Awareness of E-Banking Services among Rural Customers

Reshma S[1], Aiswarya Devi S[2], Sr. Binu K J[3]
M com, M phil
[1]Assistant Professor, Carmel College Mala, Kerala, India
[2,3]Research scholar, St. Xavier's college for women Aluva, Kerala, India

Abstract :- **Banks are constantly searching for ways to improve profitability. 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. This paper discusses development of internet banking in rural areas. The applications of internet banking of several rural consumers in rural areas are investigated and examined. The research objective is to identify the relation between demographic factor like gender, age, occupation, education, and income of rural consumers. 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 to know the factors affecting e-banking services among rural customer in Kerala. The finding depicts many factors like security and privacy and awareness level increased the acceptance of e-banking services among Kerala rural customers.**

Keywords:- E Banking, Customer satisfaction, Rural Consumer.

I. INTRODUCTION

Now day's banks are constantly searching for ways to improve profitability. On the face of the twenty first century global economy banks' service delivery practices are significantly changing to get hold of advantages encapsulate in the new technologies.

However, the degree of e-banking proliferation in rural settings is unarguably under researched to date. The contemporary market environments require the formulation of strategies which curtails and synthesizes the reinforcement of all the accessible modern technologies available to the firm repudiating modest technological instruments which are fitting for ecommerce on the consumer's side has been escalating. For instance, ownership and awareness of the internet and computers is wildly increasing amongst households, businesses and government departments.

Electronic banking (e-banking), also known as Internet banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Daniel, 1999; Sathye, 1999). E-banking reaps benefits for both banks and its customers. From the banks perspective, e-

banking has enabled banks to lower operational costs through the reduction of physical facilities and staffing resources required, reduced waiting times in branches resulting in potential increase in sales performance and a larger global reach (Sarel and Mamorstein, 2003). From the customers perspective, e-banking allows customers to perform a wide range of banking transactions electronically via the bank's website anytime and anywhere (Grabner-Kraeuter and Faullant, 2008). The emergence of new technology allows access to banking and banking services without physical direct recourse to the bank premise by the customer. The banking through internet: concept of Automated Teller Machines (ATMs) is the best example. At present, ATMs are city oriented in our country. It is inevitable that ATMs will be widely used, in semi-urban and rural areas.

II. LITERATURE REVIEW

Dabholkar (1994) the flexible design of e-banking allows customers to make changes while making transactions and further ensures availability of customer service adviser within minimum possible waiting time. Joseph et al. (1999) investigated the influence of internet on the delivery of banking services. They found six underlying dimensions of e-banking service quality such as convenience and accuracy, feedback and complaint management, efficiency, queue management, accessibility and customization. Heggade (2000), studied the bank-customer relationship in India. He analyzed responses of 11 different classes of bank customers like businessman, salaried persons, advocates etc. He analyzed customer's views on one hand and employees view on other hand. He concludes that there is low correlation among the different occupations and satisfaction from services in the PSBs. Tan & Teo (2000) studied the factors that influenced adoption of internet banking among customers in Singapore. Their main findings revealed that attitudinal and perceived behavioural control factors played significant role in influencing the intention to adopt internet banking. 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.

III. RESEARCH OBJECTIVES

1. To identify relation between demographic factor like gender, age, occupation, education, and income of rural consumers.

2. To study the factors leads to the customer satisfaction of e-banking customers.

IV. RESEARCH METHODOLOGY

The study mainly used primary data as well as secondary data. Secondary data was collected from different published sources. Primary data was collected by structured questionnaire survey. Random sampling applied to conduct this research. Data is collected from 200 respondents for the purpose of determining the rural consumer's preference towards E Banking. All items were measured by responses on a five-point Likert scale in agreement/relevance with statements, ranging from 1= strongly Disagree/ Completely Irrelevant to 5=Strongly Agree/Completely Relevant. The analysis of primary data was carried out using Statistical Package for the Social Sciences (SPSS) 20.0 trial version for windows. Main statistical tools are chi-square test, regression analysis, SEM, CFA, Arithmetic mean, standard deviation, cross tabulation, AMOS 18 used for graphical purpose.

