

A Study of ATM Users' Attitude About ATM Receipt in Dindigul City (With Special Reference to Thermal Paper (BPA))

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Abstract

In recent trend the banking sector provides more services to their customers due to the technological development. ATM centre is also one of the major service which are provided by the bankers. The receipt which is issued by machine creates some health issues to ATM users, Most of the receipts contain high levels of the chemical BPA (Bisphenol A), which acts like a hormone and can cause birth defects and cancer including store receipt and fast food receipts, airline tickets, ATM receipts, and other thermal papers in which massive amounts of BPA on the surface of the paper. "BPA first was developed by a biochemist and tested as an artificial estrogen supplement," says Frederick vom Saal, professor of biological sciences at University of Missouri. The paper-slip receipt rolled out by the automatic teller machine (ATM) can be harmful for our health. The investigation says the chemical coating that exists on the paper, which is also used extensively in malls, petrol pumps, bus tickets and online lotteries, can cause far-reaching harm to the health of user. Superior printing capabilities and strict quality standards ensures class ATM receipts, printed to exact registration and precisely machine matched for trouble free operation.

The present study highlight the level and effect of using ATM receipt and users attitude toward receipt of ATM machine in Dindigul city. The study has been undertaken mainly to assess the effect of using receipt and how much cost will be reduced from the avoidance of using receipt and to analyse the socio economic factors, influencing the ATM's user Attitude. The ATM users day by day growing and the services are also extended like Withdrawal, Balance inquiry, Mini statement, making payment to the Self A/C and third parties A/C through ATM. India is now holds the second position in the population. The receipt user base increasing every day in updated technology market. The research is conducted for examining the awareness of operation methods, effects of using thermal papers, cost of the papers, number of transactions involved per day and the like.

Keywords : *Thermal Receipt Paper, Health issues, Storage, Cost and Place of usage.*

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1. INTRODUCTION

Payment systems have developed rapidly in many countries over the past few decades. The use of electronic means of payment has increased at the expense of paper-based payment instruments. For instance, in some countries payment cards have replaced cheques, and Internet banking has become

a popular means of paying invoices. Banks ought to promote stable, reliable and efficient payment systems. Automated Teller Machines (ATMs) are nowadays a very common technology for dispensing notes to cash holders. ATM receipts (recently even bus tickets are issued with the same kind of print-outs) are made by a simple printing method called thermal printing. It is based on the principle of thermochromism, a process of change in colour with heating. Thermal printing essentially works by creating impressions using print-heads over a special kind of paper roll (found in ATMs, vending machines) coated with organic dyes, waxes. The paper used is a special thermal paper that is impregnated with mixture of a dye and a suitable matrix such as a fluoran leuco dye and an octadecylphosphonic acid. When the print-head made of regular array of minuscule heating elements receives the signal for printing, it raises the temperature to the melting point of the organic coating to cause print impression on the paper roll through the process of thermochromism. The receipt which is issued by machine creates some health issues to ATM users, Most of the receipts contain high levels of the chemical BPA (Bisphenol A), which acts like a hormone and can cause birth defects and cancer including store receipt and fast food receipts, airline tickets, ATM receipts, and other thermal papers in which massive amounts of BPA on the surface of the paper.

2. STATEMENT OF THE PROBLEM

“BPA exhibits hormone-like properties and has been proven to cause reproductive defects in fetuses, infants, children, and adults as well it caused and metabolic and immune problems in rodents. “BPA from thermal papers will be absorbed into our blood rapidly. At those levels, many diseases such as diabetes and disorders such as obesity increase as well. Use of BPA or other similar chemicals that are being used to replace BPA in thermal paper pose a threat to human health.” BPA is a mass-produced industrial chemical used primarily to make polycarbonate plastics and epoxy

resins. BPA is a component primarily utilized in some thermal point of sale receipt papers. Examples include gas pump receipts, cash register and ATM receipts. Recent independent analyses of thermal receipt papers used by large retailers indicate that roughly half of the receipts tested contained BPA. BPA is not commonly found in thermal labels, tickets and tags. Examples include supermarket labels, event tickets, airline baggage tags, etc.”The problem is consumer using hand sanitizers, hand creams, soaps, and sunscreens on our hands that drastically alter the absorption rate of the BPA found on these receipts.”

In this context, this study has been undertaken by the researcher to examine the effects of using BPA thermal receipts, awareness, using ATM and taking the socio-economic characteristics and the paper manufacturing method of the manufacturer. The purpose of the study was twofold: to create awareness about the effect of using thermal papers in the city and to collect the opinion and public feedback among the Dindigul City ATM users. The present study titled “A STUDY OF ATM USERS ATTITUDE ABOUT OF ATM RECEIPT IN DINDIGUL CITY” (With Special reference to Thermal Paper (BPA)) is considered as relevant as no such a study has been made yet.

3. METHODOLOGY

For the purpose of collecting primary data with regard to the attitude and behaviour of users, the researcher had designed a comprehensive interview schedule which was duly pre-tested. Those who are using the ATM machine and receipt of ATM machine have been considered as sample respondents for the present analysis.

The researcher has interviewed a total number of 169 respondents utilizing ATM services. These respondents are drawn across in and around Dindigul city. As the responses received from 19 respondents were inadequate and contradictory to the required information, they were not considered for the present study. Finally, the information provided by 150 respondents using ATM services

and taking receipt from the machine has been taken for the present analysis.

The data were analysed using appropriate statistical tools such as percentages, chi-square test, weighted average ranking technique, and Likert's scaling techniques. Statistical package has been used to estimate the factor loadings and chi-square values.

