

# Usage of E-Banking Services among Rural Customers in Kerala

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**Abstract:-** Financial liberalization and technology revolution have allowed the developments of new and more efficient delivery and processing channels as well as more modern products and services in banking industry. Banking institutions are facing competition not only from each other but also from non-bank financial intermediaries as well as from alternative sources of financing. Another strategic challenge facing banking institutions today is the growing and changing needs and expectations of consumers in tandem with increased education levels and growing wealth. Consumers are becoming increasingly discerning and have become more involved in their financial decisions. This paper investigates the factors evaluate the level of utilization of E banking services of the respondents relating to usage of ATM cum Debit/Credit Cards, Internet Banking and Mobile Banking as well as to find out the reason for restricted usage of E-banking service among rural customers. Primary data was collected from 200 respondents through a structured questionnaire. Descriptive statistics was used to explain demographic profile of respondents and Factor and Regression analyses were used.

**Keyword:-** E banking, Rural customers, Internet banking.

## I. INTRODUCTION

Internet banking has become the self service delivery channel that allows banks to provide information and offer services to their customers with more convenience via the web services technology. The evolution of e-banking has fundamentally transformed the way banks traditionally conduct their businesses and the ways consumers perform their banking activities (Eriksson et al., 2008; Sayar and Wolfe, 2007). Given that India has an extensive network of bank branches in rural areas established by commercial banks, the main rationale for concern about the parallel rural banking system is provided by its implications for financial inclusion. Within the Indian financial sector, the role of the rural banks is important but not apparently pre-eminent. The rural banking system is clearly more inclusive of low income families than those provided by the commercial banks. Yet rural banks have, for a number of years, been regarded as the step-child of the banking system in India. Most of the banks have started offering information based services like balance enquiry, stop payment instruction of cheques, transactions enquiry, and location of the nearest ATM/branch etc. Acceptance of transfer of funds instruction for credit to beneficiaries of same/or another

bank in favor of preregistered beneficiaries have also commenced in a few banks. In order to ensure a level playing field and considering that the technology is relatively new.

## II. SCOPE OF THE STUDY

The increasingly competitive environment in the financial service market has resulted in pressure to develop and utilize alternative delivery channels. The most recently delivery channel introduced is online or electronic banking also known as e-banking. Online or electronic banking systems give everybody the opportunity for easy access to their banking activities. Internet banking has evolved rapidly over the years with technological advances and increasing number of Internet users across various regions. It has developed as an effective distribution channel for banking products and services. It helps to attract customers, also do banking anywhere without opening branch.

## III. REVIEW OF LITERATURE

Jun and Cai (2001) identified 17 service quality dimensions of e-banking service quality. These are reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, collaboration, continuous improvement, content, accuracy, ease of use, timeliness, aesthetics, security and divers features. They also suggested that some dimensions such as responsiveness, reliability and access are critical for both traditional and internet banks. Polatoglu&Ekin (2001) conducted an exploratory study to analyse the customer acceptance of internet banking services in a Turkish bank. Their findings suggest that customer confidence in internet banking services tends to increase when they use the services for a long time. Mattila, Karjaluo, & Pento (2002) examined responses of 3000 survey respondents and 30 in-depth interview participants to study the customer channel preference in Finland. They tried to analyse the implication of new channel delivery channels in banking and its effect on customers and banks. Sciglimpaglia & Ely (2002) tried to study the impact of internet banking from "customer centric" perspective. They conclude that customers who don't mind doing business through internet might leave their current bank if they find a rival offering the service. Van Slyke, Comunale, & Belanger (2002) tried to examining the factors influencing the adoption of online shopping with special emphasis to the impact of trust. The result revealed that there is a positive impact of trust on the consumer's intention to conduct an online shopping activity.

Janeetal (2004) stated that Online banking requires perhaps the most consumer involvement, as it requires the consumer to maintain and regularly interact with additional technology (a computer and an Internet connection).

Kaynak and Harcar (2005) found in their study among U.S. bank customers that the major reasons for non-usage of online banking are security concerns, satisfaction with branch banking services and inability to talk face to face.

Mattila and Mattila (2005) they found that security issue basically depends upon some factors viz., availability of internet service, social factors and psychological factors

**IV. OBJECTIVES OF THE STUDY**

1. To study the utilisation of E banking services among rural customers.
2. To analyse the reasons to restrict the usage of E banking services among rural customers.

*A. Utilisation Of E- Banking Services*

Table 2.1 Model fit Indices for CFA Utilisation of E-Baking services

	$\chi^2$	DF	P	Normed $\chi^2$	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Utilisation	.000	0			1.000		1.000		1.000	.000	.812

(source: survey data)

All the attributes loaded significantly on the latent constructs. The value of the fit indices indicates a reasonable fit of the measurement model with data. In short the

measurement model confirms to the factor structure of the constructs. In table 2 present the regression coefficients.

