

## **A Comparative Study on Pre and Post Demonetization on E-Banking Services**

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**Abstract:** *Demonetization is the process whereby the Government decides to stop a currency unit from being circulated. In other words, the currency unit loses its status as legal tender. Generally, the currency unit is retired. In some cases, a country completely replaces all the old currency with a new one.*

*On 8 November 2016, the Government of India announced demonetization, commonly called notebandi, of all Rs.500 and Rs. 1,000 banknotes. The Government felt that demonetisation would curb shadow economy cracking down the usage of illicit and counterfeit cash which is used to fund illegal activities. The sudden nature of the announcement coupled with the prolonged cash shortages in the weeks that followed created a significant disruption throughout the economy.*

*Post demonetization, e-banking became a necessity. With the advent of Information Technology, banking industry has evolved prompting Indian banks to design world class customer services system and practices to meet the growing customer needs. Now with demonetization in place, usage of e-banking became indispensable. The present paper analyses how e-banking has evolved, were customers aware of these facilities prior to demonetization and how has this act of Government affected public at large and steered them towards using e-services.*

*The present study is based on primary data collected from 100 customers in Hyderabad.*

**Keyword:** *Convenient sampling, E-banking, Information Technology, Pre-demonetization, Post-demonetization.*

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### **I. Introduction**

Banking sector is the foremost sector to adopt the latest technology for transacting business. Technological innovations have not only reached consumer banking and financial services, but also have enhanced the capacity for continued and inclusive growth. Information Technology has changed the movement from traditional banking to mass banking or e-banking. The banking sector in India has undergone tremendous change during the past 50 years owing to intense competition, advanced technology and introduction of new products and services. The customers have become demanding and dominating and their expectations have also increased – so much so that they want banking service at their door steps.

In the post-LPG (Liberalization, Privatization and Globalization) scenario and Information Technology (IT) era, transformation in Indian banks is taking place with different parameters and the contours of banking services are dynamically altering the face of banking with banks stepping towards e-banking from traditional channels.

**1.1 Demonetization in India:** Demonetization is the process of withdrawal of a particular form of currency from circulation. Demonetization becomes necessary whenever there is a change in the national currency. The old unit of currency must be retrieved and replaced with a new currency unit. It involves either introducing new notes or coins of the same denomination or completely replacing the old denominations with the new denomination which is usually carried out as an ambush on the black market. In India demonetization has occurred thrice. The first was on 12th January 1946 (Saturday), second on 16th January 1978 (Monday) and the third was on 8th November 2016 (Tuesday). The purpose of this study is to compare and analyze the impact of demonetization and their significance in the E-Banking Services.

### **II. Objectives of the Study:**

The following are the objectives of the study

- 1) To study the socio-economic factors of bank customers and its influence on E-Banking practices on Pre and Post Demonetisation in Hyderabad.
- 2) To know the parameters which are more important for Pre and Post Demonetisation
- 3) To analyse factors influencing Pre and Post Demonetisation on E-Banking.

### **III. Review of Literature**

Ramsay and Smith (1999), observed consumers' preferences and ranked the banking channels accordingly. They rated physical branches as their most preferred service channel while Internet banking was the least preferred. The phone service came next to the physical branch. They stated that the main reason for people preferring the physical branch was the level of service and personal nature of service.

Jayawardhena and Foley (2000), in their study, listed the advantages of e-banking. These include cost savings, increased customer base, innovation, and development of non-core business. However, some concerns were raised such as privacy and security issues.

Research findings of Moutinho and Smith (2000) suggested that ease of banking and convenience is favoured by the customer and, hence, banks should find alternative routes to improve service delivery (either human-based or technology based). E-banking provides higher degree of convenience that enables customers to access internet banking at all times and places. Apart from that, the accessibility of computers is perceived as a measure of relative advantage (Suganthi et.al. (2001)). Therefore, it is hypothesized that convenience and accessibility have positive effect on consumer adoption of e-banking.

According to a study by Mali (2016), successful online retail stores in India like Flipkart, Amazon, Snapdeal, Shopclues and other online retailers temporarily stopped offering cash-on-delivery services. Such a move temporarily impacted their profits because cash-on-delivery is the most popular method of payment for shoppers in the country. Instead, they encouraged consumers to adopt payments through debit and credit cards, thereby inculcating the card culture or 'plastic money'.

For FMCG majors, the way out seems to be extending the credit cycles. Wholesalers who are already low on cash have done the same to retailers and distributors are doing the same at the moment (Chelladurai and Sornaganesh, 2016).

In a similar study by Rani (2016), it was studied that when wholesalers denied extending credit span of time, shopkeepers started Paytm and cheque facilities for consumers.

There is a correlation between attitude towards e-banking and feeling of security with regard to their demographic variables.