V. DATA ANALYSIS AND INTERPRETATION

The method used in the study is exploratory as it utilizes scoring of the variables. The collected data contains both the qualitative and quantitative data. Accordingly, the study uses both qualitative and quantitative techniques for the analysis of data. The statistical analysis comprised of two stages. The first stage examined the descriptive statistics of the measurement items and assessed the reliability and validity of the measure applied in this study. The second stage tested the proposed research model and this involves assessing the contributions and significance of the manifest variables path coefficients. 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. Parametric statistics like independent sample Z test and the one way analysis of variance were used for comparison of the factors considered between different level of the demographic variables. A level of 0.05 was established a priori for determining statistical significance.

Main Objective of the study is Adoption of E-Banking services among rural customers. The survey was conducted among the 200 customers.

The following table gives the demographic characteristic of the respondents and their response in different questions.

A. Demographic Characteristic

Table 1.1

Gender	Frequency	Percent
Male	104	52.0
Female	96	48.0

Gender * How often you visit your bank's website? Cross tabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Gender	Male	Count	8	32	60	4	104
		% within Gender	7.7%	30.8%	57.7%	3.8%	100.0%
	Female	Count	8	44	24	20	96
		% within Gender	8.3%	45.8%	25.0%	20.8%	100.0%
Total		Count	16	76	84	24	200
		% within Gender	8.0%	38.0%	42.0%	12.0%	100.0%

B. Interpretation

From the table one can observe that the female groups use Internet banking more promptly than the male groups. In other words the usage of internet depends on the gender. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H₀: Usage of internet banking is independent of Gender.
H₁: Usage of internet banking is dependents on Gender.

The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on Gender.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.714[a]	3	<0.001
Significant			

Table 1.2

Marital status	*Frequency*	*Percent*
Single	104	52.0
Married	96	48.0

Marital_status * How often you visit your bank's website? Crosstabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Marital_status	Single	Count	8	28	44	24	104
		% within Marital_status	7.7%	26.9%	42.3%	23.1%	100.0%
	Married	Count	8	48	40	0	96
		% within Marital_status	8.3%	50.0%	41.7%	0.0%	100.0%
Total		Count	16	76	84	24	200
		% within Marital_status	8.0%	38.0%	42.0%	12.0%	100.0%

From the table one can observe that the married groups use Internet banking more promptly than the single groups. In other words the usage of internet depends on the Marital status. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H₀: Usage of internet banking is independent of Marital status.
H₁: Usage of internet banking is dependents on Marital status.

The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on Marital status.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.180	3	<0.001
Significant			

Table 1.3

Age	*Frequency*	*Percent*
Upto 25	72	36.0
26-35	72	36.0
36-45	28	14.0
46-55	16	8.0
Above 55	12	6.0

Age * How often you visit your bank's website? Crosstabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Age	Upto 25	Count	8	40	24	0	72
		% within Age	11.1%	55.6%	33.3%	0.0%	100.0%
	26-35	Count	4	28	40	0	72
		% within Age	5.6%	38.9%	55.6%	0.0%	100.0%
	36-45	Count	0	4	12	12	28
		% within Age	0.0%	14.3%	42.9%	42.9%	100.0%
	46-55	Count	0	4	8	4	16
		% within Age	0.0%	25.0%	50.0%	25.0%	100.0%
	Above 55	Count	4	0	0	8	12
		% within Age	33.3%	0.0%	0.0%	66.7%	100.0%
Total		Count	16	76	84	24	200
		% within Age	8.0%	38.0%	42.0%	12.0%	100.0%

From the table one can observe that the younger age groups use Internet banking more promptly than the elder groups. In other words the usage of internet depends on the age. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H$_0$: Usage of internet banking is independent of Age.
H$_1$: Usage of internet banking is dependents on Age

The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on Age.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.212	3	<0.001
Significant			

Table 1.4

Education	Frequency	Percent
Illiterate	4	2.0
High school	24	12.0
Intermmediate	12	6.0
Degree	88	44.0
Masters degree	72	36.0

