A Gap Analysis Of Awareness And Utilisation Of Automated Teller Machines

Mr. M. Ram Kumar[1], Dr Mahesh Kumar T[2]

[1]Assistant Professor,Department of Commerce, Kalasalingam Academy of Research and Education, Krishnankoil.
[2]Assistant Professor,School of Commerce Finance and Accountancy,CHRIST Deemed to be University, Pune Campus Lavasa, India

Abstract: The Automated Teller Machines (ATMs) are colloquially abbreviated as Any Time Money, which rightly points out the purpose of a typical ATM. In the banking sector after the automation of ledger works through ALPM (Advanced Ledger Posting Machine), it was decided to bring in automation in the teller's work and ATMs were introduced. ATMs help the customers in transacting both financial and non-financial services of banking. Initially the very basic financial transaction with the ATM is withdrawing money. There is a gap of 7106 points between the expected and recorded score of the respondents, whereas there is a gap of 9869 points between the expected and recorded score of the respondents in the utilisation of the financial services.

Kay Words: ATM, Gap analysis, perception, usage

1. INTRODUCTION

The Automated Teller Machines (ATMs) are colloquially abbreviated as Any Time Money, which rightly points out the purpose of a typical ATM. In the banking sector after the automation of ledger works through ALPM (Advanced Ledger Posting Machine), it was decided to bring in automation in the teller's work and ATMs were introduced. Before the invasion of ATMs, a customer had to approach the teller whenever he wants to check the balance, query whether a particular cheque was collected or presented for payment, to know whether he has received the expected deposit, to know the interest credited or Bank charges levied and most importantly to withdraw money. This results in long queues in banks which created hurdles for both the banks and the customers. Technology has responded very well to human beings in all the areas where they need services at their ease. These ATMs ensured 24 hours of service throughout the week and the year, enabling the customers to transact any time, not waiting in long queues in a bank. The
ATMs help the customers in transacting both financial and non-financial services of banking. Initially the very basic financial transaction with the ATM is withdrawing money. But technology has been advanced very well that now, a wide range of services are there in ATMs. The financial services include cash withdrawal, cash deposit, fast cash, funds transfer, open fixed deposit, paying utility bills, mobile top ups, paying Credit Card bills, making donations, making mutual fund payments, paying insurance premium, paying fees for selected educational institutions and so on. On the other hand, the non-financial services include balance enquiry, taking a mini statement of last few transactions, changing the PIN (Personal Identification Number), requesting for a new cheque book, updating the mobile

numbers, cheque status enquiry, registering for Mobile Banking and SMS (Short Messaging Service) alerts and so on.

Growth in the Number of On-Site ATMs

S No	Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
1.	Nationalised Banks	12,655	15,691	18,277	21,533	37,350
2.	SBI and Subsidiaries	11,142	14,104	15,735	18,708	28,570
3.	Old Private Sector Banks	2,266	2,641	3,342	4,054	4,727
4.	New Private Sector Banks	6,337	8,007	9,907	11,182	12,472
5.	Foreign Banks	279	286	284	283	260

Source: Reserve Bank of India – ATM and Card Statistics from April 2009 to March 2014

It is crystal clear from the above table that there is a remarkable growth in the number of on-site ATMs installed by the banks in a five year period. The Nationalised Banks top the list with 37,350 ATMs in 2013-14 registering a growth rate of 195.14 per cent when compared to the number of ATMs in 2009-10. The SBI groups recorded a growth rate of 156.42 per cent with 28,570 ATMs in 2013-14.

The following Table pictures the growth in the number of off-site ATMs in India in a five year period of 2009-10 to 2013-14.

