

<https://doi.org/10.58419/gbs.v12i1.1212611>

THE BEHAVIORAL FOOTPRINT: CUSTOMER OUTLOOK AND ITS EFFECT ON GREEN BANKING TRENDS

Dr. Ahamed Wasim Musthaq I A

Assistant Professor

Commerce VET Institute of Arts and Science (Co-Education) College, Erode, Tamil Nadu

wasimmusthaq@gmail.com

ABSTRACT

The study explores the connection between respondents' socioeconomic backgrounds and their awareness levels as bank customers, while also investigating how this awareness shapes opinions on green banking practices. Using both primary and secondary data, the research collected primary data from customers of three leading public sector banks in Madurai District (State Bank of India, Bank of Baroda, and Canara Bank) via convenience sampling (N = 200), addressing a gap in existing literature. Secondary data were sourced from the RBI website, academic journals, and bank reports. Statistical analyses—reliability testing, frequency analysis, factor analysis, independent t-tests, and correlation—revealed seven factors influencing customer opinions: security, responsibility, sustainability, eco-consciousness, ease of use, accessibility, and availability.

Keywords: *Green Banking, Public sector banks, Customers opinion, Sustainability.*

INTRODUCTION

To ensure that future generations can meet their demands, sustainable development takes into account the needs of the present generation. This strategy has caused "go green" practices to spread over several industries. A key part of India's financial system, the banking industry is also essential to the country's sustained growth. When it comes to strengthening environmental protection initiatives, financial institutions are essential. The idea of green banking has been adopted by banks to protect the environment. The term "green banking" sets itself apart from typical banking, which prioritizes security and profitability over ethical considerations. An inventive strategy that highlights the significance of socially conscious investing and environmental sustainability is green banking. Green banking is the promotion of ecologically friendly practices and the reduction of the carbon footprint of banking activities (Sahoo, 2016). The Institute for Development and Research in Banking Technology defines "green banking" as a comprehensive term that encompasses policies and procedures that promote sustainability in the social, environmental, and economic aspects of the banking

industry. To attain maximum efficiency and effectiveness, the goal is to optimize banking procedures and the use of physical and IT infrastructure while guaranteeing little to no environmental impact.

The protection of the environment and natural resources is the main benefit of the green banking paradigm. Green banking reduces paperwork and prioritizes electronic transactions for daily activities, including using ATMs, mobile banking, and online banking. Electronic transactions give banks and customers convenience while promoting sustainability. Decreased documentation leads to less deforestation. Banks should adopt environmental lending standards to create environmentally friendly business practices, as this improves the quality of their assets. Customers' environmental performance is greatly impacted by the bank's operations (Shakkeela, 2016). A substantial number of banks provide consumers with a wide range of environmentally friendly services, such as online and mobile banking, green auto loans, green remit cards, and green PIN creation tools (Neeraja & Raji Joseph, 2021). To find out what customers think about green banking, this study looks at the green banking policies of State Bank of India, Bank of Baroda, and Canara Bank.

Literature Reviews

Researchers concentrated on the main objective and reviewed many studies on this topic, among the few most relevant literature reviewed, those literatures discussed in the following:

Level of awareness towards green banking practices by gender

The assessment focuses on how environmentally sustainable technologies also provide economic advantages for the banking sector. Currently, it is widely accepted that embracing environmentally sustainable banking practices leads to cost and time savings, reduces risk, improves the reputation of financial institutions, and supports the broader goal of environmental sustainability. The results show that respondents who were male and female did not significantly differ in their awareness of green banking products. Consequently, the female respondents exhibit a greater awareness of green banking products. Additionally, the male respondents consistently show a 7.25 percent awareness level of the green banking solutions provided by the chosen commercial bank (Vijai, 2018).

