

Customers Perception towards Green Banking Practices in India

Dr. Amita Charan*

Dr. Rekha Dahiya**

Ms. Manpreet Kaur***

*Asst. Professor in Commerce, JDMC, University of Delhi

**Asst. Professor in Marketing, BCIPS, GGSIPU Delhi

***PG Student, GGSIPU Delhi

Green Banking is a term referring to practices and guidelines that make banks more sustainable in economic, environment, and social dimensions. It aims to make banking processes highly digitized, green and eco-friendly for achieving sustainability in the long run. The use of consumer-friendly green practices, efficient IT support and environmentally safe physical infrastructure altogether can help in reduction of carbon emission and radiation especially in-service industries. Global expansion of Indian banking is remarkable and Indian banking network is placed as biggest banking. The paramount banking services are possible with insignificant or minor bearing on the atmosphere and involving the customers into it at every stage. This paper is intended to study the status of green banking practices in India and to identify the consumer's perception towards green banking. Sustainable development goals and climate change are now prominent issues in order to save our planet from unnatural industrial development and human interventions. Sustainability issues and corporate reporting are discussed worldwide in different segments and industries. This is a primary study is intended to find out the status of current green banking practices, awareness among customer and customer's perception towards green banking practices in India.

Key words: Green banking, Online Payments, Fund Transfer, E-Tax Payment, Money Transfer

Introduction

Green Banking is a term referring to practices and guidelines that make banks sustainable in economic, environment, and social dimensions. It is intended to develop sustainable banking with insignificant or zero impact on the people, societies and environment. Sustainable development is a global agenda in order to save our world from the depredations caused by human beings. Global warming, ozone depletion and climate change are alarming us every second. Reduce, Reuse and Recycle are the popular green strategies adopted by manufacturing and service industry. The banks and other financial institutions are connecting enterprises, clients and regulators on one platform. Penalties and incentives both are required to initiate green banking in a delimited mode therefore, banking sector is establishing some of the important metrics for measuring the performance of green practices i.e., energy usage, carbon usages, paper usage, water usage, solar power generation, green taxes, efficiency and productivity. On the other hand many rewards are introduced for initiating green or environmental friendly services such as green coin rating, green building awards, carbon footprint points, ISO 14000 certification, LEED rating etc. In a layman language green banking is a right time initiative to channelize green initiative in a more integrated manner at micro and macro levels. Banks officers must analyze and select the proposal in more wise and sensible manner while keeping in mind few green criteria's for comparing risk and return for sustainable entomic development. Environment management cycle and life cycle of a business needs to be analyzed before investing into it. Future implications of manufacturing, services and allied activities must be measured by the financing agencies before loaning any project. In this connection role of regulatory network or bodies must be recognized, reviewed and expanded as per the requirements of the banking sectors. From the cash handling to foreign exchange management, from the recruitment till retention, from initiating a unit till expanding of many banking outlets, from tapping a consumer till achievement of customer satisfaction a bank must offer green services. This study focuses on understanding the green banking from customers' point of view. The next section gives a brief of available studies in green banking context.

Review of Literature

According to a study conducted by Biswas (2011) green banking initiatives are adopted by various banks are and their determinations are useful for our emerging economy. The study

emphasized on various aspects such as advantages, challenges, and Green Banking strategies. The study concluded that the green banking plays a proactive role for ecology, environment, green determinations etc. Another study was conducted by Malhotra & Bhardwaj (2013) suggested that banking services are not a direct contributor in the pollution of environmental changes, but these are one of the channels for facilitating industrial and personal finances. Therefore, the banks must in corporate green services and help in establishing green industries in the near future. Banks can persuade their clients for improving their asset quality and wealth management. Rajesh and Dileep (2014) their study as sorted that banks can play a vital role in the sustainable development by adopting green banking practices. The banks must work in a planned manner for financing/investing in client's ideas/proposals directly or indirectly towards carbon footprints. Banks have a large client base therefore; they can spread awareness among their clients by adopting green initiatives for reducing pollution, emission and radiation. Sharma and Gopal (2014) revealed that employees and customers are aware about the green banking services and their opinion is quite positive towards green practices. Kanak and Singh (2014) in their study concerning various banking initiatives towards the protection of environment considered a different approach that the corporate had been shifting the inattention from the 'single bottom line' to the 'triple bottom line' for reaping the long terms hidden social, economic and environmental Payoffs. Modern world economy is attracting all the sectors towards sustainable development and environmentally friendly services. The Indian Banks like bank State Bank of India along with other commercial banks had been putting immense efforts in the area of green banking initiatives. Banks can improve their own quality standards and other business by adopting green practices, socially responsible behavior and environment responsive initiatives (Deka, 2015). Bihari and Pandey (2015) proclaimed that there are various activities initiated by the banks must analyze a proposal before financing from in terms of environmental aspects and future implications. Green banking is dynamism for injecting banking objectives from "profit only" to "profit with responsibility". Kaur (2016) purported banking sector can reform the economy by commencing environment friendly services.