Education * How often you visit your bank's website? Crosstabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Education	Illiterate	Count	0	0	0	4	4
		% within Education	0.0%	0.0%	0.0%	100.0%	100.0%
	High school	Count	4	8	4	8	24
		% within Education	16.7%	33.3%	16.7%	33.3%	100.0%
	Intermmediate	Count	0	0	8	4	12
		% within Education	0.0%	0.0%	66.7%	33.3%	100.0%
	Degree	Count	4	32	44	8	88
		% within Education	4.5%	36.4%	50.0%	9.1%	100.0%
	Masters degree	Count	8	36	28	0	72
		% within Education	11.1%	50.0%	38.9%	0.0%	100.0%
Total		Count	16	76	84	24	200
		% within Education	8.0%	38.0%	42.0%	12.0%	100.0%

From the table one can observe that the educated groups use Internet banking more promptly than the illiterate groups. In other words the usage of internet depends on the Educational level. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H₀: Usage of internet banking is independent of Educational level.
H₁: Usage of internet banking is dependents on Educational level.

The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on Educational level.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.706	4	<0.001
Significant			

Table 1.5

Occupation	Frequency	Percent
Agriculturist	8	4.0
Employee	120	60.0
Business	24	12.0
Professional	28	14.0
Others	20	10.0

Occupation * How often you visit your bank's website? Crosstabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Occupation	Agriculturist	Count	0	0	4	4	8
		% within Occupation	0.0%	0.0%	50.0%	50.0%	100.0%
	Employee	Count	4	64	48	4	120
		% within Occupation	3.3%	53.3%	40.0%	3.3%	100.0%
	Business	Count	0	4	20	0	24
		% within Occupation	0.0%	16.7%	83.3%	0.0%	100.0%
	Professional	Count	8	8	12	0	28
		% within Occupation	28.6%	28.6%	42.9%	0.0%	100.0%
	Others	Count	4	0	0	16	20
		% within Occupation	20.0%	0.0%	0.0%	80.0%	100.0%
Total		Count	16	76	84	24	200
		% within Occupation	8.0%	38.0%	42.0%	12.0%	100.0%

From the table one can observe that the employees use Internet banking more promptly than the agriculturist groups. In other words the usage of internet depends on the Occupation. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H$_0$: Usage of internet banking is independent of Occupation.
H$_1$: Usage of internet banking is dependents on Occupation.

The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on occupation.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.772	3	<0.001
Significant			

Table 1.6

Monthly income	Frequency	Percent
Upto 10,000	28	14.0
10,000-15,000	52	26.0
15,001-20,000	48	24.0
20,001-25,000	36	18.0
25,001-30,000	16	8.0
30,001 – 35,000	12	6.0
35,001-40,000	8	4.0

Monthly_income * How often you visit your bank's website? Crosstabulation

			How often you visit your bank's website?				Total
			Always	occasionally	Rarely	Do not visit	
Monthly_income	Upto 10,000	Count	4	0	4	20	28
		% within Monthly_income	14.3%	0.0%	14.3%	71.4%	100.0%
	10,000-15,000	Count	4	20	28	0	52
		% within Monthly_income	7.7%	38.5%	53.8%	0.0%	100.0%
	15,001-20,000	Count	0	20	28	0	48
		% within Monthly_income	0.0%	41.7%	58.3%	0.0%	100.0%
	20,001-25,000	Count	0	28	4	4	36
		% within Monthly_income	0.0%	77.8%	11.1%	11.1%	100.0%
	25,001-30,000	Count	4	4	8	0	16
		% within Monthly_income	25.0%	25.0%	50.0%	0.0%	100.0%
	30,001 – 35,000	Count	0	0	12	0	12
		% within Monthly_income	0.0%	0.0%	100.0%	0.0%	100.0%
	35,001-40,000	Count	4	4	0	0	8
		% within Monthly_income	50.0%	50.0%	0.0%	0.0%	100.0%
Total		Count	16	76	84	24	200
		% within Monthly_income	8.0%	38.0%	42.0%	12.0%	100.0%

From the table one can observe that the medium level income group use Internet banking more promptly than the high and low income group. In other words the usage of internet depends on the Income level. To test this dependency holds in the population or not we use the chi-square test. That is we use the chi-square test to test the hypothesis

H_0: Usage of internet banking is independent of Income level.
H_1: Usage of internet banking is dependents on Income level.
 The result of the chi-square test to test exhibited in the following table indicate that the test is significant as the p value is <0.05, so we conclude that Usage of internet banking is dependent on Income level.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.729	5	<0.001
Significant			

C. Customer Satisfaction

Next using SEM we evaluate whether the various initiatives taken by the bank to promote e-services leads to customer service or not. In other words we use SEM to test the following hypothesis

H_1: Information provided by the bank leads to customer satisfaction.