The notion of green banking initiatives has recently emerged in India. However, in comparison to Western nations, India lags significantly in implementing these green banking practices. Despite having one of the most comprehensive traditional branch banking systems,

we are not fully utilizing the potential of the green banking system. Customers from various gender groups encounter specific challenges related to green banking initiatives. Subsequently, there is no correlation between customers encountering issues in green banking initiatives and the gender cluster of customers (Narayanan & Chandrasekaran, 2021).

H₀: The mean response to level of awareness towards green banking practices from male and female bank customers does not differ significantly

Level of awareness towards green banking practices by marital status

Research by Singh and Singh (2012) suggests that customer awareness significantly influences their willingness to adopt green banking services, including online banking, paperless transactions, and eco-friendly investments. Similarly, Rahman et al. (2017) highlight that higher awareness levels correlate with an increased likelihood of utilizing sustainable banking products. However, disparities in awareness exist among different customer demographics, including age, education level, and marital status (Islam et al., 2021). Malik and Garg (2020) suggested that single customers, particularly young professionals, may exhibit higher awareness of digital and green banking initiatives due to their greater reliance on technology. Researchers argue that younger and unmarried customers are more receptive to digital banking innovations, which are integral to green banking practices (Malik & Garg, 2020). However, the extent to which marital status significantly influences awareness remains inconclusive, warranting further empirical investigation.

H₀: Single and married bank customers mean response to level of awareness towards green banking practices does not differ significantly

Factors influencing the level of customer opinion towards green banking practices

Tanima Saha Shampa and Md. Imrul Jobaid (2017) collected 246 responses from bank customers in Bangladesh to investigate factors influencing expectations about green banking practices. Their analysis identified five key criteria: "information availability and customer needs, spirit of ethics and high-yield savings, energy efficiency, product benefits, and integration and personalization" (Saha Shampa & Jobaid, 2017). Furthermore, the study emphasized that environmentally friendly banking practices enable financial institutions to reduce costs and offer larger returns, thereby raising client expectations (Saha Shampa & Jobaid, 2017). In a model developed by Herath H.M.A.K. and Herath H.M.S.P. (2019), the dependent variable is "overall customer satisfaction on green banking." The primary

independent variable, "features of green banking initiatives," is subdivided into four dimensions: "value generation, security and trust, simplicity of use, and environmental and social concern" (Herath & Herath, 2019).

A study by Deepak Shrivastava and colleagues (2019) examined factors impacting green banking adoption in Indore City, India, using a purposive sampling method to select 300 participants. Through eigenvalue analysis, six key factors were identified: "usefulness and accessibility of green banking products/services, availability of bank help desks, intent to adopt, procedural ease, account security, effectiveness, and external pressure to adopt" (Shrivastava et al., 2019). The findings highlighted that customers prioritize "usability and accessibility" when adopting green banking solutions (Shrivastava et al., 2019). Kishore Kumar et al. (2022) conducted a survey identifying six critical drivers of green banking adoption in Indian commercial banks: "competitive positioning, customer needs/benefits, economic feasibility, ethical standards, legal compliance, and environmental concerns" (Kumar et al., 2022). The study concluded that "environmental considerations and regulatory compliance" are the primary motivators for adopting sustainable banking practices (Kumar et al., 2022). Overall, green banking addresses multiple sustainability dimensions and significantly reduces carbon footprints.

H₀: Level of awareness and customers opinion are not significantly correlated

OBJECTIVES OF THE STUDY

- To identify the factors influencing customer opinion towards green banking practices in Madurai District.
- To examine the relationship between selected socio-economic variables and the level of awareness among the bank customers.
- To find out the correlation between the level of awareness and customers opinion towards green banking practices.

METHODOLOGY OF THE STUDY

Research Design and Tools

This empirical study investigates the level of consumer awareness and its effect on perceptions of green banking practices, utilizing both descriptive and quantitative research methods. Data collected through a questionnaire survey were analyzed using IBM SPSS 26. To ensure reliability, the internal consistency of the variables specifically the customer opinion and awareness scales was assessed using statistical tools, with Cronbach's alpha

employed to measure scale reliability. Exploratory factor analysis (EFA) categorized components of consumer opinion into discrete factors, while the study's hypotheses were tested using Pearson correlation coefficients and independent samples t-tests.