Growth in the Number of Off-Site ATMs

S No	Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
1.	Nationalised Banks	7,047	9,145	12,773	15,528	21,946
2.	SBI and Subsidiaries	9,836	10,547	11,408	13,883	22,558
3.	Old Private Sector Banks	1,124	1,485	2,429	3,512	4,657
4.	New Private Sector Banks	8,720	11,518	20,401	24,353	26,611
5.	Foreign Banks	747	1,081	1,130	978	904

Source: Reserve Bank of India – ATM and Card Statistics from April 2009 to March 2014

It is divulged from the above Table that the Nationalised Banks registered a growth rate of 211.42 per cent in 2013-14 when compared to the number of ATMs in 2009-10. The SBI groups recorded a growth rate of 129.34 per cent with 22,558 ATMs in 2013-14. Similarly the number of ATMs of Old Private Sector Banks has increased from 1,124 in 2009-10 to 4,657 in 2013-14 witnessing a growth rate of 314.32 per cent. The New Private Sector Banks recorded a growth rate of 205.17 per cent. The New Private Sector Banks which are just 7 in number have installed more number of off-site ATMs than that of the 12 Old Private Sector Banks. The Foreign Banks witnessed a growth rate to the extent of 21.01 per cent in the year 2013-14 when compared to that of in the year 2009-10.

The number of on-site and off-site ATMs installed by the banks has increased gradually from year to year except in the case of Foreign Banks which witnessed a fall in the last year 2013-14 compared to its previous year.

The following Table depicts the Debit Card statistics in India for the five year period from 2009-10 to 2013-14.

Debit Card Statistics in India

Period	Debit Card Payments# – Number in Million and Amount in Billion		
	No. of outstanding cards*	No. of Transactions	Amount
2009-10	181.97	170.17	264.18
2010-11	227.84	237.06	386.91
2011-12	278.28	327.53	534.91
2012-13	331.19	468.98	743.07
2013-14	394.42	619.08	954.51

Card Payments figures pertain only to Point of Sale (POS) transactions
* Cards issued by the banks excluding those withdrawn or blocked
Source: Reserve Bank of India – ATM and Card Statistics from April 2009 to March 2014
It can be understood from the above Table 3.9 that the number of outstanding cards has increased from 181.97 million in 2009-10 to 394.42 million in 2013-14 registering a growth rate of 116.75 per cent increase. Similarly the number of transactions done through the Debit Cards has increased from 170.17 million in 2009-10 to 619.08 million in 2013-14 recording an increase rate of 263.8 per cent. Also the amount of transactions executed through the Debit Cards increased from 264.18 billion to 954.51 billion in a five year period with percentage increase of 261.31.
The people of India have become very well accustomed to the Card culture.

2. REVIEW OF LITERATURE

1.   **Adeoti Johnson Olabode (2011)** investigated in their paper "Automated Teller Machines (ATMs) Frauds in Nigeria: The Way Out" the dimensions of ATM frauds in Nigeria and proffered solutions that would help in mitigating the ATM frauds in the country's banking system. It was found from the study that card jamming, shoulder surfing and stolen ATM cards constitute 65.2 per cent of the ATM frauds in the country. The author suggested solutions like installing vigilance cameras, setting withdrawal limits, remote monitoring, anti card skimming solutions, customer awareness, biometric tokens and online fraud monitoring could help in reducing the frauds in ATMs. Finally he concluded that both the customers and bankers have a joint role in facing the threats.

2.   **Shaikh Aijaz Ahmed and Shah Syed Mir Muhammad (2012)** investigated the flaw that occurred in the ATM of ACB Bank Ltd in their paper "Auto Teller Machine (ATM) Fraud – Case Study of a Commercial Bank in Pakistan". It was the bug in the ATM controller that allowed the ATM card holders of various banks to fraudulently withdraw cash from ATMs of the bank for nearly three months. In the investigation they came to know that the bank's internal control systems have failed to detect the implantation of mapping bug which deprived the bank of more than 21 million Pakistani Rupee. Also they quoted that the role played by the lack of understanding of higher management on the systems and procedures supporting ATM infrastructure was significant in developing the bug. So the authors suggested a turnkey ATM solution where under a third party or an independent selling organisation may be contacted to deploy and look after the ATMs, to provide monitoring and diagnostic services and also to ensure safety and security of the ATMs.