(a) Objectives of the Study

The overall objectives of the study is to examine the ATM user's attitude and the extent of satisfaction derived by the ATM users on the various features of ATM services offered by the bank. The specific objectives of this study are:

- ◊ To study the ATM receipt origin, history, types and its causes,
- ◊ To find the ATM users attitude towards receipt (Thermal Paper) for ATM transactions.
- ◊ To identify the level of awareness toward ATM receipt papers among the ATM users
- ◊ To offer suggestions for the improvement of ATM services based on findings of the study.

(b) Hypothesis of the Study

- ◊ There is no association between sources of awareness and socio-economic factors.
- ◊ There is no association between procedures to access ATM and educational qualification.
- ◊ There is no association between number of times using and declined the receipt.

(c) Period and Area of the Study

The present study is an empirical study and survey method for achieving the said objectives, the primary and secondary data are used in the study. The secondary data used for this study provides details like the origin ATM machine, history of banking services, kinds of services, ATM centres, operations, ATM receipt history, types, size, manufacturing method, chemical added for production of receipt were collected from the source for the period from the beginning to May 2016. The survey for the collection of primary data

was conducted from March 2016 to April 2016 covering a period of two months.

The geographical area of the study is confined to Dindigul city which is located in the southern part of Tamil Nadu. This District has a different range of income earning people and a lot of business transactions going through the electronic device with thermal paper users are available in Dindigul. Hence, the researcher has chosen Dindigul city as a suitable area for this study due to the availability of people at economic levels.

(d) Limitations of the Study

The researcher has made an attempt to study the attitude of ATM user's opinion of using ATM receipt in Dindigul city.

- ◊ Since the ATM receipt cost is not accurately found by me, an in-depth study could not be made in relation to cost of receipt, reduction of cost, eliminate the facility to customers, distribution costs etc.
- ◊ As ATM is a recent technological innovation, only limited books are available on the subject.

4. DATA ANALYSIS AND SAMPLE CLASSIFICATION

This study carried out regarding the ATM receipt due to the health hazards of the receipt and ATM users' attitude towards using receipt. In this chapter the researcher has analysed the awareness, attitude, and behaviour of the ATM users towards receipt. For the purpose of analysis and interpretation, the users are classified the respondents on the basis of educational qualification which is given in Table 1.

Table 1
Sample Classification of ATM Users
 (I-Illiterate; SE-School Education; G -Graduation; P-Professional)

	I	SE	G	P	Total
Percent	13.33%	22%	48%	16.67%	100%
Response	20	33	72	25	150

Source: Primary Data.

This study is carried out based on education, because ATM features, operational methods, cause and effects are known only based on their educational level. The result is 13.33% of the respondents are illiterates, 22% are in school level category then 48% of the respondents are in graduate's level and 16.67% of peoples are in professional category.

(a) Purpose of Using ATM

ATM is used for various banking operations and it fulfill our daily currency needs at any time if money available in our account. In the earlier days the money withdrawal is only at the business hours of banking. But now it has been reformed. In recent era the ATM used for withdrawal of money, deposit money to our account and third party account also, operational transactions like mini statement, cheque book request, goodwill of bank, status of life, aware about latest technology and upgrading knowledge. The researcher made an attempt to analyse the reasons for using ATM and the result is presented in table 2.

**Table 2
Purpose of using ATM**

(I-Illiterate; SE School Education; G Graduation; P Professional)

(W-Withdrawal; D-Deposit; OT Operational Transaction; SL Status of Life; KT Knowing Technology; U Updating)

	W	D	OT	SL	KT	U
I	20	14	11	2	4	10
SE	38	24	12	1	15	9
G	72	49	32	7	26	12
P	25	8	8	5	6	3
Total	155	95	63	15	51	34
Rank	I	II	III	VI	IV	V

Source: Primary Data.

It is observed from the above table 2 that the majority of users have used ATM for “Withdrawal of money” in all the categories. Hence the first rank has been gained by this reason. Following this the reason “Depositing money” in their account and other account at any time by the

users. It secures the second place. Third place is gained by the purpose “Operational transactions”. The remaining reasons have secured consecutive ranks with less percentage of respondents.

(b) Add on Facilities in ATM

Banking sector offering variety services to their customers to attract, to increase, to enrich and to enhance the business in the market. For this purpose the banker had launch varieties of services every day by day namely withdrawal and deposit through ATM, balance enquiry, money transfer, pin change, mini statement, account statement, cheque book request, quick cash, deposit, payment to external services like exam fee and school fee, cheque collection and clearance of cheques and orders. The researcher analysed which service is mostly used by the user in ATM and the result is in given in the table no. 3. The researcher had used weighted average ranking method to analyse the factor namely add on facilities in ATM.

**Table 3
Add on facilities in ATM**

(W-Withdrawal; BE Balance Enquiry; MT Money Transfer; PC Pin Change; MS - Mini Statement; S Statement; CR Cheque Request; QC Quick Cash)

Source: Primary Data.

*First Rank

	W	BE	MT	PC	MS	S	CR	QC
1	1168*	16	0	0	8	0	8	0
2	21	336*	406*	21	77	7	14	168*
3	0	264	240	36	234	24	36	66
4	0	150	80	45	265*	40	40	70
5	4	68	44	112	28	200*	68	76
6	0	15	18	126*	36	75	99*	81
7	0	2	4	44	36	76	64	74
8	0	3	5	40	9	24	51	19

Source: Primary Data.

It is learnt from the above Table 3 that the majority of the respondents have preferred “Withdrawal” service in ATM and the score value is 1168. Hence, first rank is gained by this service. The second rank gained by “Money transfer” and third rank is gained by “Balance enquiry”. Fourth rank is

allotted for the service “Mini statement”. Rest of the reasons have gained least score compare to above services.