SAMPLING

The study adopted a convenience sampling technique, classified as a non-probability sampling method. Primary data were collected directly from customers of three leading public sector banks in Madurai District: State Bank of India, Bank of Baroda, and Canara Bank. A total of 215 respondents completed the questionnaire, of which 15 responses were excluded due to incompleteness, resulting in 200 valid responses for final analysis.

Results and Discussions

a) *Percentage Analysis*

Table 1

Socio-Demographic Profile of the respondents

Profile		No. of Respondents	Percentage
Gender	Male	5	.0
	Female		.0
Marital Status	Single	6	.0
	Married		.0
Age	18 to 28 years	7	.5
	29 to 39 years		.5
	40 to 50 years		.5
	Above 50 years		.5
Educational Qualification	Upto school level		.0
	Under graduate		.5
	Post graduate		.5
	Others		.0
Total		0	0

Source: Computed from Primary data

The socio-demographic breakdown of 200 respondents is shown in Table 1: There are 47 percent females and 53 percent males. When it comes to marital status, 37% are married and 63% are single. Age distribution reveals that 53.5 percent fall within the 18 to 28 age group, 25.5 percent are aged 29 to 39, 9.5 percent are aged 40 to 50 years, and 11.5 percent are over 50 years. Educational qualifications indicate that 12 percent have completed school,

35.5 percent hold undergraduate degrees, 44.5 percent are postgraduates, and the remaining 8 percent possess diplomas.

b) Exploratory Factor Analysis

The 32-item customer opinion scales were reduced to a small number of elements using a principal components analysis that included Varimax rotation and Kaiser Normalization.

Table 2

Factors analysis of customers' opinion scales

Customers Opinion Item	Factor Loading						
	1	2	3	4	5	6	7
Factor 1: Security & Trust							
Green banking sends transaction alert message to protect customers from unfair practices	.727						
Green banking avoids pay in slip, withdrawal & remittance forms	.676						
Banks explain about green banking initiatives in a clear and understanding manner	.665						
Bank maintain accurate records of all customer transaction	.656						
Paperless statement reduces customer's risk of fraud	.623						
Banks make friendly relationship with customers	.563						
Green banking protects the personal information about customers	.547						



Factor 2: Responsibility							
Educate the customers about green banking benefits		.736					
Bank provides advertisement and pamphlet about green banking		.708					
Banks create awareness programs about green banking practices		.673					
Satisfying the customers by resolving their inquiries		.620					
Banks convey the benefits present in green banking		.591					
OTP system secures the electronic transactions		.467					
Bank provides proper response for customer queries regarding green banking		.464					
Factor 3: Sustainability							
Encourage the customer to use digital banking			.722				
Promote the use of energy efficiency product			.719				
Increase energy saving			.707				
Reduce the usage of non-renewable resources			.637				
Less paper usage			.620				
Factor 4: Eco-conscious							
Control air pollution				.788			
Encourage the eco-friendly business				.696			
Less harm to the				.660			



environment							
Factor 5: Easy to use							
Energy conservation					.720		
Easy to understand the green banking practices					.706		
Provide 24×7 services					.648		
Factor 6: Accessibility							
Reduce transportation cost						.640	
Reduce the carbon footprints						.620	
Easy and convenient to access						.607	
Saving time						.566	
Factor 7: Availability							
Bank provides various green banking products and service							.648
Bank offers accurate information about green banking through websites							.545
Green banking provides lower interest rates for green products							.417
Eigenvalue	9.866	2.451	2.061	1.376	1.265	1.258	1.090
Variance Explained (%)	30.833	7.659	6.441	4.300	3.955	3.930	3.405
Cumulative Variance Explained (%)	30.833	38.492	44.932	49.232	53.186	57.117	60.522
Note. N = 200. The extraction method was principal components analysis with a rotation (Varimax with Kaiser Normalization). KMO = .893. Total variance explained = 60.522%.							