H_2:Website of the bank leads to customer satisfaction.

H_3: Competency of the bank leads to customer satisfaction.

H_4: Efficiency of the bank leads to customer satisfaction.

H_5: Economical aspect of the bank leads to customer satisfaction.

H_6: Supporting factors the bank leads to customer satisfaction.

H_7: Educating the customers by the bank leads to customer satisfaction.

H_8: Customer Relationship Management by the bank leads to customer satisfaction.
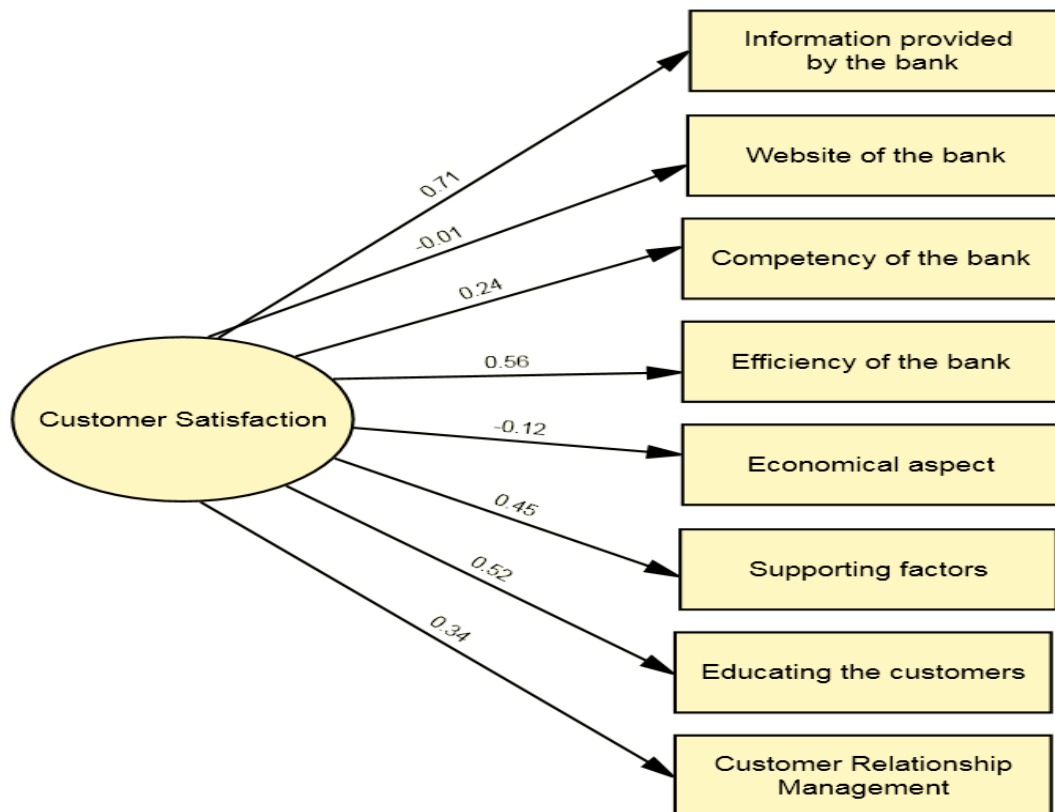
Table 2.1 Model fit Indices for CFA Customer satisfaction

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Customer satisfaction	12.491	11	.328	1.136	.985	.950	.959	.986	.995	.082	.026

(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.