(c) Association between Socio-Economic Factors and Sources of Awareness

The association between the sources of awareness on ATM receipt and socio-economic variables like age, gender, educational qualifications, occupation and annual income has been analyzed with the help of chi-square test based on the basis of null hypothesis (Ho), i.e. there is no association between the sources of awareness on ATM receipt and socio-economic factors and alternative hypothesis (H1), viz. there is an association between the sources of awareness on ATM receipt and socio-economic factors. The result of the analysis is shown below the Table 4.

Table 4

Association between socio-economic factors and sources of awareness

(G Gender; ES Educational Status; A Age; E Employment; AI Annual Income)

	G	ES	A	E	AI
Friends & Relatives	0.392* (1)	12.581* (4)	8.745* (3)	14.74* (5)	8.3* (3)
Media	2.499* (2)	17.85* (8)	10.15* (6)	20.71* (10)	9.63* (6)
Banker	2.257* (1)	11.58* (4)	2.962* (3)	4.46* (5)	2.22* (3)
Existing customers	1.771* (2)	8.022* (8)	5.073* (6)	5.11* (10)	2.43* (6)

Source: Primary Data. * Level of significance (1 percent)

It is observed from the above table 4 that the calculated chi-square value is less than one percent critical value for the sources 'Friends and relatives'; 'Media'; 'Banker'; 'Existing customers' and word of mouth in age, gender, educational qualifications, occupation and annual income in all the factors, Hence the null hypotheses for these sources are accepted. Hence it can be concluded that there is no association between the sources 'Friends and relatives'; 'Media'; 'Banker'; 'Existing customers'.

(d) Regularity of Availing Receipt

Receipt is an evidence of business transactions which are carried through ATM. It contains all the informations related to the transactions such as account number, transaction ID, bank name, date, time of transactions, card number, ATM id, transaction number, nature of transaction, address of the ATM and they like. The machine asks before completion of the transaction whether receipt is needed or not. ATM users sometimes take the receipt from the machine and sometime decline the receipt for their transactions. So the researcher made an attempt to analyse about the factor receiving or declining the receipt from ATM. The result is given below in the table 5.

Table 5

Regularity of Availing Receipt

Particulars	Yes	Percent	No	Percent	Total
Illiterate	18	90	2	10	20
Schooling	28	84.84	5	15.16	33
Graduation	60	83.33	12	16.67	72
Professional	23	92	2	8	25

Source: Primary Data.

It is observed from the above Table 5. 10 that 92 percent of professional category respondents, 90 percent of illiterate respondents, 84.44 percent of school level respondents and 83.33 percent of graduate category respondents are getting receipt from the machine. Hence it is inferred that the ATM operational expenditure is very high based on number of transactions.

(e) Putting ATM Receipt Into Dust bin

ATM issues receipt as the evidence of the transactions. It consumes cost for maintenance and printing. ATM users are taking receipt from the machine and throw it out or putting into the dust bin or tear it off because there is no need to preserve the receipt it is only used to view the informations instantly. Hence the researcher had analysed the number of persons putting ATM receipt into dust bin and result is given below in the table 6.

Table 6
Putting ATM receipt into dust bin

Particulars	Yes	Percent	No	Percent	TOTAL
Illiterate	15	75	5	25	20
Schooling	21	63.6	12	36.34	33
Graduation	42	58.33	30	41.67	72
Professional	15	60	10	40	25

Source: Primary Data.

Table 6 expresses that the majority percentage of respondents among Illiterate, School level, and professional level category put ATM receipt into dust bin. If RBI stop the issue of receipt through the machine it will reduce ATM maintenance cost and moreover the transaction details are sent to the customer to mobile immediately. Hence respondents might have felt that the receipt is not necessary. The remaining percentage of respondents (Illiterate level 25 percent; School level 36.34 percent; Graduation level 41.67 and professional level 40 percent) keep the receipt with them for some time for some references.

(f) Preserving ATM Receipt

A receipt is referred document for the purpose of solving ATM transactional issues like without issuing money debited in account, no response for the transaction, system operation hang up, no adequate cash in ATM, transaction declined, card not properly accessed by the ATM. Sometimes above said ATM issues are rectified by procuring this receipt as evidence and then only banker rectifies the error. Hence the banker instructs customers to keep the transactions receipt for dealing with the complaint. The researcher made an attempt to analyse the number of respondents keeping the receipt with them until the solvency of issues and the result is presented in the table 7.

Table 7
Preserving ATM Receipt

Particulars	Yes	Percent	No	Percent	TOTAL
Illiterate	18	90	2	10	20
Schooling	21	63.64	12	36.36	33
Graduation	37	51.39	35	48.61	72
Professional	17	68	8	32	25

Source: Primary Data.

Table 7 states that among the sample respondents 37 of graduated respondents, 21 of school level respondents, 18 of illiterate and 17 of professional level category of respondents preserves the receipt with them. Out of 150 respondents, 35 response are from graduation category, 12 responses are from school level category, 8 response from professional category and 2 response from illiterate category have opined they do not preserve the receipt.

(g) Receipt Takers From ATM Machine

ATM users are not aware about the side effect of using ATM receipt. The respondents are going in to the ATM centers with their family members namely kids, spouse and third parties. The ATM users allow taking the transaction receipt from the ATM machine by the above mentioned family members also. Researcher wants to analyse about the persons who are taking receipt from the machine and the result is presented in table 8.

Table 8
Receipt takers from ATM Machine

(I-Illiterate; SE School Education; G Graduation; P Professional)

(M-Myself; S Spouse; MK My Kids; TP Third Parties)

	M	%	S	%	MK	%	TP	%	T
I	20	100	0	0	0	0	0	0	20
SE	30	90.9	0	0	3	9.1	0	0	33
G	67	93.05	1	1.39	1	1.39	3	4.17	72
P	24	96	0	0	0	0	1	4	25

Source: Primary Data.