Research Methodology

The primary objective of this empirical study was to observe the factors affecting perception of customers towards Green Banking practices. The study also intended to know the most used

channel of green banking. The study included various demographic factors and also envisaged to see the association if any between demographic factors and various green banking channels. Descriptive research design was used in the study. Data for the study was primary in nature which was collected from respondents from Delhi using a 5 points structured questionnaire. The study made use of non-probability sampling and convenience and judgment sampling techniques were deployed to collect the primary data. Both online and offline mode of distribution was used to collect the data and finally the data was obtained from 208 respondents which was also the final sample size of the study. Microsoft Excel and SPSS 20 were used for analyzing the data. Their liability score was checked and various tests were applied such as Dimension reduction (Factor), Non-Parametric Test (Binomial Test), and Chi-Square test as inferential statistics.

Data Analysis

Data was collected from the respondents having diverse background in terms of age, occupation, educational qualifications and income. Table 1 gives the detail of sample profile of respondents.

Table 1: Sample Profile

Variable	Categories	Frequency	% of Respondents
Gender	Male	97	46.6
	Female	111	53.4
Age	18-25years	90	43.3
	26-35years	57	27.4
	36-45years	38	18.3
	46-60years	17	8.2
	60 years above	6	2.9
Income	Upto 300000	94	45.2
	300000 - 500000	34	16.3
	600000 - 800000	32	15.4
	> 800000	48	23.1
Occupation	Student	56	26.9
	Service	78	37.5
	Entrepreneur	15	7.2
	Professional	37	17.8
	Homemaker	10	4.8
	Other	12	5.8

Qualification	Till 12 th	16	7.7
	Graduate	80	38.5
	Post graduate	93	44.7
	Other Courses	19	9.1

It is inferred from the above table 47% of the sample was composed by female respondents whereas 53% of the sample was constituted by male respondents. 45% of respondent were found possessing post graduate educational qualifications followed by 38% graduate, respondents. 38% of the respondents were in service whereas 27% of the respondents were students. 45% of respondent fell in income level of upto 3 lakhs whereas 23% had income level of 8 lakhs and above. 43% of the sample was represented by young customers lying in the age bracket of 18-25 years followed by 27% of the respondents lying in age bracket of 25-35 years.

Most Used Green Banking Channel

A bank employs number of green banking alternatives or channels such as internet banking, telephone banking, mobile banking, messaging, ATM and green loan. Researchers intended to know the most used green banking channel, used by the respondents. Table 1 gives the details of green banking channels used by the respondents. It can be seen from the table 4 that ATM emerged as the most used green channel used by 81% of the respondents, followed by internet banking used by 78% of the respondents and Mobile banking used by 74% of the respondents.

Table 1: Most Used Green Banking Channel

Green Banking Channels	Number of people using	% of Use	Test	Significance	Decision
Internet Banking	163	78%	One Sample binomial Test	0.000	Reject the Null Hypothesis
Telephone Banking	56	27%		0.000	Reject the Null Hypothesis
Mobile Banking	154	74%		0.000	Reject the Null Hypothesis
MS	131	63%		0.000	Reject the Null Hypothesis
ATM	169	81%		0.000	Reject the Null Hypothesis
Green Loan	22	11%		0.000	Reject the Null Hypothesis

It was hypothesized that:

H₀₁: People are indifferent towards various channels of Green Banking.

H_{a1}: People had preference towards particular channels of Green Banking. One sample binomial test was applied as test of significance at 5% level of significance and it can be seen from table 1 that for all the channel test was found significant. On the basis of descriptive results obtained, it can be concluded that ATM followed by internet banking were the most used channel of green banking.

Factors Affecting Consumer Perception

In order to know the factors affecting consumers' perception, factor analysis was applied. 'Kaiser-Meyer-Olkin (KMO)' Test was applied to see the overall suitability of the data for factor analysis. The test also assesses the sampling adequacy for each variable and complete model. The value closer to 1 are considered superior (precision limit 0-1) and 0.6 is considered the minimum cut-off value. Value of KMO tests statistic was found associated with 0.949, which ensured the sample adequacy. The test is normally accompanied by the 'Bartlett's Test of Sphericity' which was also found significant (.000). Communality which refers to the extent, to which an item correlates with all other items, was found exceeding the cut off value of .5 for all the items. So, all the statements/variables were considered for further analysis.

