

**A PARADIGM SHIFT FROM TRADITIONAL BANKING TO GREEN BANKING:
AWARENESS, ADOPTION AND SATISFACTION OF END-USERS.****¹SAROMI. N, ²Dr. S. SAHAYASELVI**

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Abstract

It is not easy to shift from the traditional system to a new era unless there is any substantial reason, either the new system will more effective, systematic, updated and easy to accept. Green Banking is new technology based banking concept, which aims to promote the eco friendly banking in order to reduce the emissions of carbon footprints. The customers who are aware about the sustainable banking were ready to adopt from traditional banking to green banking and they satisfied with the products and services. For this purpose the study examined 156 sample respondents using multi random sampling method using ANNOVA and Factor Analysis methods. The findings of the paper elaborately explained about the products and services of green banking which are easily adoptable by the customer and examines about the level of satisfaction of using the products and services. It evaluates the elements which are less aware by the customers and explains the low level satisfaction of the banking customers.

Keywords: Traditional Banking, Green Banking, Customer, Carbon Footprints.

Introduction

The world in recent more conscious about to protect our Earth from Pollution, Carbon Footprints, deforestation. The ecologist, environmental scientist, Climatologist insists the business people to move towards eco friendly process for our upcoming descendant. Developed countries were already aware about this environmental pollution and now they are in the stage of taking remedial action against these global warming. Now it is time for the developing countries to show their performance to safeguard the earth. Finance and Industry are the major industries for the development of any country which plays a vital role in the economy. Banking is one of the finance sectors which do not pollute the environment directly but it increases the emission of inner and outer carbon unknowingly. So, banking industry is in urge to take amendatory steps at the same time without any vulnerability to the economy.

With the aim of eco-friendly banking the concept of green banking introduced. Green banking is not a new concept; initially green banking was introduced in 2009 in the state of Florida. In India State Bank of India was the forerunner of green banking. Green banking is wide concept with a meaning of any banking activities which is concerned with eco friendly process or technology. Online banking, mobile banking, tele banking, green loans, green cards, green pin, remote deposit are some of the products and services of green banking. This green banking acts as tool in the reduction of carbon footprints in the banking industry.

Review of Literature

The recent developments in Indian technology have transformed banking from the traditional system towards a more inclusive one incorporating the interest of customers, the bank and the environment (Jeyabal and soundarya 2017). Every industry has a duty to understand their role in repairing the earth's eco system and make a positive impact on the health of the environment by raising awareness of environmental issues or by lowering hazardous pollutants in the environment the making and distributing of their goods (Raj and Rajan, 2006). Now it is the time for the banks to implement a comprehensive green banking policy in a formal, structured manner in accordance with international standards in order to protect the environment to ensure sustainable banking operations and reduce environmental degradation (Lalon, 2015), The vital causes are strict regulatory compliance requirements and rising public expectations for environmentally friendly goods and services (Risal and Joshi, 2018). To protect the environment green banking awareness practices initiates to reduce external carbon emission and internal carbon footprint (Ko et al, 2012). A study on Consumer awareness and satisfaction towards e-banking services was come to the conclusion that customers were only minimally aware of the various methods of e-banking services available to them (Mary, 2015). There is limited empirical study which conducted previously captures features of green banking initiatives and the impact which is generated by satisfaction on features/attributes of green banking initiatives on general customer satisfaction on green banking (Herath and Herath, 2019). With the strong recommendation of these reviews, the researcher willing to analyze the level of awareness, adoption and satisfaction of using green banking practices.

Statement of the Problem

To achieve the mission of digital India it is the duty of every citizen to operate their banking transactions. Digital transformation is necessary for all industries and institution for the sustainable development of the country. Banking industry is one of the leading industries which transformed tremendously from traditional banking to sustainable banking in recent days. But, it is not easy for the customers to shift from these technology based banking. To eradicate this problem it is the duty of the banks to create awareness about the green banking practices. The purpose of this study is to explore an awareness, adoption and satisfaction of green banking users. This study will be an eye opener for the banking customers those who are unaware of the technological banking.