Table 8 states that more than 93 percent of the respondents are taking receipt by themselves in all the category. Minimum number of respondents allow to take the transaction receipt through their spouse or kids or third parties accompanying them during the transactions in ATM centre.

(h) Washing Hands After Using ATM Receipt

A chemical BPA is mixed in the receipt. It is a cause of cancer, depression, allergy and few other health issues. Washing hands after touching ATM receipt is good habit for health, Doctors suggests washing hands after and before using electrical, electronic, and medicinal components. Hence the researcher made an attempt to analyse the number of respondents washing their hands after and before using ATM receipt. Above analysis is given in the table 9.

Table 9
Washing hands after using ATM receipt

Particulars	Yes	Percent	No	Percent	TOTAL
Illiterate	2	10	18	90	20
Schooling	4	12.12	29	87.88	33
Graduation	7	9.73	69	95.83	72
Professional	5	20	20	80	25

Source: Primary Data.

Table 9 shows those 69 respondents from graduation category, 29 respondents from school level category, 18 respondents from illiterate category and 20 respondents from professional category do not wash their hands after using ATM receipt. So it is concluded that majority of the respondents do not wash their hands due to the lack of awareness BPA chemicals that is present in the receipt.

(i) Material Used for Hand Wash : A receipt contains more chemical components in various proportions. Doctor's advice that use liquid or hard material for washing the hands after using BPA thermal papers. Thermal paper used in various places such as atm

receipt, purchase through credit or debit card, tickets from cinema theatre and buses etc. The researcher analysed the kind of material used by the users for cleaning hands while using BPA thermal paper and the result has been given below in the table 10.

Table 10
Material Used for Hand Wash

(I-Illiterate; SE School Education; G Graduation; P Professional)
(A Alcohol; H Hard Materials; HW Hand Wash)

Details	A	%	H	%	HW	%	Total
I	0	0	1	50	1	50	2
SE	0	0	2	50	2	50	4
G	0	0	5	71.43	2	28.57	7
P	0	0	0	0	5	100	5

Source: Primary Data.

Table 10 stated that cent percentage of professional category respondents using 'hand wash cream' for washing hands. In graduation category, 71.43 percent of respondents using hard material to clean their hands. Among illiterate and school level educated respondents, 50 percent are using hard materials and remaining fifty percent are using hand wash cream to wash their hands while using ATM receipt.

(j) Number Of Times Declined Atm Receipt

ATM receipt decline is reducing ATM paper cost, maintenance cost also comes down and it helps to the user to avoid some health issues. Once the receipt in decline, the user will receive confirmation and transaction details to their registered mobile number. It is usually secured, safest and speediest mode. The researcher attempted to analyse the number of respondents who are declining the receipt for their ATM transaction and the result is presented in the table 11.

Table 11

Number of times declined ATM receipt
(I-Illiterate; SE-School Education; G-Graduation;
P-Professional)

	3 – 5 days	%	5 - 7 days	%	> 7 days	%	Total
I	20	100	0	0	0	0	20
SE	26	78.78	3	9.09	4	12	33
G	64	88.88	4	5.56	4	5.7	72
P	18	72	3	12	4	16	25

Source: Primary Data.

Table 11 expresses that 100 percent in illiterate level, 88.88 percent in graduation category, 78.78 percent of respondents in school level education and 72 percent of professional respondents are declining receipt for their ATM transactions for 3 to 5 times in a month. Lowest percentage of respondents in all the category have declined the receipt for 5 to 7times or always. On the whole it is clear that every user wishes to avail ATM receipt for their ATM towards.

(k) Association Between Number of Times Using ATM* Number of Times Decline Receipt

The association between the number of times using atm and number of times decline receipt has been analyzed with the help of chi-square test based on the assumption of “Null Hypothesis (Ho), there is no association between the number of times using ATM and number of times decline receipt” and “Alternative Hypothesis (H1), there is an association between the number of times using ATM and number of times decline receipt”. The result of the analysis is shown below in the Table 12 and 13.

It is observed from the below table 5.23 and 5.24 that the calculated chi-square value is less than five percent critical value for number of times using ATM vs. number of times decline receipt. Hence the null hypotheses for this statement is accepted. Hence it can be concluded that there is no association between numbers of times using ATM and number of times decline receipt.

Table 12

Association between number of times using ATM * number of times decline receipt

PARTICULARS		Number of times Decline Receipt			Total	
		1.00	2.00	3.00		
Number of Times Using ATM	1.00	Observed Count	109	5	3	117
		Expected Count	99.8	7.8	9.4	117.0
	2.00	Observed Count	13	5	5	23
		Expected Count	19.6	1.5	1.8	23.0
	3.00	Observed Count	6	0	4	10
		Expected Count	8.5	.7	.8	10.0
Total	Observed Count	128	10	12	150	
	Expected Count	128.0	10.0	12.0	150.0	

Source: Primary Data.

Table 13

Chi Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.888 ^a	4	.000
Likelihood Ratio	27.617	4	.000
Linear-by-Linear Association	26.409	1	.000
N of Valid Cases	150		

Source: Primary Data.

(l) Life Of ATM Receipt Information

The informations are printed in the receipt is an evidence for default of transactions. It is printed in BPA thermal paper with exhaustible ink. At the time of printing it is very clear, informative, not erasable, fixed size will be issued by the machine, white colour with some more advertisements etc. It is used as an evidence in the needy place. Therefore the researcher analysed how long the informations are present in the receipt and the result has been presented in the table 14.