Table 2.2 Regression coefficient

Path	Estimate	CR	P	Variance explained
Information provided by the bank ->Customer Satisfaction	0.714	12.566	<0.001	51.0
Website of the bank->Customer Satisfaction	-0.006	-0.084	0.933	0.0
Competency of the bank->Customer Satisfaction	0.237	3.391	0.001	5.6
Efficiency of the bank->Customer Satisfaction	0.562	8.923	<0.001	31.6
Economical aspect->Customer Satisfaction	-0.119	-1.678	0.095	1.4
Supporting factors->Customer Satisfaction	0.445	6.715	<0.001	19.8
Educating the customers->Customer Satisfaction	0.521	8.109	<0.001	27.2
Customer Relationship Management->Customer Satisfaction	0.342	5.002	<0.001	11.7

Findings:

1. Usage of internet banking is dependent on demographical characteristics like Gender, Marital status, Age, Educational level, occupation, Income level.
2. Utilization of ATM cum Debit/Credit Cards of the respondents in E Banking services is moderate.
3. Utilization of Internet Banking of the respondents in E Banking services is average.
4. Utilization of Mobile Banking of the respondents in E Banking services is average.
5. Information provided by the bank, Efficiency of the bank, Supporting factors and Educating the customers by the bank are lead to customer satisfaction.
6. Competency of the bank, Economical aspect of the bank and Customer Relationship Management by the bank are does not lead to customer satisfaction

VI.   CONCLUSION

Banking Industry is the backbone of the financial system of a country. Internet banking provides alternatives for faster delivery of banking services to a wider range of customers. Internet banking refers to the use of internet as a remote delivery channel for banking services. Customers are corner stone of the success of banking activities. So customer satisfaction consider as the success of banking activities. Demographic characteristics are depending on the utilisation of E-banking services. 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.

Bibliography

[1]. Al-Eisa Abdulkarim S. and Abdulla M. Alhemoud. (2009). Using a multiple attribute approach for measuring customer satisfaction with retail banking sevices in Kuwait. *International journal of bank marketing*, 294-314.

[2]. D., H. O. (2000). *Banker- Customer Relationship in India.* New Delhi: Mohit Publication.

[3]. Bimal, K. S. (2014). Electronic Banking: n Emerging Way of Customer Services . *Research Journal of Management Science* .

[4]. Bernard, B. (1952). Content analysis in communication research. *New York: Free Press*, 45-60.

[5]. Chandar Suresh G.S , Chandrasekharan Rajendran and R.N Anantharaman. (2003, May). Customer perceptions of service quality in the banking sector of a developing economy-A critical analysis . *International journal of bank management*, pp. 233-42, DOI:10.11.08/ 026523.

[6]. Flavian C., T. E. (2004). Corporate image measurement: A further problem for the tangibilization of Internet banking services. *International Journal of Bank Marketing* , 366-384.

[7]. Furst K, L. W. (2002). *Internet banking: developments and prospects.*

[8]. G, A. (2004, October-December). Customer service in banking. *Vinimaya*, pp. 45-51.

[9]. G, H. (2009). An Experimental Investigation of Online Bnaking Adoption in China. *Journal of Internet Banking and Commerce* , 1-12.

[10]. G., P. (2002). *A study on the quality of customer service in public sector banks, Ph.D thesis.* Kerala: Kerala University.

[11]. H.S. Srivastsa, S. (2007). *research on banking channel perception .*

[12]. Jamal A and Naser K. (2002). Customer satisfaction and retail banking: An assessment of some of the key antecedents of customer satisfaction in retail banking. *International journal of bank marketing*, 146-160.

[13]. John Akindele Ogunlowore and Rotimi Oladele. (2014). An analysis of electronic banking and customer satisfaction in Nigeria. *European journal of business and social sciences*, 14-27.

[14]. Joseph, M. (2001). *Performance effectiveness of new generation banks.* Kerala: Kerala University.

[15]. Rod Michel, Nicholas J, Jinyi Shao and Janet Carruthers. (2009). *An examination of the relationship between service quality and customer satisfaction -A New Zealand study,Marketing intelligence and planning.* Emerald Group.

[16]. T.A, B. (2006). Confirmatory factor analysis for applied research. New York, The Guiford press.