3.   **Siddik M. Mohammed (2012)** investigated the ATM services in India through the paper titled "A Study on E-Banking Services in India With Special Reference to ATM Services". Since ATMs offer any time money, most of the customers use these any time

money machines for their frequent transactions. It was found from the study that there is active usage of electronic banking. The frequent use of this mode is reflected from the study through the finding that nearly 50 percent of the respondents were using ATM transactions more than 8 times in a month. He finally concluded that the ability to adjust themselves to customer orientation will lead to the survival and growth of Indian banking. Also to match the global standards they have to bring about an improvement in the service standard.

4. **Premalatha and Sundaram (2012)** have undertaken a study to analyse the satisfaction level of the customers, their convenience and attitude towards safety, assurance and flexibility of using ATM services in their paper "Analysis of Customer Satisfaction with reference to ATM Services in Vellore District". The Chi-Square test indicated that there is a significant relationship between age and the two dimensions convenience and safety of the ATM services. The t-test pointed out that there is no significant relationship between gender and various dimensions of the satisfaction level. The ANOVA test divulged that there is a significant difference between educational qualification and satisfaction level. With regard to occupation, the ANOVA test confirmed the null hypothesis. Finally, they concluded that the overall satisfaction level of the customers of various banks in Vellore district was good. They also suggested that the bankers can improve the safety, provide accurate information and make the ATM services to be easy-to-use facility.

3. SCOPE OF THE STUDY

This study covers the awareness level of Automated Teller Machine among the banking consumers and also the utilization level of ATM among the consumer users. The primary data collected from the people who are residing in around Sivakasi town. The people consists rural, urban and also semi urban. Due to limited time and cost the data collected by using convenient sampling method. Around 400 respondents were considered for collecting data.

4. OBJECTIVES OF THE STUDY

This study attempt to attain the following objectives;
•   To know the level of awareness and
•   To Know the utilization of Automated Teller Machine
•   To analysis the gap between awareness and utilization level of Customer usage.

5. RESEARCH METHODOLOGY

This study used both the primary and secondary data for the accomplishment of the objectives. In case of primary data questionnaire was framed and data collected by sing interview schedule. This study also used the secondary sources which are already published like books, journals, newspapers and websites, etc.

6. DATA INTERPRETATION

Usage of Automated Teller Machines Cards
The Automated Teller Machines, as the name indicates automated the functions of a Teller in a Bank in the form of a machine. These machines have been in usage from the sixties. But it is during the late nineties, the usage gained momentum. Now people cannot imagine a life without ATMs. The people make use of small rectangular plastic cards to access these

machines. These cards are occupying an important place in the pouches of people like that of other cards like licenses, voter IDs, visiting cards and the like. So all the respondents in the study area are making use of these cards. The following Table 6.1 reveals the usage of ATM cards by the respondents.

Usage of Automated Teller Machines Cards

Particulars		Total Users	
		Frequency	**Percentage**
Waiting Time for getting the card	Less than 3 days	85	21.20
	3 to 7 days	107	26.80
	8 to 30 days	102	25.50
	More than 30 days	32	8.00
	Do not remember	74	18.50
	Total	**400**	**100.00**
Storage of PIN	Cannot Reveal	78	19.40
	Memory	255	63.28
	Mobile with security lock	43	10.80
	Mobile without security lock	14	3.50
	Diary	8	2.00
	On the Card Itself	2	0.50
	Total	**400**	**100.00**
Primary Usage of ATM	Cash Withdrawal	137	34.20
	Balance Enquiry	6	1.50
	Taking Mini Statement	2	0.50
	Shopping	2	0.50
	Cash Withdrawal and Balance Enquiry	64	16.00
	Cash Withdrawal and Taking Mini Statement	11	2.80
	Cash Withdrawal and shopping	49	12.20
	Cash Withdrawal, Balance Enquiry and Taking Mini Statement	30	7.50
	Cash Withdrawal, Balance Enquiry and shopping	30	7.50
	Cash Withdrawal and deposit of Cash	38	9.50
	Balance enquiry, deposit of cash and shopping	11	2.80