Objectives

The general objective of the study is to measure the level of customer's awareness, adoption and satisfaction of green banking products and services among sample respondents. The following are specific objectives of the study.

1. To study the demographic profile of the sample respondents.
2. To identify awareness level of green banking products and services.
3. To identify the adopting factor which motivates the respondents to shift from traditional banking to green banking
4. To analyze the level of satisfaction of using the green banking products and services

METHODOLOGY

The present study is empirical study and data collection is done on the basis of primary data through a self made questionnaire. The researcher collected the data from 156 sample respondents from Nagercoil Town for the study. For selecting the sample respondents, multi random sampling technique has been adopted. Statistical Package of Social Science (SPSS) was used for analyzing the data. Secondary data were collected from various books, journals, reports, thesis, websites and publications of the various Government organizations of India and abroad.

LIMITATIONS OF THE STUDY

1. This study is confined to Nagercoil Town only.
2. The sample size collected for the study is very small and thus it may not be considered appropriate to be applied to the whole population.
3. The results of the study are susceptible to all the constraints of the primary data because it is based on questionnaire-collected primary data.

HYPOTHESIS

Ho: There is no significant mean difference between the age and awareness of green banking products and services among the sample respondents.

Data Analysis and Interpretation

After collecting the primary data, the interview schedules were classified and arranged and the master table was prepared. Data were organized and tabulated for further analysis. Percentage analysis was used to measure the age, gender, educational qualification, monthly income of the family, and usage of green banking. ANNOVA test is used to study the awareness of green banking products and services.

Demographic Profile

To understand the respondents in an efficient manner the researcher has analyzed the demographic profile of the respondents. Demographic profile consists of age, gender, marital status, educational qualification, marital status, occupation, monthly income and educational qualification.

Table 1

Demographic profile of the Respondents

Variables	Particulars	No. of Frequency	Per centage
Age	Below 20 Years	39	25
	21 to 40 years	41	26.2
	41 to 60 years	40	25.6
	above 60 years	36	23
	Total	156	100
Gender	Male	81	56
	Female	75	44
	Total	156	100
Marital status	Married	89	44.2
	Unmarried	67	55.8
	Total	156	100
Occupation	Employee	52	34.6
	Business man	3	2.0
	Professionals	19	12.7
	Others	76	50.7
	Total	156	100
Monthly Income	below 10000	69	46
	10001 – 30000	23	15.3
	30001 – 50000	26	17.3
	above 50001	17	11.4
	Total	156	100

Educational Qualification	less than SSLC	14	9.0
	higher secondary	45	28.8
	degree holders	85	54.5
	Professionals	7	4.5
	technical education	5	3.2
	Total	156	100

(Source: Primary Data)

Table 1 show that 26.2per cent (41) respondents belonging to the age group of 21-40, 56 per cent (81) of the respondents are males. The marital status of the calculated table shows that 56 per cent are married and 44 per cent of the respondents are single. The occupation of the sample respondents are mostly in the category of salaried and business people with the per cent of 30. The majority of the sample respondents are under the income group of 10001-30000 with 37 per cent. The educational qualifications of the sample respondents are shows that majority of the respondents are degree holders with 55 per cent.

Awareness of Green Banking Products and Services

The one way analysis of variance is used to determine whether there are any statistically differences between the means of two or more independent unrelated groups although one tends to see when there are a minimum of three rather than two groups.

Ho: There is no significant mean difference between age and awareness about green banking product and services among sample respondents.