Table 14

Life of ATM receipt information

(I-Illiterate; SE-School Education; G-Graduation; P-Professional)

	< 1	%	1 to 2 days	%	> 2 days	%	Total
I	2	10	6	30	12	60	20
SE	5	15.15	10	30.3	18	54.55	33
G	21	29.17	25	34.7	26	36.11	72
P	1	4	6	24	17	68	25

Source: Primary Data.

It is observed from the above table 14 that majority of the respondents have said that the ATM receipt informations are present in the receipt for more than 2 days. 30 percent of the respondents among in all the category have opined that the receipt information are present for 1 to 2 days. Least

Table 15

Receipt paper quality is good

Attitude	Illiterate No Scal Sco			School No Scale Sco			Graduation No Scale Sco			Professional No Scal Sco		
SA	0	5	0	8	5	40	11	5	55	6	5	30
A	1	4	4	5	4	20	12	4	48	1	4	4
NA DA	6	3	18	8	3	24	23	3	69	6	3	18
D	13	2	26	12	2	24	23	2	46	11	2	22
SDA	0	1	0	0	1	0	3	1	3	1	1	1
Total	20		48	33		108	72		221	25		75
Final Score	48 / 100 ×100 = 48%			108/165×100 =65.46%			221/360 ×100 = 61.39%			75/125 ×100 =60%		

Source: Primary Data.

percent of the respondents have that said the informations due present only for one day and then it exhaust.

(m) Disease Caused Through Using ATM Receipt

In recent technologies era, many advantages are reaped from technological advancement on the other side due it various side effects, illegal measures, spread of side effects and health hazards easily arises

without the knowledge of the user. This study attempted to knew the number of respondents affected using ATM receipt and the result is given in the table 16.

Table 16

Disease caused using ATM receipt

Particulars	Yes	Percent	No	Percent	TOTAL
Illiterate	0	0	7	100	7
Schooling	5	15.15	7	84.85	12
Graduation	6	8.33	12	91.67	18
Professional	2	8	6	92	8

Source: Primary Data.

Table no 16 expresses that majority of the sample respondents are not affected with any disease because of using ATM receipt. Cent percent in illiterate category, 92 percent in professional category, 91.67 percent in graduation category and 84.85 percent in school level category have opined his response. Out of 45 sample of respondents 13 respondents are affected with some health issues among other category of respondents except illiterate category.

(n) Receipt Paper Quality Is Good

Receipt paper is of very soft nature and smooth. It is not hard and it is easy to keep in the pocket. Many kinds of quality are available in the market. Hence a question regarding “opinion about the quality of paper” has been asked to the respondents. The attitude of the respondents to this statement is furnished in the below table 16.

The below table 17 shows the respondents' opinion towards quality of receipt paper. It is observed from the above table that the majority of customers from school level (65.46 percent), graduate level (61.39 percent), professional level (60 percent) and Illiterate level (48 percent) are neutrally satisfied.

Table 17
Receipt paper quality is good

Attitude	Illiterate No Scal Sco			School No Scal Sco			Graduation No Scal Sco			Professional No Scal Sco		
	SA	10	5	50	13	5	65	19	5	95	12	5
A	9	4	36	6	4	24	29	4	116	7	4	28
NADA	0	3	0	8	3	24	16	3	48	5	3	15
DA	0	2	0	6	2	12	6	2	12	1	2	2
SD	1	1	1	0	1	0	2	1	2	0	1	0
Total	20		87	33		125	72		273	25		105
Final Score	87 / 100 ×100 = 87%			125/165×100 = 75.76%			273/360 ×100 = 75.83%			105/125 ×100 = 84%		

Source: Primary data.

(o) Cancer Spread Through ATM Receipt

ATM receipt causes of cancer, allergy, and hormonal changes. Day by day the numbers of users are increased in this service. This kind of paper as a receipt is used in all the field of sale or purchase. It is manufactured in BPA material. So many issues and research is going on regarding this health hazards. The opinion of the respondents is given in the following table 18.

Table 18
Cancer spread through ATM receipt

Attitud	Illiterate No Sca Sco			School No Scal Sco			Graduation No Scal Sco			Professional No Sca Sco		
	SA	8	5	40	8	5	40	20	5	100	12	5
A	10	4	40	15	4	60	26	4	104	3	4	12
NA DA	0	3	0	2	3	6	19	3	57	5	3	15
DA	0	2	0	6	2	12	6	2	12	4	2	8
SDA	2	1	2	2	1	2	1	1	1	1	1	1
Total	20		82	33		120	72		274	25		96
Final Score	82 / 100 ×100 = 82%			120/165× 100 = 72.73%			274/360 ×100 = 76.11%			96/125 ×100 = 76.8%		

Source: Primary data.

The satisfaction score of the respondents towards ATM receipt is causing cancer has been analysed and exhibited in the table no 18. It is inferred from the above table that majority of respondents have agreed that the ATM receipt will cause cancer.

(p) Hormonal Change Happened in User's Health

The opinion of hormonal change happened in user's health due to the usage of Thermal paper has been displayed in the following table 18. Level of satisfactions or dissatisfaction of the receipt is based on effect of using receipt, life of information, related to the information and using methodology. Hence a question regarding this health issues has been placed before the sample respondents.

Table 19 highlights the opinion regarding hormonal changes abusing due to the usage of thermal paper receipt and the level of satisfaction of the respondents.

Table 19
Hormonal change happened in user's health

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.692
Bartlett's Test of Sphericity	Approx. Chi-Square	959.072
	df	190
	Sig.	.000

Source: Primary data.

Majority of respondents have strongly agreed to this statement. The satisfaction scores given by the sample respondents are illiterate 84 percent, professional 84 percent, graduates 75.83 percent and 75.76 percent school level.

