.	Purchase/Sale	12.7
4.	Bill Payments	33
5.	Deposits & Withdraws	54.3
6.	Others	17.3
<u>Reasons for choosing E-Banking</u>		
1.	Convenience	24
2.	To Save Time	47.7
3.	24 Hrs. Access	39.7
4.	Others	11
<u>Frequency of using Instruments</u>		
1.	Daily	15.4
2.	Weekly	38.7
3.	Monthly	46
<u>Satisfaction towards E-Banking Instruments</u>		
1.	Satisfied	68
2.	Not Satisfied	32

Table – 2

Compare Awareness about E-Banking With		P – Value
1.	Gender	0.188
2.	Income	0.024
3.	Education	0.007
4.	Occupation	0.000

5.	Account Holder	0.000
Note: (1) These tests are carried out at 5% level of significance. (2) All tests are considered to be two sided.		

Table – 3

Compare Overall Satisfaction of Customers towards E-Banking Instruments With		P – Value
1.	Gender	0.188
2.	Income	0.023
3.	Education	0.000
4.	Occupation	0.062
Note: (1) These tests are carried out at 5% level of significance. (2) All tests are considered to be two sided.		

References

1. Tiwari, and Buse, (2007), The mobile Commerce prospects: A strategic Analysis of Opportunities in the Banking Sector, Hamburger University Press. (E-Book) pp.73-74.
2. Corporation Essvale (2011), Business Knowledge For Information Technology In Global Retail Banking, Essvale Corporation Limited.
3. Barnes.S (2012), MBusiness: The Strategic Implications of Mobile Communications, Routledge, MA.
4. Sullivan.N (2007), You Can Hear me Now: How Microloans and Cell Phones are : Connecting the World, John Wiley and Sons, CA.
5. Kim.M et al (2009), The Effect of Perceived Trust on Electronic Commerce: Shopping Online For Tourism Products and Services in South Korea, Tourism Management.
6. Lan, C, Chien, C., Hsieh, M & Chen, I. (2000), "A Mobile E-commerce Solution". Proceedings of the : International Symposium on Multimedia Softwar Engineering
7. Kiesnoski, K. (2000), "Wireless Banking", Bank Systems & Technology, Vol. 37, No.2 40-43.
8. Siau, K., Lim, E-P., Shen, Z (2001)., "Mobile Commerce: Promises, Challenges, and Research Agenda", Journal of Database Management, Vol.12, No.3 (2001): 4-13
9. Guardini, I., D'Urso, P. & Fasano, P (2000)., "The Role of Internet Technology in Future Mobile Data systems", IEEE Communications Magazine, November 68-72
10. Gupta.S.L and Mittal.A (n,d), Mobile Banking in India: Present Status and Future Perspectives
11. Yu.S (2009), Factors Influencing the Use of Mobile Banking: The Case of SMS-based Mobile Banking, Scientific Journal of King Faisal University.
12. Bangens.L and Soderberg.B (2008), Mobile Banking-financial Services For the Unbanked?, Retrieved On:22-Dec-2013, Retrieved From: <http://www.spidercenter.org/files/m-bankingstudy.pdf>
13. Banzal S. (2010). "Mobile Banking & M-Commerce and Related Issues", Retrieved On: 22-Dec-13, Retrieved From: www.public.webfoundation.org/.../25.Mobile_banking_M-commerce_15.03.pdf
14. Rao.G.R et al (2009), Online Banking in India, Mondaq Business Briefing, Research Review.
15. Alam.S et al (2010), A Secured Electronic Transaction Scheme For Mobile Banking, ICITIS.
16. Ivatury and Mas (2010), The Early Experience with Branchless Banking, CGAP.
17. Lyman, T.R., Pickens M. & Porteous D. (2008), "Regulating Transformational Branchless Banking: Mobile Phones and Other Technology to Increase Access to Finance", In: Focus Note 43. Consultative Group to Assist the Poor (CGAP), Washington, DC.
18. Mas, I. (2008), "Realizing the Potential of Branchless Banking: Challenges Ahead", In: Focus Note 50. Consultancy Group to Assist the Poor (CGAP), Washington, D.C.
19. Sharma, Perna & Singh, Preeti (2009), "Users' perception about mobile banking- with special reference to Indore & around", Review of Business & Technology Research, Vol. 2, 1, pp. 1-5
20. Unnithan, C.R. & Swatman, P. (2001), "Online banking Adaptation and Dot.Com Viability: A Comparison of Australian and Indian Experiences in the Banking Sector", School of Management Information Systems, Deakin University, No. 14.
21. Kumbhar.V (2011), Financial Inclusion Through M-Banking Services: Scope and Problems in India, MPRA.
22. Abdullah Bin Omar, & Naveed Sultan (2011). Customer Perception towards Online Banking Services: Empirical Evidence from Pakistan. Journal of Internet Banking and Commerce, 16(2).
23. Amtul Fatima (2011). E-Banking Security Issues – Is There A Solution in Biometrics?. Journal of Internet Banking and Commerce, 16(2).
24. Joshua A J, & Moli P Koshy (2011). Usage Patterns of Electronic Banking Services by Urban Educated Customers: Glimpses from India. Journal of Internet Banking and Commerce,16(1).