Table 2

Age and Awareness

Factors	Age group (in years)				F value	P value
	BELOW 20	21-40	41-60	60 ABOVE		
Online banking	3.39	3.71	3.72	3.97	2.127	.000**
Mobile banking	4.00	4.10	4.00	3.76	2.321	.002**
Debit card	3.97	4.17	4.26	3.95	3.466	.000**
Credit card	2.97	3.24	3.36	3.30	3.061	.001**
Electronic Clearance System	3.47	3.57	3.36	3.54	.240	.068
Tele banking	2.79	2.60	2.87	2.78	.475	070
Customer Integrated	2.55	2.36	2.67	2.86	1.436	.023*

System						
National Electronic Fund Transfer	3.95	4.05	3.92	4.08	.296	.082
Real Time Gross Settlement	4.18	4.24	4.14	4.20	.086	.000**
Immediate Payment Service	3.47	3.36	3.38	3.35	.134	.094
Withdrawal without using debit card	4.13	4.14	4.10	4.03	.158	.092
Point of sale	4.21	4.07	4.21	4.14	.289	.000**
Scan and pay	4.21	4.12	4.13	4.27	.222	.000**
Cash depositing through machine	3.84	4.00	3.77	4.16	1.388	.001*
Green loans	3.34	3.24	3.28	3.89	2.535.	.005**
Online insurance	3.74	3.50	3.90	3.70	852	.046*
Green cards	2.71	2.69	2.87	2.65	229	.087
Carbon insurance	4.05	4.14	4.00	4.16	.287	.083
Green deposits	3.58	3.52	3.33	3.32	.645	.058
Remote deposit	1.87	2.19	1.92	2.16	1528	.054
Green pin	3.53	3.57	3.21	3.41	1537	.062

(Source: Primary data)

Note: ** Denotes significance at 1 per cent level.

* Denotes significance at 5 per cent level

Discussion

Since the P value is less than 0.01; null hypothesis is rejected at 1 per cent level of significance with online banking, debit card, credit card, Real Time Gross Settlement, point of sale, scan and pay, green loans and cash depositing through machine. Hence there is a significant difference among age group of the respondents. The P value is more than 0.05, null hypothesis is accepted at 5 per cent level with regard to awareness of credit card, customer integrated system, and online insurance. There is no significance difference between the awareness regarding the age group of the factor electronic clearance system, immediate payment system, green cards, carbon insurance, green deposit, and remote deposit above at 5 per cent level. The above study was agreed with **Dr.Rupali Satsangi and pavneet kaur (2021)**, the results of their study indicated that the banks are using green banking practices and many of the respondents are unaware of the green banking practices, **Catherine and Jeba Melvin (2020)** also related to this

study their findings reflected as there is no significant difference in awareness of green banking products of green loans among various age group of bank customers.

Adopting Factors which influences the Customers.

To analyze the important adopting factors influence to practice green banking practices grouped into three factors such as ‘SIGNIFICANT CHANGES IN LIFESTYL’, ‘PERSONAL FACTOR’, ‘NEW WAYS TO ADOPT FACTOR’, ‘TECHNICAL FACTOR’, ‘ECO FRIENDLY FACTOR’, and ‘PETTY FACTOR’ among these variables, the dominant leading factors were analyzed with the help of factor analysis.

Rotated component matrix for the variables relating to adopting factors which influences to practice Green banking.

Rotated factor matrix for the variables relating to adopting factors of the respondents are given below table

TABLE 3

ROTATED COMPONENT MATRIX FOR THE VARIABLES RELATING TO ADOPTING FACTORS

S.No	Variables	Components					
		1	2	3	4	5	6
1.	Cash back offers	.846					
2.	Discount	.823					
3.	Frequently shopping	.648					
4.	After covid		.793				
5.	Fuel expenses		.766				
6.	Poor customer services		.673				
7.	Long distance			.789			
8.	Network facility			.523			
9.	Latest technology				.719		
10.	Out of station				.518		
11.	Eco-consciousness					.720	

12.	Bank holidays					.657	
13.	Easy access						.702
14.	Small amount						.663

Extraction method: Principal component analysis

Rotation method: Varimax with Kaiser Normalization

The above table 3 demonstrates the rotating factor loading of the fourteen variables of adopting factors. It is clear from the table that all fourteen variables have been filtered into six factors.