Table 2 shows the Eigen value figure out and identify the actual number of factors on which the researcher can further apply factor analysis. Eigen value refers to the amount of variance explained by a factor. The Eigen value table contains three important fragments i.e., Extracted Sums of Squared Loadings, Initial Eigen Values and Rotation of Sums of Squared Loadings. Total refers to the total variance. % of variance explains the % of variance attributable to each factor. Cumulative variance refers to the variance when added to the previous factors. In Extraction sums of Squared Loadings section, total refer to the total variance after extraction. % of variance in Extraction Sums of Squared Loadings refers to the % of variance attribute table to each factor after extraction. The value is important as it is reflecting the factors contributing towards the studied phenomenon. This is inferred from the table 2 that there are three important factors in this research explaining 81% of the variation.

Table 2: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.467	61.570	61.570	10.467	61.570	61.570	5.797	34.098	34.098
2	2.112	12.421	73.991	2.112	12.421	73.991	5.101	30.009	64.107
3	1.153	6.784	80.775	1.153	6.784	80.775	2.834	16.668	80.775
4	0.509	2.992	83.767						
5	0.396	2.330	86.097						
6	0.385	2.267	88.364						
7	0.303	1.783	90.147						
8	0.253	1.487	91.634						
9	0.233	1.371	93.005						
10	0.223	1.309	94.314						

11	0.194	1.144	95.457						
12	0.177	1.042	96.499						
13	0.143	0.840	97.340						
14	0.134	0.790	98.129						
15	0.119	0.699	98.828						
16	0.108	0.634	99.462						
17	0.091	0.538	100.000						

Extraction Method: Principal Component Analysis.

It is observed that there were total three factors extracted which accounted for the given phenomenon. Table 3 gives the details of the factors emerged after factor analysis.

Table 3: Rotated Component Matrix

Variables/Statements	Component		
	1	2	3
Promotes paperless banking			0.791
Green Banking saves energy			0.852
Leads to low carbon footprint			0.828
Green Banking practices are environment friendly		0.677	
Faster than traditional banking	0.835		
Help to avoid long queue in banking halls	0.846		
Make the life of an individual more convenient	0.849		
Reduce the risk of physical handling of cash	0.827		
Time Saving.	0.871		
Easily accessible	0.837		

Cost effective	0.793		
Beneficial for customers		0.816	
Better customer services		0.794	
Improved brand images		0.818	
Contribute towards preserving environment		0.725	
Saving trees		0.826	
Contribution in making our earth green .		0.838	
Extraction Method- 'Principal Component Analysis'			
Rotation Method – 'Varimax with Kaiser Normalization'			
a. Rotation converged in 5 iterations.			

It is observed from the table 3 which gives the details of rotated component matrix that statements like Promotes paperless banking, saves energy and Leads to low carbon footprint loaded heavily on factor one. This factor was labeled as 'Environmental Payoffs. Statements like faster than traditional banking, helps to avoid long queue in banking halls, make the life of an individual more convenient, reduce the risk of physical handling of cash, Time saving, easily accessible and cost effective associated well with second factor. This factor was labeled as 'Importance of Green Banking'. Statements like contribution in making our earth green, saving trees, improved brand images, beneficial for customers, gives better customer services, contribute towards preserving environment and contribution in making our earth green pollution loaded heavily on third factor. This factor was labeled as 'Consumer Role'. The findings of factor analysis established that 'Environmental Pay offs', 'Importance of Green banking' and 'Consumer Role' are the factors affecting customer's perception towards Green Banking practices.

Association between Demographic Variables and Green Banking Channels

The study also intended to see the association between demographic variables and various green banking channels. This can be seen from the table 5 that for all the green banking channels, respondents belonging to 18-25 years age group made the maximum usage followed by respondents belonging to 26-35 years age group. Overall ATM emerged as the most used channel by all the respondents except the ones belonging to 26-35years age group. Male and female respondents also preferred ATM in comparison to other green banking tools.

Respondents having the qualification till senior secondary level and graduate also used ATM the most as green banking channel. However, respondents possessing Post Graduate and others qualifications used Internet banking more. Students preferred mobile banking, respondents in service and professional occupational category preferred internet banking, entrepreneurs, home-makers and others preferred ATM as green banking channel. Respondents belonging to Up to Rs 3 Lakhs and 6-8 lakhs income category preferred ATM as green banking channel whereas, respondents belonging to 3-5 lakhs income category and above 8 lakhs income category used internet banking more. The study hypothesized that H₀₂: Demographic profile and sources of green banking channel are not associated.