There is a positive relationship between the level of financial infrastructure and the level of competition and a negative relationship between the degree of state ownership in a banking sector and the level of competition.

### **IV. Methodology:**

To fulfill the above objectives, a structured questionnaire form was made by the researchers consisting of 27 questions asking the respondents about their awareness of online banking.

Respondents were asked if they were aware of online banking and whether they were willing to experience it had their banks provided sufficient support. The questionnaire was made up the dimension which measures the awareness of online banking among Indian adult customers. The variables were measures using multiple items. All of the scale items represented in the survey instrument utilizing a fivepoint categorical rating scale. The statements are given with a Likert scale ranging from 1 to 5 i.e., from strongly disagree to strongly agree. The data obtained responses from adults women in Hyderabad. The total number of useable

Responses were 100(50respondents were Pre-demonetization and 50 respondents were Post-demonetization).

Secondary data was collected from books, magazines and from various published articles through internet and journals.

### **V. Data Analysis and Findings:**

The collected data were processed both manually and with the help of SPSS. The following tools were used for the study:

1. Simple percentage analysis,
2. One-sample tests for both Pre-demonetization and Post-demonetization on E- banking
2. Factor Analysis.

**5.1 Percentage Analysis:** Percentage analysis deals with the demographic factors such as age, educational qualification, marital status, occupation and monthly income of the respondents. It can be inferred from Table 2 that a majority of the respondents – 41% of the respondents belonged to the age group of 35-45 years, 83% respondents are Post graduate level, 74% of the respondents are in Teaching Profession, and 56% of the respondents earned monthly income is between Rs15,001 and Rs. 30,000, and 45% of respondents are using E-Banking since Post-demonetization only.

**Table 2: Demographic Profile of E-Banking Customers**

Factors	Options	No. of Respondents	Percentage (%)
Age	Below 35 Years	33	33.0
	35-45 Years	41	41.0
	45 and above Years	26	26.0
Qualification	Post Graduate	83	83.0
	Professional	5	5.0
	Others	12	12.0
Occupation	Lecturers	74	74.0
	Clerks	11	11.0
	Doctors/Software Engineers	5	5.0
	Others	10	10.0
Monthly Income(in Rs)	Less than 15000	26	26.0
	15001-30000	56	56.0
	30001-45000	18	18.0
Status of Usage	More than 5 yrs	27	27.0
	More than 3 yrs	28	28.0
	Post demonetization	45	45.0

**5.2. One-sample tests for usage of E-Banking Pre-demonetization and Post-demonetization:** To achieve the objective of customer’s perception towards E-Banking services pre and post-demonetization in banks the instrument is used 27 different statements with likert scale for measuring performance on E-Banking services.

**5.2.1 One –sample Test for Pre-demonetization:**  $H_0$ : There is no significant difference between the calculated sample mean for individual service parameter and hypothesized mean (3.00). Hence,  $H_0: \bar{x} = \mu = 3$ .

Against  $H_1$ : There is significant difference between the calculated sample mean for individual service parameter and hypothesized mean (3.0). Hence,  $H_1: \bar{x} \neq \mu \neq 3$ .

Significance Level: The significance level will decide the test statistic to accept at 95% confidence level or the test statistic will be rejected at 5% level.

The sample statistic  $\bar{x}$  is tested at 5% level of significance. A low significance value i.e., below 0.05 indicates that there is a significant difference between the test value and the observed mean. It means, that the significant value less than 0.05 (i.e., the test statistic ‘t’ is greater than the tabulated value of ‘t’ for (n-1) degrees of freedom at 5% level of significance), the null Hypothesis is rejected. For significant value greater than 0.05 the null Hypothesis may be accepted.

From Table 3 it is observed that the statement is found out which have high significant value i.e., significant value is more than 0.05. It means that for this statement the hypothetical mean is almost equal to the calculated mean.

- Online A/C opening is easy
- Online banking provide problem solution menu
- Bank conducting seminars