Table 2.2 The regression Coefficients Utilisation of E-Baking services

Factors/ Latent Variables (Dependent Variable)	Construct (Independent Variable)	Regression Coefficient	C.R.	P	Variance explained (%)
Utilisation of E-Baking services	U1	0.930	23.277	<0.001	86.5
	U2	0.927	22.971	<0.001	85.9
	U3	0.712	12.509	<0.001	50.7

(source: survey data)

**V. RESEARCH METHODOLOGY**

This study “Adoption of E-Banking services among rural customers with special reference to Kerala” is descriptive in nature and makes use of a descriptive research design. Both primary and secondary data are used for this study. Primary data is collected through survey. Secondary data were collected from website, books, journals etc. Primary data was collected from sample of 200 customers in Kerala state. Multi stage random sampling method used for this study.

Confirmatory factor analysis (CFA), Structural equation modeling (SEM), Chi-squared test, Regression analysis, Arithmetic mean, standard deviation and z test etc are the main statistical tool to test the hypothesis.

**VI. DATA ANALYSIS AND INTERPRETATION**

The collected data contains both the qualitative and quantitative data. The data were analyzed via SPSS 20.0 for Windows. Descriptive statistics were used to describe and summarize the properties of the mass of data collected from the respondents.

The validity of the hypothesis was assessed by examining the regression coefficients of extracted constructs. If the regression coefficient has value more than 0.4 it is treated as significant impact on dependent variable. In this case all the constructs has regression coefficient value more than 0.4. That is in this case all these constructs has significant impact on Utilisation of E-Banking services.

Now evaluate the level of utilization of E banking services of the respondents relating to usage of ATM cum Debit/Credit Cards, Internet Banking and Mobile Banking. For this the respondents are asked 8 questions on the purpose of using ATM cum Debit/Credit Cards, 10 questions on the purpose of using Internet banking and 7 questions on the purpose of using Mobile banking in a five

point likert scale. The responses are scored as 1 for ‘Never’, 2 for ‘Rarely’, 3 for ‘Occasionally’, 4 for ‘Often’ and 5 for ‘Regularly’. The total score of the questions for all 200 respondents is found out, based on which we calculate the mean % score  $\left[ MPS = \frac{MeanScore \times 100}{Maximum\ possible\ score} \right]$  of the satisfaction the participants. This score is classified into one of the four groups as low or poor if the mean % score is less than 35%, average if the mean % score is between 35 to 50 per cent, medium or good if the mean % score lies in the interval 50 to 75% and high or excellent if the mean % score is above 75%. A one sample Z test is carried out to test the significance. The following table gives the Mean, SD, Mean % Score and Z value of the variables considered. (Loyd, B. H., & R. R. Abidin. R. R. (1985). Revision of the Parent Stress Index. *Journal of Pediatric Psychiatry*, 10(2), 169).

Table 2.3 Means, Standard deviation and z value for Purpose of using ATM cum Debit/ Credit Cards

	N	Mean	Std. Deviation	Mean %score	CV	Z	p value
Purpose of using ATM cum Debit/Credit Cards	200	25.50	6.60	63.75	25.88	11.787	<0.001

(source: survey data)

The mean percentage score of Utilisation of ATM cum Debit/Credit Cards for E-Banking services is 63.75% which indicate that Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is moderate. The  $CV = \frac{Standard\ deviation \times 100}{Mean}$  indicate that this score is less stable as the value is more than 20%. To test whether the sample information that observe exists in the population or to verify that the Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is average or moderate, formulate the hypothesis

H<sub>0</sub>: The Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is average

H<sub>1</sub>: The Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is moderate

To test the above hypothesis use one sample Z test and the result is exhibited in Table 17. From the table the calculated Z value is 11.787 which is more than the tabled value of 1.645 which indicates that the test is significant. So conclude that the Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is moderate or good.

Table 2.4 Means, Standard deviation and z value for Purpose of using Internet Banking

	N	Mean	Std. Deviation	Mean %score	CV	Z	p value
Purpose of using Internet Banking	200	22.88	6.09	45.76	26.63	-4.920	<0.001

(source: survey data)

The mean percentage score of Utilisation of Internet Banking for E-Banking services is 45.76% which indicate that Utilisation of Internet Banking of the respondents in E Banking services is average. The CV indicates that this score is less stable as the value is more than 20%. To test whether the sample information that observe exists in the population or to verify that the Utilisation of Internet Banking of the respondents in E Banking services is moderate or average, we formulate the hypothesis

H<sub>0</sub>: The Utilisation of Internet Banking of the respondents in E Banking services is moderate

H<sub>1</sub>: The Utilisation of Internet Banking of the respondents in E Banking services is average

To test the above hypothesis use one sample Z test and the result is exhibited in Table 18. From the table the calculated Z value is -4.920 which is less than the tabled value of -

1.645 which indicates that the test is significant. So conclude that the Utilisation of Internet Banking of the

respondents in E Banking services is average.