H_{a2}: Demographic profile and sources of green banking channel are significantly associated.

Chi-Square at 5% level of significance was applied as test of significance. Table 5 gives the results of chi-square test.

Table 5: Demographic Variables and Green Banking Channels

Green Banking Channels	Internet Banking	Telephone Banking	Mobile Banking	SMS	ATM	Green Loan
Age						
18-25 Years	63	18	63	53	67	6
26-35 Years	49	18	47	41	47	6
36-45 Years	31	13	27	24	33	6
46-60 Years	16	6	14	9	16	4
Above 60 Years	4	1	3	4	6	0
Chi-Square	8.860	4.773	5.456	3.375	6.803	6.272
Sig. level	.065	.311	.244	.497	.147	.180
Gender						
Female	73	31	70	62	78	10
Male	90	25	84	69	91	12
Chi-Square	1.035	2.343	.322	.068	.084	.014
Sig. Level	.309	.126	.565	.794	.772	.907
Educational Qualification						
Till 12th	7	1	8	12	15	0
Graduate	61	16	57	50	63	5
Post Graduate	77	31	75	54	75	15
Others	18	8	14	15	16	2
Chi-Square	15.599	9.593	7.247	4.041	2.101	6.507
Sig. Level	.001	.022	.064	.257	.552	.089

Occupation						
Student	39	12	42	34	40	1
Service	64	23	55	46	66	5
Entrepreneur	14	7	12	12	13	8
Professional	30	9	31	23	29	6
Homemaker	5	1	4	6	9	0
Other	11	4	10	10	12	2
Sig. level	.046	.314	.101	.453	.163	.000
Income						
UptoRs 3 Lakhs	61	18	61	55	70	4
Rs 3-5 Lakhs	29	6	26	20	28	2
Rs 6-8 Lakhs	27	11	26	23	27	4
Above 8 Lakhs	46	21	41	33	44	12
Chi-Square	20.346	12.186	8.293	2.829	6.489	15.446
Sig. level	.000	.007	.040	.419	.090	.001

It can be seen from Table 5 that test was found insignificant for variables such as age and gender. However, test was found significant for educational qualification, occupation and Income for few green banking channels such as telephone banking, internet banking, mobile banking and green loans .Internet banking was used the most by the postgraduate respondents in service occupational category having an annual income of Up to Rs 3 Lakhs. Telephone banking was used the most by the post graduate respondents belonging to above 8 Lakhs income category. Mobile banking was the most by the respondents falling in 3-5Lakhs and 6- 8 Lakhs income categories. Green loans were used the most by the entrepreneur respondents falling in above 8 Lakhs income category. This led to the acceptance (partial) of hypothesis Ha2.

1.4 Findings

Demographic Profile of Respondent was associated with usages of Green Banking Channels. Variables like ‘age’, ‘education’, ‘income’, ‘occupation’ and ‘gender’ were used in the study. A significant association was found between educational qualification of the respondent with both internet banking and telephone banking. A significant association was also found between occupation of the respondent with both internet banking and green loan. A significant association was found between income of the respondent with internet banking, mobile banking, telephone banking and green loan. There was significant association between age of the respondent and source

that made aware about green banking. The most preferred channel from the analysis seems to be ATM followed by Internet Banking, Mobile banking, SMS, Telephone Banking and Green Loan. 81% of the respondent were using ATM, 78% were using Internet Banking, 74% of the respondent were using Mobile Banking, 63% were used SMS, 27% were used Telephone Banking and rest 11% of the respondent using Green Loan. The usage of green loan was very low as compared to other green banking channels as 22 respondents out of 208 were used green loan and rest 186 were not used. From factor analysis, it can be concluded that 'Environmental Payoffs', 'Importance of Green Banking' and 'Consumer Role' were the major factors affecting customer's perception towards Green Banking practices.

Suggestions

It was observed that that most of the respondents were using Internet Banking, so Content of the 'websites' should be given utmost importance and it should help customers through their entire process. 'Websites' should be regularly updated and should have an adequate amount of information. Bank should conduct various awareness programs to educate public about green banking. Trade fairs and exhibitions should be organized by banks.

Banks should arrange incentives for those customers who are keeping green policies. Creating awareness through web sites, road shows event meeting and media would help fostering the growth of green banking in India. Middle age generation was less aware so banks should initiate and motivate them to do green banking. Green Banking can be done easily through multiple devices like desktops, laptops, mobile ,tablets etc. as it was found that customers find difficulties in accessing the internet banking through mobiles.