Source: Primary data

In Table 2, the details of factor loading are shown. Seven factors, each with an eigenvalue greater than 1, were formed from the 32 elements that represented customer opinions. The sample size is deemed adequate for factor analysis due to its size, as indicated

by the Kaiser-Meyer-Olkin (KMO) sampling adequacy measure of 0.893. A statistically significant result was also obtained using a Bartlett's test of sphericity ($X^2 = 3498.213$, $df = 496$, $p > 0.05$). From .512 to .751, the commonalities show that every item is appropriate for factor analysis. All 32 items were therefore kept, loading onto seven variables that explained 60.522 percent of the variation. Eigenvalues ranged from 9.866 to 1.090. Security was the name of Factor 1, which had seven elements and accounted for 30.833 percent of the variation. Factor 2, titled Responsibility, included seven items and accounted for 7.659 percent of the variation. Factor 3, Sustainability, was made up of five components and accounted for 6.441 percent of the variation. Factor 4, referred to as eco-conscious, had three items, accounting for 4.300 percent of the variation. Factor 5 consisted of three items labelled "Easy to use" that accounted for 3.955 percent of the variance. Four items, comprising 3.930 percent of the total variance, made up Factor 6, which was labelled "Accessibility." Availability was the label for three items that made up Factor 7, which accounted for 3.405 percent of the overall variation.

c) *Reliability Analysis*

The dependability metric Cronbach's alpha is used to evaluate the internal consistency of the consumer opinion and awareness level variables.

Table 3

Reliability of level of awareness

Factors	No. of Items	Cronbach's alpha
Level of awareness	15	.831

Source: Computed from Primary data

Table 4

Reliability of seven factors of customers' opinion

Factors	No. of Items	Cronbach's alpha
Security	7	.791
Responsibility	7	.793
Sustainability	5	.808
Eco-conscious	3	.831
Easy to use	3	.808
Accessibility	4	.827
Availability	3	.801
Customers Opinion (Overall)	32	.925

Source: Primary data

Table 3 shows that the overall awareness scales have an outstanding and reliable dependability (internal consistency) of 0.831. Both the overall number of customer opinion scales and the internal consistency of the seven measures are shown in Table 4. The results demonstrate the reliability and quality of the items used to assess these aspects, as all scales are greater than 7.

d) Independent samples t-test**Level of awareness towards green banking practices by Gender and Marital Status**

H₀: The mean response to level of awareness towards green banking practices from male and female bank customers does not differ significantly

Table 5**Independent samples t-test by gender**

	Gender	N	Mean	SD	t-value	Df	p-value
Level of Awareness	Male	106	49.7075	10.87765	1.103	198	.077
	Female	94	48.0957	9.63201			

Source: Primary data

Table 5 displays the findings of an independent-sample t-test. According to the results, there is no significant difference between male and female bank customers' mean responses to awareness levels ($t(198) = 1.103, p > 0.05$). The average for male bank customers was significantly higher ($M = 49.7075, SD = 10.87765$) than the average for female bank customers ($M = 48.0957, SD = 9.63201$).

H₀: Single and married bank customers mean response to level of awareness towards green banking practices does not differ significantly

Table 6**Independent samples t-test by marital status**

	Marital status	N	Mean	SD	t-value	Df	p-value
Level of Awareness	Single	126	49.0397	9.72782	.160	198	.118
	Married	74	48.7973	11.31732			

Source: Primary data

The results of an independent-sample t-test comparing the mean awareness level scores of married and single people are shown in Table 6. The results indicate that the means of the two groups do not differ significantly ($t(198) = .160, p > 0.05$). According to the

findings, the mean for bank customers who were single ($M = 49.0397$, $SD = 9.72782$) was considerably higher than the mean for bank customers who were married ($M = 48.7973$, $SD = 11.31732$).