Table 2.5 Means, Standard deviation and z value for Purpose of using Mobile Banking

	N	Mean	Std. Deviation	Mean %score	CV	Z	p value
Purpose of using Mobile Banking	200	16.88	3.73	48.23	22.11	-2.349	0.020

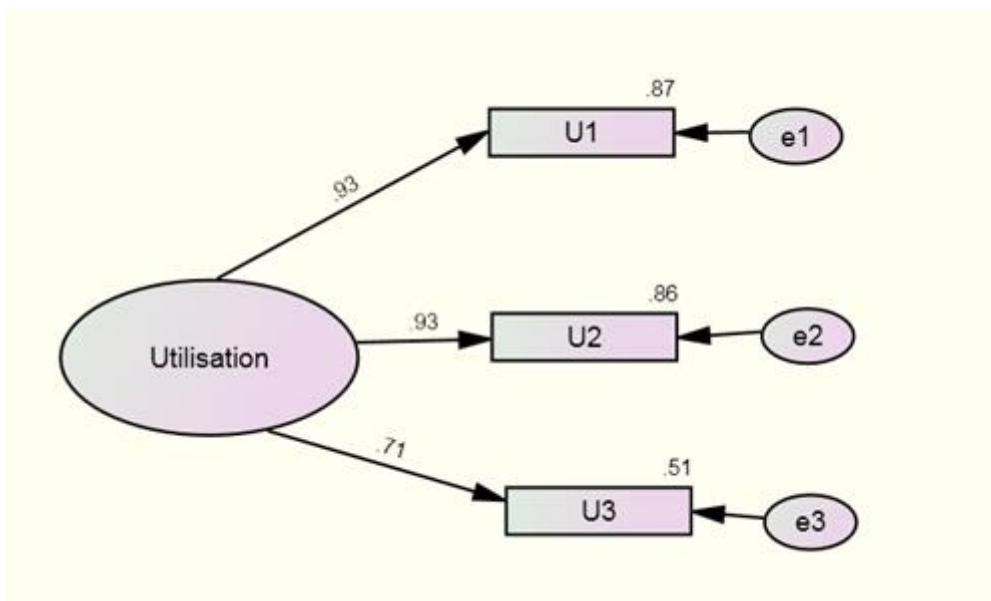
(source: survey data)

The mean percentage score of Utilisation of Mobile Banking for E-Banking services is 45.76% which indicate that Utilisation of Mobile Banking of the respondents in E Banking services is average. The CV indicates that this score is less stable as the value is more than 20%. To test whether the sample information that observe exists in the population or to verify that the Utilisation of Mobile Banking of the respondents in E Banking services is average or moderate, formulate the hypothesis

H<sub>0</sub>: The Utilisation of Mobile Banking of the respondents in E Banking services is moderate

H<sub>1</sub>: The Utilisation of Mobile Banking of the respondents in E Banking services is average

To test the above hypothesis use one sample Z test and the result is exhibited in Table 19. From the table the calculated Z value is -2.349 which is less than the tabled value of -1.645 which indicates that the test is significant. So conclude that the Utilisation of Mobile Banking of the respondents in E Banking services is average.



Next objective of the study is to find out the reason for restricted usage of E-banking service among rural customers.

H<sub>1</sub>: Inaccessibility is the reason for restricted usage of E-banking service by the rural consumers.

H<sub>2</sub>: Inertia is the reason for restricted usage of E-banking service by the rural consumers

H<sub>3</sub>: Lack of human touch is the reason for restricted usage of E-banking service by the rural consumers

H<sub>4</sub>: Lack of knowledge is the reason for restricted usage of

E-banking service by the rural consumers  
 H<sub>5</sub>: Noperceivedneed is the reason for restricted usage of E-banking service by the rural consumers`

H<sub>6</sub>: Costaspect is the reason for restricted usage of E-banking service by the rural consumers