25. Kamini Singh (2011). Innovated Technology in Banking Services. Journal of Internet Banking and Commerce, 16(2).
26. Mohammad O. Al-Smadi, & Saad A. Al-Wabel (2011). The Impact of E- Banking on The Performance of Jordanian Banks. Journal of Internet Banking and Commerce, 16(2).
27. Ogbuji, Onuoha, Chinedu, Chima B, Izogo, & Emeka E (2012). Analysis of the Negative Effects of the Automated Teller Machine (ATM) as a Channel for Delivering Banking Services in Nigeria. International Journal of Business & Management, 7(7), 180-190.
28. Sujana Adapa (2011). Continued And Frequent Use of Internet Banking by Australian Consumers: Identification of The Factor Components. Journal of Internet Banking and Commerce, 16(2).
29. Surekha Invali, Raghurama A., & Chandramma M. (2011). Modeling the Adoption of Basic E-Banking Services in Urban and Semi-Urban Regions in India. The IUP Journal of Bank Management, 10(3), 98-115.

AUTHOR(S) PROFILE



Prof. Neha Shroff She has been working as a lecturer in Mathematics and Statistics for the past 19 years. She is pursuing PhD in Statistics. Her area of interest is Operation Research and is also interested in research activities. She was a visiting faculty at NIFT, Gandhinagar, MBA College, and M.Com. She taught in courses like B Com. for 3 years. She has also attended various state level seminars, national and international conferences, workshop in Statistics and Research Methodology. She has presented and published research paper at national level conference. She was a member of syllabus Revision Committee under the Choice based Credit System, Gujarat University and GLS University in the Subject of Mathematics, Business Statistics and Operation Research. She is also a member of Gujarat Statistical Association and All India Management Association.



Prof. Maitrey Bhagat, He is pursuing PhD in Statistics from Gujarat University. He has over 8 years of academic experience. He has served as a visiting faculty of Mathematics and Statistics in various courses like B.Com, BCA, M. Sc. (I.T.), MBA, CA, ICWA. He presented the research papers in various conferences and won 2nd prize in VIGYAAN PARISHAD – SCIENCE EXCELLENCE 2011 organized by Gujarat University. He had attended several international conferences, national conferences, state level conferences, faculty development programs and workshops. He was a member of Syllabus Revision Committee under the Choice Based Credit System at GLS University and Gujarat University in the subject of Mathematics, Statistics, Operations Research, and Research Methodology. He is also a member of International Indian Statistical Association, Indian Statistical Association, Operations Research Society of India, Gujarat Statistical Association and All India Management Association.