(q) Extraction of Factors Underlying Users Attitude Towards Using ATM Receipt

The rotated matrix of factor co-efficient or factor loadings given in the Table 20 summarizes the results of factor analysis for using ATM receipt. The Kaiser-Meyer-Olkin (KMO) and Bartlett's coefficient is 0.692. The analysis has given five factor solutions (F1 to F6) to find out the influence of groups of inter-correlated variables on users attitude called factors. This is evident from the Table 20. The results reveal that all the factors taken together have accounted for 63.02 percent of the total variations. Further the results are reliable as the communality values have been high.

Table 20
Descriptive Statistics

Sl. No.	Variables	F1	F2	F3	F4	F5	F6	Com
1	ATM receipt is not necessary	.757	.095	.075	.003	.130	.046	.607
2	ATM receipt have not spoiled the health	.753	.188	.156	.110	.096	.145	.669
3	All the customers put the receipt in dust bin	.692	.135	.008	.062	.480	.062	.735
4	Hormonal change happened in user's health	.617	.232	.262	.135	.282	.106	.611
5	ATM receipt information erasable	.589	.103	.017	.230	.342	.109	.540
6	Receipt paper quality is good	.581	.423	.029	.007	.039	.324	.624
7	There is no service charge for ATM receipt	.558	.217	.483	.027	.078	.133	.616
8	Cancer spread through the usage of receipt	.533	.529	.278	.089	.220	.094	.707
9	Informations are accurate	.235	.671	.273	.317	.150	.207	.746
10	Receipt used as an evidence	.039	.591	.013	.476	.047	.409	.747
11	Receipt had printing issues	.206	.577	.189	.125	.092	.339	.550
12	Service charge for using receipt as a record	.389	.111	.507	.074	.420	.081	.610
13	Information life is very low.	.433	.223	.441	.199	.209	.158	.541
14	All the transaction done through onlyreceipt	.262	.166	.440	.118	.014	.267	.375
15	Printing of receipt cost is very low	.413	.155	.399	.138	.440	.131	.583
16	Customer felt secure while using ATM	.011	.523	.161	.576	.004	.137	.650
17	ATM infrastructure is secured	.145	.420	.344	.542	.078	.271	.689
18	Adequate informations are available in receipt	.377	.570	.008	.338	.081	.078	.594
19	Receipt information is understandable	.386	.194	.369	.288	.533	.025	.690
20	Receipt contains all the information	.255	.288	.151	.194	.207	.684	.720
	Percentage of variance	21.67	13.87	8.15	6.89	6.48	5.97	
	Cumulative percentage of variance	21.67	35.54	43.69	50.57	57.05	63.02	
	Eigen value	4.33	2.77	1.63	1.38	1.35	1.19	

The first factor has explained 21.67 per cent of the total variations and encompasses the following variables "ATM receipt is not necessary", "ATM receipt have not spoiled the health", "All the customers put the receipt in dust bin", "Hormonal change happened in user's health", "ATM receipt information erasable", "Receipt paper quality is good", "There is no service charge for ATM receipt" and "Cancer spread through the usage of ATM receipt". In these factor all the variables have been positively loaded and the effect of using ATM receipt has a high positive correlation with the first six variables with the factor. It implies that all the variables in the factor have positive influence on the effect of atm receipt described by users. The factor has been termed as '**Issue Factor**'.

The second factor has been represented by the variable such as nature of receipt. This factor has explained with 13.87 per cent of the total variations. The variable is positively loaded and so it means that this factor has a positive influence on nature of receipt. It also shows that the nature of receipt has been influenced mainly consider the effects. That variable is related to carry and hence the factor can be named as '**Evidence factor**'.

The variables availability, durability of information and receipt constituted the third factor. It has accounted for 8.15 per cent of the total variations. The loadings in this factor have been positive. As all the variables in this factor naturally pertain to the life of ATM receipt informations, the

factor has been named as '**Durability Factor**'. The safety measures have been dominating variable in the fourth factor and it has explained 6.891 per cent of the total variations. The factor loading of the variables have been positive. The factor could be called '**Safety measures Factor**'.

Table 21

Rotated Factor matrix of selected variables users' attitude towards ATM receipt

Sl. No.	STATEMENTS	Mean	Std. Devian
1.	Customer felt secure while using ATM	4.38	.632
2.	ATM infrastructure is secured	4.19	.598
3.	ATM receipt have not spoiled the health	2.31	1.182
4.	ATM receipt information non erasable	2.28	1.594
5.	Receipt information is understandable	4.08	.776
6.	Informations are accurate	4.04	.758
7.	Receipt used as an evidence	3.96	.834
8.	Receipt paper quality is good	3.03	1.137
9.	There is no service charge for ATM receipt	2.60	.948
10.	Any service charge for using ATM Receipt as a record	2.45	.790
11.	ATM receipt is not necessary	2.15	1.109
12.	All the customers put it receipt in dust bin	2.40	1.146
13.	Cancer spread through the usage of ATM receipt	3.74	1.130
14.	Hormonal change happened in user's health	3.86	1.034
15.	All the transaction carried out through only receipt	3.20	.716
16.	Receipt contains all the transaction related information	3.50	.872
17.	Receipt had printing issues	3.75	.834
18.	Printing of receipt cost is very low	3.46	1.065
19.	Adequate informations are available in receipt	4.05	.988
20.	Information life is very low.	4.71	.753

The fifth factor 'Receipt information is understandable'. It has accounted for 6.48 per cent of the total variations. The loadings in this factor has been heavily loaded positively. As these variables deal with awareness, so it may be termed as '**Awareness Factor**'.

