

Demonetisation and E-banking in India

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Abstract— This case study examine the awareness level of people of rural areas in India about e-banking facilities and how much it has increased after demonetization. The present study is conducted to investigate the use of e-banking facilities for purposes post demonetization in India. An awareness level scale and an operation level scale are administered about simple transaction activities like amount transfer to other person's account on a sample of 100 people of rural and urban areas of India. An ANNOVA test was conducted which shows that rural people differ significantly with urban people in their awareness level as well as usage level of e-banking. The survey was done on rural and urban customers of both public and private sector banks. It is observed that urban male youth have higher awareness and usage of e-banking whereas rural women have noticeable awareness about e-banking but level of using it is very low. Further stepwise regression analysis determines the factors that contributed in creating awareness and use pattern of e-banking. Finding of the study are helpful for banks to improve their e-banking facilities, making their websites user friendly and improving awareness and usage of e-banking.

Index Terms— E-Banking, Rural India, Demonetization, und Transfer, Public and Private Sector Banks.

I. INTRODUCTION

Banking industry is considered as a backbone of economy as every other industry needs banks to invest or move financially. E-banking trend is spreading fast in developing countries. Banks are advised to provide internet banking services to its national and international customers. It is proved as a cost effective way for banks. It has enriched relationship with customers by providing them easy to operate mechanism for banking functions. Many innovative banking products are customized to cater individual customer's needs. It provides a greater choice in terms of channel they can use to conduct their business and convenience in terms of when and where they can use e-banking. An online Banking user is expected to perform transactions online such as checking account balance, transaction history, paying bills, transferring funds between accounts, requesting credit card or cheque books, managing investments and stock trading. These facilities improved daily banking operations and reduced footfalls in banks. It is economic, fool proof, hassle free and demand of smaller infrastructure. It is available 24x7 .there are certain challenges like high set up cost, knowledge about working technology, lack of security etc. The delivery channel include dial-up connection, devices like telephone, mobile, personal computer , ATM.E-banking services are broadly categorized in three:

A) Basic level services which disseminate information to

customers or general public about bank products and services it includes replying customers' queries through e-mail

B) Level of simple transactions which allow customers to submit application for various services or queries on their account balances but do not permit any fund based transaction on their account.

C) It facilitates fund transfers, payments, purchase and sale of securities. These value added services made banks "virtual", where physical presence can be omitted.

Banks provide following e-banking facilities

1. Viewing account balances
2. Viewing recent transactions
3. Downloading bank statements in pdf format
4. Viewing images of paid cheques
5. Ordering cheque books
6. Downloading periodic account statements
7. Downloading application for M-banking, E-banking etc.
8. Fund transfers
9. Third party payments, paying bills
10. Investment purchase or sale
11. Loan applications and transactions, EMI payments
12. Register utility billers

II. OBJECTIVES

1. To study the impact of the demography on the awareness level in customers about e-banking services
2. To find the variation in the awareness level about e-banking in customers of urban and rural areas
3. To list the reason behind low level of awareness in customers about e-banking
4. To study the challenges involved in using e-banking

III. METHODOLOGY

Monthly data over the period of 26th Sept 2016 to 8th Nov 2016(45 days) has been considered to check the status of use of e-banking facility given by 4 private and 4 public sector banks in both urban and rural areas in India. The same analysis done post 9th Nov 2016 to 23rd Nov 2016(45 days)

A survey was conducted where 50 urban households and 50 rural households of Bangalore of different demographic profile were contacted through face to face interview and online questionnaire to check their awareness and usage of e-banking. Their responses were categorized on the scale. Statistical tools like chi-square test of cross tabulation and regression analysis have been used to test the hypothesis. To test awareness of internet banking is dependent on demographic profile of customer a regression model has been developed.

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Awareness about e-banking services = $\mu + \delta_1 \text{education} + \delta_2 \text{gender} + \delta_3 \text{Annual income} + \delta_4 \text{residential status} + \delta_5 \text{occupation}$

A. Independent variable:

Demographic profile of respondents

B. Dependent variable:

Awareness about e-banking services

C. Hypothesis to be tested:

Hypothesis: 1

H0: There is no significant difference in the level of awareness among the customers of private and public sector banks

H1: There is significant difference in the level of awareness among the customers of private and public sector banks.

Hypothesis: 2

H0: Demographic profile of the respondents has no relevance on the awareness about e-banking services.

H1: Demographic profile of the respondents has relevance on the awareness about e-banking services.