Conclusion

The term 'Green Banking' is a comprehensive concept and includes a range of activities such as promoting ecofriendly actions, adopting environmentally safe activities, decreasing the consumption of energy, instilling water harvesting system, installing solar panel, reducing the emission and greenhouse gases, saving carbon footprint from banking and non-banking actions. The use of digital tools i.e., e-banking, mobile banking, e- statements, mobile statements, green channel counters, green processing, green loans, mobile vans, solar based automated teller machines or banking devices, installation of LED lamps, waste water

management, composting, green toilets, paperless banking, green bins, green loans, clean development mechanism, air/noise/radiation control and many other green activities are initiated by the modern age banks. It is assumed that young, tech savvy and educated customer is comfortably adopting these practices whereas aged customers prefer traditional modus operandi. Therefore, this study was conducted on green banking in order to test and understand the perception of customers towards these practices. Banks like SBI, South Indian Bank have started using or initiating green channel counters, green data center, green rewards, green coin rating and green investments for developing a positive attitude among customers towards green banking. These activities are helping customers switching from traditional mode to green mode. This study proves a significant association between income of the respondents and adaptation of green banking practices. The study also proves that young respondents are frequently adopting the green practices whereas senior citizens and middle-aged respondents still prefer traditional practices. Majority of respondents had a positive response towards green banking practices and the most reliable sources for green banking related services are the bank employees. The study concluded that three fourth of the population surveyed were using or used automated teller machines and e- banking//internet banking quite frequently as compared to other green banking channels.

Limitations

The outcomes of this study are summarized on the basis of a small sample collected from 208 respondents only. However, a large population is using internet banking in India. Convenient sampling was used as per the convenience of the researchers therefore; the data may contain some sampling error. The study was conducted in Delhi, so results of the study should be applied with caution in non-metro cities.

References

- Bihari, S. C., & Pandey, B. (2015, January). Green Banking in India. *Academic Journal*, vol.7(1), pp.1-17.
- Biswas, M. (2011). Awareness of green banking initiative in selected public and private sector banks. *Internation journal of Management*, vol.3, pp.6-7.
- Bloem, A. M., & Cornelis, N. G. (2001, December). The treatment of Non-performing loans.

IMF WORKING PAPER, Vol.I, WP/01/209.

- Cucinelli, D. (2015). The Impact of Non-performing Loans on Bank Lending Behavior. *Eurasian Journal of Business and Economics, Vol.8(16)*, pg.59-71.
- Deka, D. G. (2015, Sept). Green Banking Practices: A study on environmental strategies of bank with special reference to State Bank of India. *Indian Journal of Commerce & Management Studies, vol.VI(3)*, pp.11-19.
- IDRBT Publication, RBI. (2013). *Green Banking*. Hyderabad: IDRBT Publication .
- Kanak, T., & Singh, S. (2014). Green Banking: An Approach Towards Environmental Management. *Prabhandan:Indian journal of Managemnet, vol.7(11)*, pp.15-25.
- Kaur, M. (2016, june). Green Banking: Need an hour. *International education and research journal, vol.2(6)*, pp.46-47.
- Malhotra, A., & Bhardwaj, D. R. (2013, May). Green Banking Strategies: Sustainability through Corporate Entrepreneurship. *Greener Journal of Business and Management Studies Vol. 3 (4),, Vol. 3 (4)*, pp.180-193.
- Nakamura, L. I., & Kasper, R. (2010, June). Credit Ratings and Bank Monitoring Ability. *FRB of Philadelphia Working Paper No. 10-21*, pg.1-59.
- Narasimham, M. (1991). *NarasimhamCommitte (1991-1998)*. submitted the report to RBI and Finance Minister.
- Rajesh, &Dileep. (2014). Green banking- A study of select banks in India. *International Journal of management, 3*, pp.6.
- Rajni, & Dhaliwal2, D. N. (2013, November). GROWTH OF LOANS AND ADVANCES AND RECOVERY PERFORMANCE OF STATE PUNJAB. *International Monthly Refereed Journal of Research In Management & Technology, Vol II*, page 50-59.
- Sharma,M.,K,M.,&Gopal,D.(2014).Astudyoncustomer'sawarenessonGreenBanking initiatives in selected public and private sector banks with special reference to Mumbai. *IOSR Journal of Economics and Finance, vol.2,pp.28-35*.
- Vohra, &Dhamu. (2014, June). Non Performing Asset of Indian Commercial banks. *An International journal from m P birla Institute of Management,,Vol 8*, pp 03-29.