The variables defining factor 1 with the factor loading and communality for adopting factors are given below

FACTOR INFLUENCE TO ADOPT GREEN BANKING

S.No	Factors	Eigen Value	Per centage of Variance	Cumulative per centage of Variance
1.	Significant Changes in lifestyle	2.627	17.511	17.511
2.	Personal Factor	1.744	11.626	29.136
3.	New ways to adopt	1.317	8.780	37.917
4.	Technical factor	1.239	8.262	46.179
5.	Eco friendly factor	1.145	7.634	53.813
6.	Petty factor	1.025	6.832	60.645

KMO and Bartlett’s Test

Kaiser- Meyer –Olkin Measure of Sampling Adequacy : 0.610

Batrlett’s test of Sphericity chi-Square : 2347.607

Degrees of freedom : 91

Significance : 000

It is observed that from table 3, that six factors such as significant changes in lifestyle, personal factor, new ways to adopt factor, technical factor, eco friendly factor, petty factor were extracted out of 14 elements. These factors account for about 60.645 per cent of variance in the data. Eigen value for the first factor “**SIGNIFICANT CHANGES IN LIFESTYLE**” 2.627, which indicates that factor highly influence than other factors. The first factor significant

changes in lifestyle provide maximum insights for adopting factor in the study area. The respondents were highly motivated by cash back offers, discount and frequent shopping. The second important factor called “PERSONAL FACTOR” account for 11.626 per cent of variance. The Eigen value of this factor is 1.744. The third factor such as “NEW WAYS TO ADOPT” factor accounts for 8.780 with the Eigen value of 1.317. It is inferred that there are new practices. The fourth factor accounts for 8.262 per cent of variance with the Eigen value of 1.239. It is inferred that the development of new technologies in banking industry make the customer easy to adopt green TECHNICAL FACTOR banking practices. The fifth factor “ECO FRIENDLY FACTOR” accounts for 7.634 per cent of variance with Eigen value of 1.145. It is inferred that respondents who are aware about the carbon foot prints are ready to adopt green banking practices. The sixth factor “PETTY FACTOR” accounts for 6.832 per cent of variance with the Eigen value of 1.025. It is inferred that customers doing small transaction are willing to adopt green banking practices.

High value of Kaiser-Meyer –Olkin Measure (KMO) test of sampling adequacy (0.610) indicates correlation between the pairs of variable factors explained by other variables and thus factor analysis is considered to be appropriate in this model. The Bartlett’s Test of Sphericity chi-square indicates the population correlation matrix. It is an identity matrix. The test of statistics for Sphericity is based on X² which is significant the value is 2347.607.

It is inferred that respondents nowadays wants everything in the time they want. Due to hurry burry work schedule they are not ready to wait for anything. Hence in banking the green banking practices is a boon for them as it is very convenient and quick access. This was not agreed with Sucharita Debnath and Sanghita Roy (2019), Srilatha (2018) because the authors found in their study as there was a lack of awareness about banking users about Green banking. This finding was agreed with Ankita Dhamija and Diksha sahani (2018).

Satisfaction of using green products and services
 T – Test for Significant Difference between Gender and Awareness about Satisfaction of Using Green Banking Products and Services

Table 4
Satisfaction of Using Green Banking Products and Services

Satisfaction Towards Green banking Products and Services	Gender				T – Value	P- value
	Male		Female			
	Mean	Std. Deviation	Mean	Std. Deviation		
Online Banking	3.63	1.069	3.23	1.134	2.145	.034
Mobile Banking	3.26	1.081	3.24	1.195	.106	.916

Debit Card	3.60	1.195	3.65	1.221	.255	.799
Credit Card	3.46	1.225	3.44	1.068	.091	.928
Electronic Clearing System (ECS)	3.57	1.150	3.51	1.256	.318	.751
Tele Banking	3.36	1.165	3.55	1.082	1.046	.297
CIS (Customer Integrated System)	3.19	1.050	3.03	.972	.976	.331
NEFT (National Electronic Fund Transfer)	3.26	.997	3.35	1.033	.538	.592
RTGS (Real Time Gross Settlement)	3.70	.968	3.47	1.004	1.501	.135
IMPS(Immediate Payment System)	3.77	1.110	3.76	.956	.033	.974
Withdrawal without using Debit Card	3.41	.972	4.04	.779	4.464	.000
Point of Sales	3.52	.950	3.89	.894	2.532	.012
Scan and Pay	3.62	1.251	3.79	1.131	.885	.378
Cash Depositing through CDM	3.28	1.227	3.27	1.212	.088	.930
Green Loans: Housing, Vehicle, Mortgage	3.07	1.104	2.96	1.045	.661	.509
Online insurance	3.10	1.437	3.19	1.322	.397	.692
Green cards	3.37	1.364	3.05	1.324	1.471	.143
Carbon Insurance	2.83	1.127	2.39	1.114	2.453	.015
Green Deposits	2.99	1.401	3.35	1.400	1.600	.112
Remote Deposits	2.74	1.253	2.56	1.003	990	.324