The sixth factor 'Receipt contain all the information related transaction'. It has accounted

for 5.97 per cent of the total variations. The loadings in this factor has been heavily loaded positively. As these variables deal with awareness, so it may be termed as '**Informative Factor**'.

5. FINDINGS

- (i) This study is carried out based on education, because ATM features, operational methods, cause and effects are known only based on their educational level. The result is 13.33 per cent of the respondents are illiterates, 22% are in school level category then 48 per cent of the respondents are in graduate's level and 16.67 per cent of peoples are in professional category.
- (ii) Out of the sample respondents belonging to illiterates, cent percent of respondents are male viz. 20 (13.33%). In the school level education 72.72 respondents are male and 27.28 per cent are female respondents. In graduate category, 81.94 per cent male respondents and 18.06 per cent female respondents are found in the study. In professional category 68 per cent male respondent and 32 per cent are female respondents are found in the study.
- (iii) The result is the among age groups in illiterate category 90 per cent, 45.5 per cent respondents in school level education, 70.83 per cent of respondents in graduation level of education and 84 per cent of respondents among professional category falls in the age group of 20 years to 35 years.
- (iv) Majority of the respondents are working in the private sector among all the category of education. In the illiterate level 90 percent in private sector. In school level 33.33 per cent of the respondents are working in private sector and 27.27 percent respondents are student's category. Among Graduate respondents, 63.89 per cent are working in private sector and 16.67 respondents are doing business and respondents are in other field of employment. 48 per cent of the professional respondents

- are in private sector and 24 per cent of respondents are doing their professional works.
- (v) 80 percent illiterate respondents earn income between Rs. 10000 to Rs. 15000 and 15 percent respondents earn more than Rs. 20000 is this group. In the school level category 51.51 per cent respondents earn less than Rs. 10000 category. In the graduate level 40.28 per cent of respondents earnings are between Rs. 10000 to Rs. Rs. 15000 and 33.33 per cent respondents are under the income category of less than Rs. 10000.
- (vi) Majority of users are aware of ATM receipt through "Friends and relatives" among all the level of education and Illiterate users aware through "Existing customers". Hence the first rank has been gained by this source.
- (vii) The calculated chi-square value is less than one percent critical value for the sources 'Friends and relatives'; 'Media'; 'Banker'; 'Existing customers' and word of mouth in age, gender, educational qualifications, occupation and annual income in all the factors, Hence the null hypotheses for these sources are accepted. Hence it can be concluded that there is no association between the sources 'Friends and relatives'; 'Media'; 'Banker'; 'Existing customers'.
- (viii) The majority of users are uses ATM for "Withdrawal of money" in all the categories. Hence the first rank has been gained by this reason. Following this the reason "Depositing money" in their account and other account at any time by the users had secured the second place.
- (ix) Respondents are using ATM for one to three years in every literacy level such as Illiterate category 45 percent, School level category 42.42 per cent, Graduation level category 44.44 per cent and 20 percent in professional category. School (30.3 per cent) and professional level (48 per cent) literate respondents used ATM for 3 to 5 years.
- (x) Respondents prefer "Withdrawal" service from ATM and the score value is 1168. Hence, first rank is secured for this service. The second rank is gained by "Money transfer" and third rank is by "Balance enquiry" by these respondents.
- (xi) The satisfaction score of the respondents towards procedure to operate ATM has been obtained and exhibited. It is inferred that majority of respondents have opinion that "Easy" operating procedure of ATM. The satisfaction score for illiterate level is 82.5 per cent, for schooling level is 86.37 percent.
- (xii) The calculated chi-square value is less than one percent critical value for the opinion 'simple', 'easy', 'moderate', 'difficult' and word of mouth in educational qualifications in all the opinion. Hence the null hypotheses for these sources are accepted.
- (xiii) 92 percent of professional category respondents, 90 per cent of illiterate respondents, 84.44 per cent of schooling level respondents and 83.33 per cent of graduate category respondents are getting receipt from the machine. Hence the ATM operational expenditure increasing high due to the number of transactions.
- (xiv) More than 93 per cent of the respondents are taking receipt by themselves in all the category. Minimum number of allows, to take transaction receipt from the machine by spouse or kids and third persons.
- (xv) 95 percent illiterate respondents, 88 per cent professional responses, 84.8 school respondents and 81.9 per cent graduate respondents considering receipt information.
- (xvi) Among the sample respondents 114 responses view "account balance", out of 150 respondents, 96 respondents are "verifying the transaction" 62 respondents are checking date and time of transaction. Remaining information considered by minimized number of respondents.