**Table 3: One-Sample Statistics- Pre demonetization**

Statements	Mean	Std. Dev	Sig (2-tailed)	Mean Difference
Banks websites provides confidentiality	3.80	.756	.000	.800
Bank allows authorized persons only	4.40	.495	.000	1.400
E-Banking provide privacy	2.52	1.199	.007	-.480
Banks Never Misuse my financial info.	3.60	1.069	.000	.600
Online bank provides simple operational Procedure	3.76	.625	.000	.760
Bank websites secure for fund transfer	3.98	.589	.000	.980
Online A/C opening is easy	3.22	.864	.078	.220
Online banking websites are trustworthy	3.46	.762	.000	.460
I trust online banking websites	3.40	.639	.000	.400
Use of online banking increase in future	3.96	.570	.000	.960
Trust on financial info. Remains in registers	3.98	.553	.000	.980
Bank websites are always increase customer interest	3.98	.654	.000	.980
Trust on benefits provided by online banking	3.96	.807	.000	.960
Banks provide useful tips	3.70	.763	.000	.700
Bank conducting seminars	3.30	.953	.131	.300
Intended to use E-banking in future	3.70	.789	.000	.700
Online banking provide problem solution menu	3.60	.782	.052	.600
Online banking web design is very efficient	3.74	.600	.000	.740
Online banking clear and easy to follow instructions	3.78	.679	.000	.780
Banks web keep promises and commitment	3.72	.671	.000	.720
Banks increase the awareness about security of date	3.94	.652	.000	.940
Banks always encourage to transfer fund through online	3.86	.756	.000	.860

**5.2.2 One –sample Test for Post-demonetization:** Here  $H_0$ ,  $H_1$  and significance value are taken as same as earlier. The sample mean  $\bar{x}$  is tested at 95% confidence level. If the calculated value of sample mean  $\bar{x}$  fall in 95% confidence level the null Hypothesis is accepted, if it is greater than 95% confidence level null Hypothesis is rejected.

The statements that are found out with high significance value (i.e., significance value greater than 0.05), indicates that there is no significance difference between calculated mean and hypothetical mean. From Table 4 it is known the following statements calculated mean and hypothetical mean are same.

- Banks websites provides confidentiality
- E-Banking provide privacy
- Banks Never Misuse my financial information
- Banks’ websites keep promises and commitment
- Banks always encourage to transfer fund through online

**Table 4: One-Sample Statistics- Post- demonetization**

Statements	Mean	Std. Div	Sig. (2-tailed)	Mean Difference
Banks websites provides confidentiality	3.30	1.313	.113	.300
Bank allows authorized persons only	4.44	.501	.000	1.440
E-Banking provide privacy	2.90	1.074	.513	-.100
Banks Never Misuse my financial info.	3.12	1.380	.541	.120
Online bank provides simple operational Procedure	3.32	.978	.025	.320
Bank websites secure for fund transfer	3.72	.809	.000	.720
Online A/C opening is easy	2.74	1.139	.013	-.260
Online banking websites are trustworthy	3.32	.741	.004	.320
I trust online banking websites	3.26	.664	.008	.260
Use of online banking increase in future	3.46	1.265	.013	.460
Trust on financial info. Remains in registers	3.64	.921	.000	.640
Bank websites are always increase customer interest	3.64	1.005	.000	.640
Trust on benefits provided by online banking	3.60	1.161	.001	.600
Banks provide useful tips	3.56	.787	.000	.560
Bank conducting seminars	3.08	.922	.042	.080
Intended to use E-banking in future	3.78	.737	.000	.780
Online banking provide problem solution menu	2.88	1.223	.491	-.120
Online banking web design is very efficient	3.52	.646	.000	.520
Online banking clear and easy to follow instructions	3.70	.735	.000	.700
Banks web keep promises and commitment	3.24	.960	.083	.240
Banks increase the awareness about security of data	3.64	.827	.000	.640
Banks always encourage to transfer fund through online	3.30	1.313	.113	.300

To know the parameters which are more important to build good relationship between banks and their service users in Pre-demonetization, the following statements are found out which are favourable to Pre-demonetization. From the following table (Table 5) it can be understood that Pre-demonetization customers’ perception about e-banking and the facilities offered by banks in terms of services and security is more.

Hence, people could easily adapt to e-banking once demonetization was in place.

22 statements were taken and a comparative study of Pre-demonetization and Post-demonetization was conducted based on the replies people gave. Thereby the results were analysed.

The table is presented as follows:

**Table 5: Statements of More favourable to Pre-demonetization**

Stmt.No	Statements	Pre-demonetization Mean	Post- demonetization Mean
1	Banks websites provides confidentiality	3.80	3.30
4	Banks Never Misuse my financial info.	3.60	3.12
5	Online bank provides simple operational Procedure	3.76	3.32
6	Bank websites secure for fund transfer	3.98	3.72
8	Online banking websites are trustworthy	3.46	3.32
9	I trust online banking websites	3.40	3.26
10	Use of online banking increase in future	3.96	3.46
11	Trust on financial info. Remains in registers	3.98	3.64
12	Bank websites increase customer interest	3.98	3.64
13	Trust on benefits provided by online banking	3.96	3.60
14	banks provide useful tips	3.70	3.56
15	Bank conducting seminars	3.30	3.08
17	Online banking provide problem solution menu	3.60	2.88

18	Online banking web design is very efficient	3.74	3.52
20	Banks web keep promises and commitment	3.72	3.24
21	Banks increase the awareness about security of data	3.94	3.64
22	Banks always encourage through online	3.86	3.30

From Table 5 it is known that Pre-demonetization customers' perception is more.