	Cash Withdrawal, Balance Enquiry, Taking Mini Statement and shopping	20	5.00
	Total	**400**	**100.00**
Benefits in Using ATMs	Convenience	75	18.80
	Safety	70	17.50
	No need to carry cash	50	12.50
	No counterfeit notes	6	1.40
	Convenience and Safety	36	9.00
	Convenience and no need to carry cash	32	8.00
	Safety and no need to carry cash	27	6.80
	Safety and no counterfeit notes	20	5.00
	Convenience, safety and no need to carry cash	43	10.80
	Convenience, safety and no counterfeit notes	16	4.00
	Convenience, no need to carry cash and no counterfeit notes	11	2.70
	All	14	3.50
	Total	**400**	**100.00**
Frequency of Using the card in a month	Less than 5 times	247	61.80
	5 to 10 times	109	27.20
	More than 10 times	44	11.00
	Total	**400**	**100.00**

Source: Primary Data

It is revealed from the above Table that out of 400 respondents, 107 (26.8 per cent) respondents got their ATM cards within 3 to 7 days of opening their bank account, while 102 (25.5 per cent) respondents got their cards in 8 to 30 days.

Any new delivery channel of banks is subject to problems and ATMs are not an exception to this. There are quite a number of problems in using ATMs.

The following Table presents the problems faced by the respondents in using the ATMs.

Particulars		Total Users	
		Frequency	Percentage
Problems in Using ATMs	Faced Problems	211	52.80
	Faced No Problems	189	47.20
	Total	**400**	**100.00**
Type of Problems	Strucking of Card	41	19.40

Faced	No sufficient balance in ATMs	31	14.70
	Power cut	14	6.60
	No desired denomination	15	7.10
	Account debited but no money come out	23	10.90
	Strucking of Card and No sufficient balance in ATMs	30	14.20
	Power cut and Account debited but no money come out	34	16.10
	Strucking of Card, no sufficient balance in ATMs, no desired denomination and account debited but no money come out	23	11.00
	Total	**211**	**100.00**
Complaint Filed	Filed	93	44.10
	Not Filed	118	55.90
	Total	**211**	**100.00**
Steps Taken against Complaint filed	Complaint was set Right	60	64.50
	Complaint was not taken into consideration	20	21.50
	First responded well but later no action was Taken	13	14.00
	Total	**93**	**100.00**
Reasons for not filing complaint	Problem was set right automatically	70	59.30
	Fear that Banks may not respond well	38	32.20
	No time	10	8.50
	Total	**118**	**100.00**

Source: Primary data

Awareness and Utilisation of Various Services in Automated Teller Machines
There are extensive facilities offered by the ATMs apart from the basic facilities like enquiring the balances, withdrawing cash and the like. But the point worth noting here is that most of the ATM users are not aware of many of these services and even if they are aware they are not utilising the same.

Source: Primary Data
* Total no of respondents using ATMs = 400; Total no of non-financial services = 7;
Score for fully aware and frequently using = 3

Total no of respondents using ATMs = 400; Total no of financial services = 14; Score for fully aware and frequently using = 3

The above Table elucidates that there is a gap of 2724 points between the expected and recorded score of the respondents with regard to awareness of non-financial services of ATMs, while there is a gap of 4419 points between the expected and recorded score of utilisation of the non-financial services. So it can be concluded that the utilisation of the non-financial services of ATMs is not upto the level of awareness towards them. So the banks have to induce the respondents in utilising the non-financial services through ATMs.

With regard to the awareness of financial services of ATMs, there is a gap of 7106 points between the expected and recorded score of the respondents, whereas there is a gap of 9869 points between the expected and recorded score of the respondents in the utilisation of the financial services. So it can be concluded that there is a wide gap between the awareness and utilisation of financial services of ATMs.