IV. ANALYSIS AND FINDINGS

Table 1: Summary table of demographic profile of respondents

Demographic variable	Sub components	No. of customers
Gender	Male	70
	Female	30
	Total	100
Education	SSC	4
	PU	9
	UG	57
	PG	30
	Total	100
Annual income	No income	15
	1 to 1 lac	18
	100001 to 3 lac	43
	Above 3 lac	24
	Total	100
Occupation	Student	20
	Housewife	22
	Self employed	27
	Service	21
	Retired	10
	Total	100
Residential status	Urban	55
	Rural	45
	Total	100
Type of bank	Public bank	50
	Private bank	50
	Total	100
Time period of being a customer	Less than 6 months	9

of bank	6m to 1 year	35
	1 year to 3 year	35
	More than 3 year	21
	Total	100

Table 2: Awareness level of customers towards e – banking

		Frequency	%
Valid	Fully aware	21	21%
	Partially aware	63	63%
	Unaware	16	16%
	Total	100	

This table shows that customers have bank accounts but almost 79% are either partially aware or unaware about e-banking services given by their banks.

Table 3: Reasons for unawareness about e-banking services

Reasons for unawareness	Frequency
Weak educational background	25
Lack of access of information	21
a/c is managed by guardian, parents, husband/ son	54
Total	100

Table 3 shows that major reason behind partial or unawareness about e-banking is lack of education and information or management of a/c by head of the family.

Table 4: Sources through which information about e- banking was known to customers

Sources of information	Frequency
Welcome kit provided by banks at the time of opening the a/c	29
Media	29
Friends	26
e-mail/sms	16
Total	100

This table shows that most of the awareness about e-banking passes from welcome kit, media and friends.

Table 5: Respondent knowledge on the use of e-banking

	Complete knowledge	Partial knowledge	No knowledge	Total
How to browse information on internet	66	30	4	100
How to visit bank website for information on banking product	55	43	2	100
How to access a/c information using online banking login id and password	45	52	3	100
How to change login password and transaction password	38	47	15	100
Awareness about SMS alert service facility	60	45	5	
How to view the account statement online	40	57	3	100
How to transfer the funds	34	58	8	100
How to open RD/ FD online	37	55	8	100
How to make payments to utility bills	41	53	6	100
Awareness about prepaid mobile/DTH recharge facility	55	42	3	
How to make online request for DD and cheque book	27	65	8	100
Facility to pay online credit card bills	65	32	3	100
Awareness about facility provided by banks for purchasing travel/ vehicle insurance online	33	47	20	100
Awareness about e-wallet card facility	30	50	20	100
Awareness about funds transfer through IMPS mode	28	42	30	100

Table 5 shows that most of the customers have complete or partial knowledge about basic e-banking services. But most of the customers are unaware about advance and virtual banks services provided by banks.

Table 6: Factors responsible for not utilizing e-banking. U=Urban=Rural

	Most important		Very important		Important		Less important		Neutral		Not so important		Least important		Not at all important	
Not regular in banking activities	12 U	20 R	10 U	7 R	4 U	3 R	5 U	4 R	6 U	5 R	4 U	4 R	2 U	2 R	8 U	4 R
Electricity problem	4 U	8 R	4 U	8 R	7 U	10 R	5 U	5 R	4 U	5 R	5 U	2 R	10 U	6 R	15 U	2 R
Speed and reliability concern	3 U	2 R	10 U	10 R	11 U	8 R	18 U	1 R	6 U	6 R	8 U	6 R	4 U	2 R	3 U	2 R
Unfriendly bank website	5 U	2 R	6 U	6 R	13 U	10 R	12 U	12 R	6 U	6 R	5 U	2 R	6 U	2 R	3 U	3 R
Difficulty in using online banking technology	4 U	5 R	3 U	2 R	5 U	4 R	10 U	7 R	12 U	12 R	8 U	7 R	6 U	5 R	5 U	5 R
Not familiar with internet	1 U	3 R	6 U	5 R	3 U	3 R	5 U	2 R	6 U	3 R	12 U	12 R	10 U	9 R	10 U	10R
No computer	9 U	8 R	7 U	3 R	3 U	2 R	5 U	4 R	8 U	8 R	9 U	11 R	3 U	4 R	8 U	8 R
Concerned about security issues	9 U	11 R	9U	7 R	2 U	2R	4 U	2 R	2 U	2 R	9 U	8 R	6 U	7 R	11 U	9 R

The above table shows that there are many reasons for not utilizing e-banking services by customers which are most important to some but least important for others. Urban customers do not find electricity problem, lack of computer or internet facility as most important factor for not utilizing

e-banking services. For them security of bank website and not user-friendly bank website is the main reason of not using e-banking services. Where in rural areas customers do not have knowledge about computer and internet, they do not have internet facility, computer and electricity to utilize bank website.

Table 7: Answers of questions asked about e-banking facilities to urban customers of public and private sector banks (in %)

	Public banks		Private banks	
	Yes	No	Yes	No
Are you aware about e-banking facility	70	30	90	10
Are you frequently use those facilities	60	40	80	20
Do you face problems in using bank's website	80	20	30	70
Do you find charges for using e-banking facilities too high	30	70	80	20
Do you want those websites to become more user friendly	10	90	80	20
Do your problems related to using bank's website rectified by bank's employee quickly	60	40	70	30
Do your other family members aware about these facilities	60	40	90	10
Do they use e-banking frequently	70	30	90	10

This table shows that urban customers are aware about e-banking. They utilize it also and they find private banks' website more user friendly than public banks'. But they are not satisfied with the high charges charged by private banks to provide e-banking facility.