From Table 6 it is observed that Post-demonetization customers are more satisfied with privacy.

**Table 6: Statements of More favourable to Post-demonetization**

Stmt. No	Statements	Post-demonetization Mean	Pre-demonetization Mean
3	E-Banking provide privacy	2.90	2.52

By observing Table 7 it is understood that the customers of both Pre and Post demonetization are equally aware of the new banking channels/avenues.

**Table 7: Statements of Very much near for Pre and Post demonetization**

Stmt. No	Statements	Pre-demonetization Mean	Post-demonetization Mean
2	Bank allows authorized persons only	4.40	4.44
16	Intended to use E-banking in future	3.70	3.78
19	Online banking clear and easy to follow instructions	3.78	3.70

**5.3. Factor Analysis:** Factor analysis is a very useful method for reducing data complexity by reducing the number of variables being studied. It was used to identify the various factors for usefulness of E-Banking services.

The Table 8 represented the rotated component matrix. The variables- Online bank provides simple operational Procedure, Bank websites secure websites for fund transfer, Banks increase awareness about security of data, Banks web keep promises and commitment, I trust online banking websites, Trust on benefits provided by online banking, and Only authorized person can access own account have loadings .871, .859, .783, .745, .762, .787, and .561. Thus, Factor 1 can be named as **Security**. On Factor 2, it is evident that the variables- Banks always encourage through online, Online banking increase future, Online A/C opening is easy, Trust on financial info. in registers, Bank websites increase customer interest, Banks websites provides confidentiality, Banks Never Misuse Customer Information and Online banking provide problem solution menu have loaded as .845, .837, .803, .800, .717, .638, .546 and .532. Thus the Factor 2 is named as **Trust**. On Factor 3, the variables – Online banking clear and easy, Bank conducting seminars and Banks provide useful tips have loadings .869, .829 and .721 and therefore, the factor is named as **Easiness**. On Factor 4 the variables- Online banking is trusty and Intended to use E-banking in future have loadings .858 and .883 respectively. Hence, the Factor 4 can be named as **Innovativeness** The variable I-Banking provides privacy has loaded .911. Hence the Factor 5 can be named as **Privacy**.

## VI. Conclusion

In a country like India, there is a need for providing better and customized services to the customers. Banks must be concerned about the attitudes of adult customers with regard to acceptance of online banking. Though many were aware of e-banking facilities and were even using it, the study shows that post-demonetisation, e-banking became a necessity. Not only people belonging to higher strata but also the common man too is relying on the new channels. Banks should design their website in such a way that security and privacy issues are addressed.

Pre-demonetization, banks were already taking efforts to make their customers aware of the new channels by conducting seminars etc. Post demonetization, customers are more interested in privacy issues since usage of internet banking has become the norm.

## VII. Limitations and Scope of Further Research

This research serves as an initial step in exploring customers' views and expectations on online banking. However, it is limited by the following factors:

- a. The sample was distributed randomly over customers from the working environment. It did not include customers who are less educated or those who never used computers or accessed the Internet.
- b. The sample is comprised with 100 customers who use e-Banking services. Future research requires a larger sample for the purpose of higher accuracy.
- c. This research focused to a high degree of acceptance of online banking among customers and opinion regarding security and privacy issues in Hyderabad only.

Further research is required to investigate issues related to online banking in deeper manner and what strategies should adopt by banks by which they can enhance level of e-satisfaction and e-loyalty with respect to online banking.

**Table 8: Rotated Component Matrix<sup>a</sup>**

	Component				
	1	2	3	4	5
Online bank provides simple operational Procedure	.871				
Bank websites secure websites for fund transfer	.859				
Banks increase awareness about security of data	.783				
Banks web keep promises and commitment	.745				
I trust online banking websites	.762				
Trust on benefits provided by online banking	.787				
Authorized persons only	.561				
Banks always encourage through online		.845			
Online banking increase future		.837			
Online A/C opening is easy		.803			
Trust on financial info. in registers		.800			
Bank websites increase customer interest		.717			
Banks websites provides confidentiality		.638			
Banks Never Misuse Customer Information		.546			
Online banking provide problem solution menu		.532			
Online banking clear and easy			.869		
Bank conducting seminars			.829		
Banks provide useful tips			.721		
Online banking is trusty				.858	
Intended to use E-banking in future				.883	
I-Banking provides privacy					.911
Eigen values	9.011	3.212	2.634	2.006	1.553
% of variance	40.959	14.602	11.972	9.120	7.057
Cumulative %	40.959	55.561	67.534	76.654	83.711
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization, a=. Rotation converged in 7 iterations.					

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