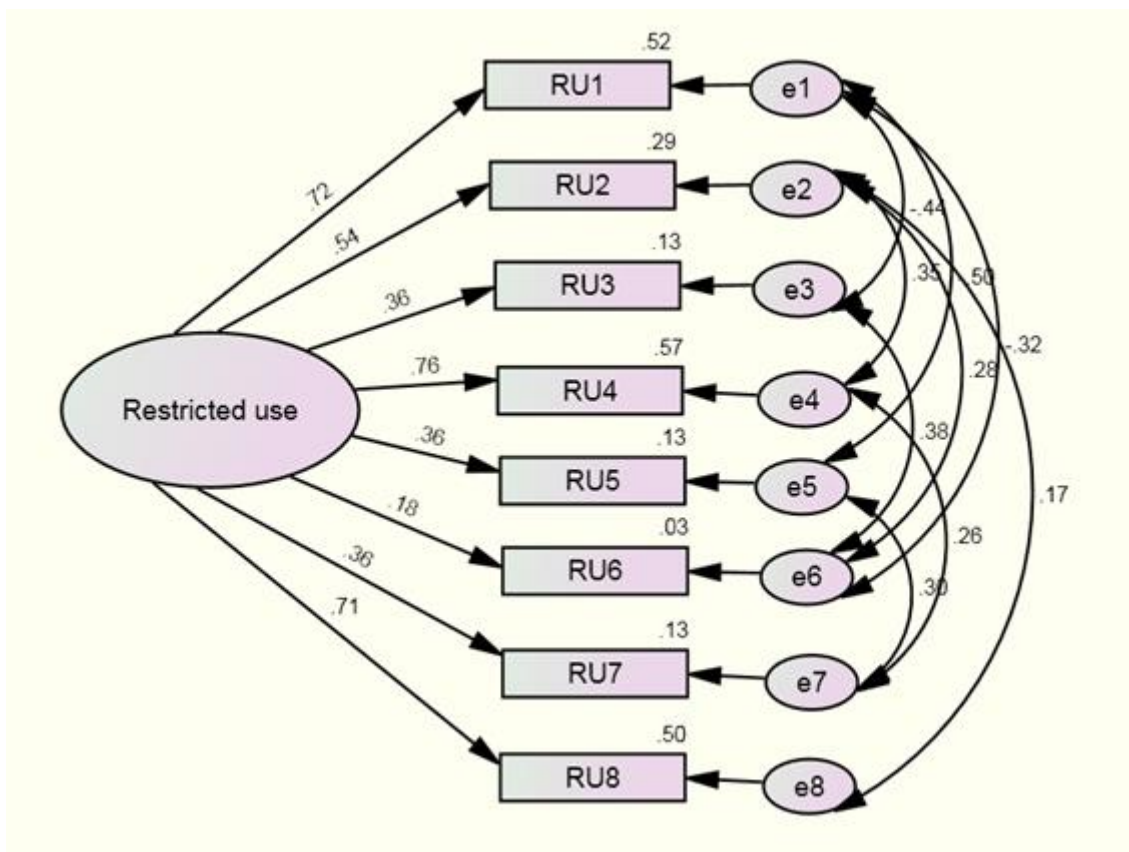
H<sub>7</sub>: Risksinvolved is the reason for restricted usage of E-banking service by the rural consumers

H<sub>8</sub>: Mobile banking transact is the reason for restricted usage of E-banking service by the rural consumers

Table 4.36 Regression coefficient

Path	Estimate	CR	P	Variance explained
Inaccessibility->Reason for RU	0.724	12.857	<0.001	52.4
Inertia->Reason for RU	0.542	8.519	<0.001	29.3
Lack of human touch->Reason for RU	0.361	5.306	<0.001	13.0
Lack of knowledge->Reason for RU	0.758	13.916	<0.001	57.4
No perceived need->Reason for RU	0.358	5.258	<0.001	12.8
Cost aspect->Reason for RU	0.177	2.511	0.013	3.1
Risks involve->Reason for RU	0.362	5.322	<0.001	13.1
Mobile banking transact->Reason for RU	0.707	12.368	<0.001	50.0

(source: survey data)



**B. Findings**

1. The Utilisation of ATM cum Debit/Credit Cards of the respondents in E Banking services is moderate or good.
2. The Utilisation of Internet Banking of the respondents in E Banking services is average.
3. The Utilisation of Mobile Banking of the respondents in E Banking services is average.
4. Inaccessibility is the reason for restricted usage of E-banking service by the rural consumers.
5. Inertia is the reason for restricted usage of E-banking service by the rural consumers.
6. Lack of human touch is not a reason for restricted usage of E-banking service by the rural consumers.
7. Lack of knowledge is the reason for restricted usage of E-banking service by the rural consumers.



8. No perceived cost aspect is not a reason for restricted usage of E-banking service by the rural consumers.
9. Cost aspect is not a reason for restricted usage of E-banking service by the rural consumers.
10. Risks involved are not a reason for restricted usage of E-banking service by the rural consumers.

## VII. CONCLUSION

In the present context of the market scenario the present study is very relevant and will be very helpful to determining awareness and adoption of technology based banking services among rural customers. It also helps in determining the basic problems while using them and reasons behind not using these services.

In a country like India, there is need for providing better and customized services to the customers. Banks must be concerned about the attitudes of customers with regard to acceptance of online banking. The importance of security and privacy for the acceptance of internet banking has been noted in many earlier studies and it was found that people have weak understanding of internet banking, although they are aware about risk.

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