- (xvii) The majority percentage of respondents among Illiterate, School level, and professional level groups puts the ATM receipt into dust bin. If RBI stop the issue of receipt through the machine it will reduce ATM maintenance cost since that transaction details are immediately sent to the customer mobile number.
- (xviii) Cent percent of illiterate respondents, 96 per cent of professional respondents, 60.6 per cent of school level respondents and 54.17 of percent graduate respondents always threw the receipt in the dust bin.
- (xix) 37 graduated respondents, 21 school level respondents, 18 illiterate and 17 professional level category of respondents keeps the receipt with them for future use.
- (xx) The majority of the users are keeping ATM transaction receipt in their "Purse" among literacy level respondents. Hence the First rank has been gained by this place. The second rank gained by the factor "Separate envelope" to keep a receipt by illiterate, graduation and professional literacy.
- (xxi) Among illiterate category 45 per cent of the respondents are keeping ATM receipt as a record, 40 per cent of them keep it for reference and treat it as evidence. Among School category 45.4 per cent respondents keep it for only reference and 39.4 per cent of respondents are using as record. In Graduation category, 47.3 per cent of respondents use receipt as a reference and 33.33 per cent respondents maintain it as a record. In Professional category, 40 per cent are using it as a record and 32 per cent of respondents are using it for reference and 28 percent of respondents are maintaining it for evidence.
- (xxii) 69 respondents from graduation category, 29 respondents from school level category, 18 respondents from illiterate category and 20 respondents from professional category do not wash their hands after using ATM receipt.
- (xxiii) Cent percentage of professional category respondents users 'hand wash cream' for washing hands. In graduation category 71.43 percent of respondents uses hard material to clean their hands.
- (xxiv) Majority of the respondents in all the literacy category of users are using ATM for 2 to 5 times per month for avoidance of transaction charges. 21.21 per cent of respondents in schooling level used more than 7 times.
- (xxv) 100 percent in illiterate level, 88.88 percent in graduation category, 78.78 per cent of respondents in school level education and 72 percent in professional respondents are declining receipt for the ATM transactions from 3 to 5 times in a month.
- (xxvi) The calculated chi-square value is less than five percent critical value for number of times using ATM vs. number of times decline receipt. Thus the null hypotheses for this statement is accepted. Hence it can be concluded that there is no association between numbers of times using ATM and number of times decline receipt.
- (xxvii) In the respondent's opinion towards technical operations and handling of transaction of ATM system, the satisfaction score of the respondents towards technical operations opined by illiterate, school level, graduate and professional category respondents says good.
- (xxviii) Majority of the respondents said that the ATM receipt information's are present more than 2 days in the receipt. 30 per cent of the respondents among the entire category opined that the information's are in present the receipt from 1 to 2 days.
- (xxix) 100 percent in illiterate category, 90.28 in graduation category, 81.82 percent in school level category and 72 percent in professional level category of respondents are unknown about receipt size which is issued in the ATM centre after completion of transaction.

- (xxx) 7 respondents knew the size 2 ¼, 5 respondents knew the size 3 ¼, only one respondent knew the size 6 1/8 and 2 ¾. 6 respondents among all the categories knew the size 3 1/5. Other sizes are not known by the respondents.
- (xxxii) The respondent's in graduate category 75 percent, professionals 68 percent, illiterate 65 percent and 63.64 percent school level respondents are unknown about health effect and cause of the receipt. Simply they are taking receipt from the machine and after the reference and conformation of the transaction threw it in the dust bin.
- (xxxiii) Majority of the sample respondents are not affected by disease on using ATM receipt i.e. Cent per cent in illiterate, 92 per cent in professional category, 91.67 per cent in graduation category and 84.85 per cent in school level category have agreed to this statement.
- (xxxiiii) Only one respondent have said that he knew that it brings cancer in graduate category. Four respondents in school education, one respondent each in from graduation and professional. In the graduation category four respondents and one respondent from professional knew that it affects their body parts.
- (xxxv) The majority (107) of the respondents have faced a problem "Paper Jam". Hence first rank is gained by this problem. The second rank is gained by the problem "inferior print density" in all the categories.
- (xxxvi) 103 users have faced the problem in ATM receipt is "Thermal coating". Hence the first rank has been gained to this issue. Following this, the factor "Paper is too smooth" have secured the second place.
- (xxxvii) Cent percentage of illiterate and professional group, 93.94 per cent school level category and 93.1 per cent graduation category respondents are unaware of the receipt cost.
- If the banker try to create awareness about the receipt cost it helps to avoid wastage of receipt.
- (xxxviii) 144 respondents are doing E transactions, 141 respondents are using for cash withdrawal and 78 respondents are getting a receipt for the purchases.
- (xxxix) The respondent's opinion towards safety while using ATM. Majority of respondents have strongly agreed to this statement. The satisfaction scores given by the sample respondents are professional level 92.8 per cent, Illiterate level 89 per cent, graduate level 86.39 per cent and 81.81 per cent in school level.
- (xl) The respondents' opinion towards quality of billing paper. It is observed from the above table that the majority of customers are from school level (65.46 per cent), graduate level (61.39 per cent), professional level (60 percent) and Illiterate level (48 per cent). This indicates that the level of satisfaction is neutral.
- (xli) ATM receipt causes of cancer was analysed and exhibited in the table no 5.39. It is inferred from the above table that majority of respondents have agreed that the ATM receipt causes cancer.
- (xlii) Opinion regarding hormonal changes due to using thermal paper receipt was analysed. Majority of respondents have strongly agreed to this statement. The satisfaction scores given by the sample respondents are illiterate 84 percent, professional 84 per cent, graduates 75.83 per cent and 75.76 per cent school level.
- (xliii) The first factor has explained 21.67 per cent of the total variations and encompasses the following variables "ATM receipt is not necessary", "ATM receipt is not spoiled the health", "All the customers put it receipt in dust bin", "Hormonal change happened in user's health", "ATM receipt information

erasable”, “Receipt paper quality is good”, “There is no service charge for ATM receipt” and “Cancer spread through the usage of ATM receipt”. In the factor all the variables have been positively loaded and the effect of using ATM receipt has a high positive correlation with the first six variables with the factor. It implies that all the variables in the factor have positive influence on the effect of ATM receipt described by users. The factor has been termed as 'Issue Factor'. The second factor has been represented by the variable such as nature of receipt. This factor has explained with 13.87 per cent of the total variations.

That variable is related to carry and hence the factor can be named as 'Evidence factor'.

6. CONCLUSION

It would help the bank to know the impact of thermal paper problems in ATM receipt. This project would create awareness among the customers to know the effect of using ATM receipt and may rely on mobile messages rather than depending on ATM receipt in the future. This research project would pave way for future researchers to pursue research in various dimensions this potential field.

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