Based on the mean rank Immediate Payment System get the first rank 3.77, Real Time Gross Settlement get second rank 3.70. Online banking get third rank with the mean score of 3.63. It was inferred that respondents are less satisfied with other green banking activities.

Since the P value is less than 0.05 the null hypothesis is rejected at the one per cent level of significance with regard to level of satisfaction towards green banking product such as online banking, debit card, cash depositing through CDM. Hence it shows that respondents are satisfied using these services with regards to the gender wise. The P value is not less than the 0.05 level the null hypothesis is accepted with the factors of green loans, green cards, green deposits. Hence this proves that the respondents are not satisfied with these services because they less aware

about these green banking products and services. The above study was agreed with **Jitha Thomas and Siby Linson (2018)**. Their study found that lack of awareness of the green banking methods is the main reason for not using green banking.

Findings

- The study reflected that 81 per cent of the respondents are male and 75 per cent of the respondents are female..
- The marital status of the respondents is categorized as 87 per cent of the sample respondents are married and 69 per cent of the respondents are single.
- The educational qualifications of the sample respondents are shows that majority of the respondents are degree holders with 55 per cent.
- The occupation of the sample respondents are mostly in the category of salaried and business people with the per cent of 30.
- It is inferred that majority of the sample respondents are under the income group of 10001-30000 with 37 per cent.
- The P value is less than 0.01; null hypothesis is rejected at 1 per cent level of significance with online banking, debit card, credit card, Real Time Gross Settlement, point of sale, scan and pay, green loans and cash depositing through machine. Hence there is a significant difference among age group of the respondents. The P value is more than 0.05, null hypothesis is accepted at 5 per cent level with regard to awareness of credit card, customer integrated system, and online insurance.
- Six factors such as significant changes in lifestyle, personal factor, new ways to adopt factor, technical factor, eco friendly factor, petty factor were extracted out of 14 elements. These factors account for about 60.645 per cent of variance in the data. Eigen value for the first factor “**SIGNIFICANT CHANGES IN LIFESTYLE**” 2.627, which indicates that factor highly influence than other factors
- The P value is not less than the 0.05 level the null hypothesis is accepted with the factors of green loans, green cards, green deposits. Hence this proves that the respondents are not satisfied with these services because they less aware about these green banking products and services.

Suggestions

- Though respondents aware about eco friendly banking process but, they not aware about the term “Green banking “so the researcher suggested to the RBI to mention these eco friendly banking process as green banking and create awareness about sustainable banking. So it is the duty of the Reserve Bank of India to provide regular awareness programme to provide to their customers about the green products and services
- New innovative practices are to be encouraged to practice by the customers by providing certain rules and regulations by the RBI.

- Banks should create awareness among consumers about the innovative green banking practices like Solar ATM, Carbon Insurance, and Green securitization.
- The consumers should reduce the usage of traditional banking; instead the consumers will take a step to move towards green banking.

Conclusion

Necessary actions and implementation are needed to create the awareness of green banking among the customers. The beginning stage is little difficult to shift from traditional banking to green banking. But the study reveals that the customers who aware about these sustainable banking are ready to adopt and they are satisfied with most of the green banking products and services. So it is the duty of the bank to create awareness in which the customers were less aware about the green technologies. Shifting from traditional banking to sustainable banking will create a reform in the reduction of carbon foot prints.

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