The lack of awareness about the ATM services may be due to two reasons: 1) the banks have not provided such options in their ATMs or 2) the banks have failed to educate their customers about these options. The other reasons could be due to the less time spending in the ATMs due to security concerns and the long queues waiting outside the ATMs

7. FINDINGS

The findings relating to ATMs are presented below.

• Out of 400 respondents, 107 (26.8 per cent) respondents got their ATM cards within to 7 days of opening their Bank account. A very big majority of 255 (63.8 per cent) respondents stored their ATM PIN (Personal Identification Number) in their memory itself. Further a good majority of 137 (34.2 per cent) respondents are using the cards primarily for cash withdrawal. 75 (18.8 per cent) respondents when asked about the benefits in using the ATMs and the cards reported that it is convenient for them.

• 247 (61.8 per cent) respondents are using the cards for less than 5 times a month. 173 (43.2 per cent) respondents do not know the annual charges levied by their banks for the usage of ATMs and 365 (91.3 per cent) respondents have used their cards in other banks' ATMs too. 163 (44.7 per cent) respondents do not know the charges levied by their banks for sixth financial transaction at other banks' ATMs.

• More than half of the respondents (52.8 per cent) reported that they face problems. Among them, 41 (19.4 per cent) respondents face the problem of ATM card being strucking into the machine due to reasons like power cut, system hang, wrong input of password and the like. Out of 211 respondents who faced problems, only 93 (44.1 per cent) respondents filed a complaint with the banks regarding their problems. Among them, 60 (64.5 per cent) respondents' problems are set right by the concerned banks.

8. CONCLUSION

The Gap Analysis reveals that there is a wide gap between the awareness and utilisation of financial and non-financial services of ATMs. There is a gap of 2724 points between the expected and recorded score of the respondents with regard to awareness of non-financial services of ATMs, while there is a gap of 4419 points between the expected and recorded score of utilisation of the non-financial services. With regard to the awareness of financial services of ATMs, there is a gap of 7106 points between the expected and recorded score of

IJAS

the respondents, whereas there is a gap of 9869 points between the expected and recorded score of the respondents in the utilisation of the financial services.

9. REFERENCES

[1]	Ou Chin-S, Hung Shin-Yuan, Yen C. David and Liu Fang-Chun (2005), "Can Automatic Teller Machine Investment Improve Bank Cost Efficiency", Proceedings of the Third Workshop on Knowledge Economy and Electronic Commerce, Taiwan, 2005

[2]	Kauffman and Baker (1991), "Case Study of Electronic Banking at Meridian Bankcorp",

[3]	Information and Software Technology, Vol. 33, No. 1, pp. 200-204

[4]	Davies Fiona, Moutinho Luiz and Curry Bruce (1996), "ATM User Attitudes: A Neural Network Analysis", Marketing Intelligence and Planning, Vol. 14, No. 2, pp. 26-32, ISSN 0263-4503

[5]	Weiner E Stuart (1999), "Electronic Payments in the U.S. Economy: An Overview"

[6]	available at http://www.kc.frb.org/publicat/econrev/PDF/4q99wein.pdf

[7]	Dheenadhayalan V. (2010), "Automation of Banking Sector in India" Yojana (Indian) Feb 2010. Vol: 54. PP: 32-37

[8]	Pahwa Manvinder Singh and Saxena Karunesh (2011), "Analytical Study of Customer

[9]	Satisfaction of ICICI Bank with special reference to ATMs", 3rd International Conference on Information and Financial Engineering, Singapore.

[10]	Khumbar V. M (2011), "Customers' Satisfaction in ATM Service: An Empirical Evidence from Public and Private Sector Banks in India", Management Research and Practice, Volume 3, Issue 2 (2011) pp: 24-35, June 2011

[11]	Kadir Hazlina Abdul, Rahmani Nasim and Masinaei Reza (2011), "Impact of Service.