Table 8: Answers of questions asked about e-banking facilities to rural customers of public and private sector banks (in %)

	Public banks		Private banks	
	Yes	No	Yes	No
Are you aware about e-banking facility	30	70	10	90
Are you frequently use those facilities	50	50	20	80
Do you face problems in using bank's website	80	20	70	30
Do you find charges for using e-banking facilities too high	70	30	80	20
Do you want those websites to become more user friendly	90	10	80	20

Do your problems related to using bank's website rectified by bank's employee quickly	Yes No	60 40	Yes No	60 40
Do your other family members aware about these facilities	Yes No	30 70	Yes No	10 90
Do they use e-banking frequently	Yes No	60 40	Yes No	10 90

This table shows that rural people have more access to public sector banks and they prefer to visit banks personally than virtually as they afraid of mistakes.

V. HYPOTHESIS TESTED

Table 9: Hypothesis 1

		Private banks		Public banks		Total
Are you aware about e-banking services provided by your bank	Fully aware	13	21%	9	24%	22
	Partially aware	43	73%	26	68%	71
	unaware	4	6%	3	8%	7
total		62		38		100

Table 10

	value	df	Asymp. Sig (2-sided)
Pearson chi - square	.207a	2	.902
Likelihood ratio	.205	2	.903
Linear by linear association	.014	1	.905
N of valid cases	100		

2 cells (33.3%) have expected count less than 5. Minimum expected is 2.66. Chi-square test result is found that at 2 df at 5% of significance the p value of Pearson chi- square is .902. this value is higher than 0.05, hence the H0 is accepted . there is no significant difference between in the level of awareness among the customers of private and public sector banks. This is evident from the cross tabulation where 94% of private bank customers are either fully or partially aware of e-banking services. Similar % i.e. 92% of respondent of public sector bank is either fully or partially aware of it.

VI. HYPOTHESIS: 2

Table 11: Descriptive statistics

	Mean	Standard deviation	N
Are you aware about the e-banking services provided by banks	1.85	.520	100
Gender	1.30	.461	100
Education	3.13	.731	100
Annual income	2.22	1.011	100
occupation	2.34	1.075	100
Residential status	1.49	.559	100

Table 12: Model summary

Model	R	R square	Adjust R square	St. error of the estimate	Durbin Watson
1	.4109	.168	.124	.487	1.990

It is observed that education of the respondent have moderately negative impact on the awareness of e-banking and the p value $0.000 < 0.05$, whereas the beta value -0.274 signify the relationship. Gender has weak positive relationship and hence is independent of awareness of e-banking. With p value being greater than 0.05 i.e. 0.436 and beta value 0.085. Annual income has weak negative impact and is independent of awareness with p-value being greater than 0.05 i.e. 0.840 and beta value -0.016 . Similar observation is found in case of occupation. Residential status has strong impact on awareness and usage of e-banking services. Co linearity statistics of tolerance and VIF also satisfy the rule since the tolerance value for all the variable selected for the test have more than 0.2 and VIF less than 5. This shows that there doesn't exist multicollinearity among the variable selected for study. Hence regression model selected for study is best fit.

Findings:

- 61% rural people don't have ATM . It restrict them to use e-banking services
- 86% swipe machines are far from the reach of rural people.
- 73% of rural people are unaware about digital transaction .
- The awareness level about e-banking is more in urban areas in comparison to rural areas.
- The use of e-banking services in urban areas is more than rural areas.
- After demonetization awareness about e-banking is significantly increases in both rural and urban areas

- After demonetization usage of e-banking for transactions has significantly increased in both rural and urban areas.
- Rural people are facing difficulty in using banking sites due to lack of infrastructure or education.
- Payment through mobile increased by 10%
- 66% people are happy with demonetization.

VII. SUGGESTIONS

- Based on the findings, it is suggested that the banks have to make an effort to create awareness on use of e-banking services by conducting monthly seminar and invite their customers in that.
- Banks have to exhibit visual ads on ATM sites as customers frequently visit it.
- Banks while sending hard copy of monthly statements to customers should also insert information about latest services like e-wallet, easy recharge etc.
- Banks should ensure that their websites should be user friendly and secure.
- Banks should keep multi-level security points to check the validity of right customers accessing e-banking.
- Facilities should be developed to report any mistakes through SMS and acknowledgement SMS should be sent immediately on receipt of SMS from the customer.

VIII. CONCLUSION

E-banking is a buzzword after demonetization. India is now in the list of top countries where major population transact online. With the introduction of smart phones and mobiles application the usage rate has increased. But there is a long way to go as rural population of India is still waiting for some program from banks that will facilitate their usage of e-banking services.

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