e) Correlation Analysis

Correlation between level of awareness and customer opinion towards green banking practices

H_0 : Level of awareness and customers opinion are not significantly correlated

Table 7

Descriptive statistics and correlations for study variables

Variables	AW	SE	RES	SUS	EC	EU	ACC	AVA	CO
Awareness	1								
Security	.298**	1							
Responsibility	.346**	.663**	1						
Sustainability	.303**	.401**	.410**	1					
Eco-conscious	.297**	.317**	.225**	.391**	1				
Easy to use	.247**	.549**	.588**	.520**	.239**	1			
Accessibility	.334**	.272**	.255**	.245**	.454**	.204**	1		
Availability	.368**	.497**	.484**	.372**	.356**	.477**	.268**	1	
Customers opinion (Overall)	.435**	.824**	.820**	.697**	.535**	.750**	.461**	.679**	1

*. Correlation is significant at the 0.01 level (2-tailed).

Note. AW-Awareness, SE-Security, RES-Responsibility, SUS-Sustainability, EC-Eco-conscious, EU-Easy to use, ACC-Accessibility, AVA-Availability, CO-Customers opinion

Source: Primary data

Table 7 demonstrates that the p-value is less than 0.05 for all analyzed variables. The null hypothesis has been rejected, demonstrating a significant correlation between awareness levels and customer perceptions of green banking practices. The highest r value is .750, indicating a strong positive correlation between the independent variable "security" and the dependent variable "customers' opinion." The minimum r value is .204, signifying a very low positive correlation between the independent variable "conveniency" and the dependent variable "accessibility."

CONCLUSION

This study identified seven critical factors such as security, responsibility, sustainability, eco-consciousness, ease of use, accessibility, and availability that shape customer perceptions of green banking practices, with security and trust emerging as pivotal influencers. By promoting eco-friendly behaviors such as reducing carbon footprints, green banking encourages environmental stewardship, underscoring the need for banks to prioritize sustainable practices both internally and externally. To enhance adoption, banks must innovate user-friendly solutions, educate customers on green banking benefits, and align strategies with environmental responsibility. However, the findings are limited to customers of three public sector banks (State Bank of India, Bank of Baroda, Canara Bank) in Madurai District, and reliance on English-language literature may overlook non-English research contributions. Methodologically, the study employed percentage analysis, factor analysis, independent t-tests, and correlation to identify significant relationships, though future research could expand geographic and institutional scope while utilizing advanced statistical tests (e.g., ANOVA, regression, structural equation modeling) for deeper insights.

REFERENCES

- A., A.W.M.I., & M., J. (2023). Impact of knowledge management practices on job performance of faculties with special reference to select higher educational institutions in Coimbatore District. *GBS Impact: Journal of Multi Disciplinary Research*, 9(2), 91–103.
- Akter, A., Majumder, M. T. H., & Rahman, M. M. (2012). Green banking—A new dimension. *Journal of Management and Science*, 1(4), 343–347.
- Arulrajah, A. A. (2016). Measuring green banking practices: Evidence from Sri Lanka. *13th International Conference on Business Management*.
- Bihari, S. C. (2011). Green banking towards socially responsible banking in India. *International Journal of Business Insights and Transformation*, 4, 82–87.
- Broto, R. B., & Aarushi, M. (2013). Green banking strategies: Sustainability through corporate entrepreneurship. *Greener Journal of Business and Management Studies*, 3, 180–193.
- Bukhari, S., et al. (2020). Green banking in Islamic banks: A case from Pakistan. *PMC*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC123456/>



- Chandrasekaran, S., & Narayanan, M. (2024). A study on green banking initiatives of customer awareness level in public sector and private sector banks with special reference to Madurai District. *Asian Journal of Management*.
- Chaurasia, A. K. (2014). Green banking practices in Indian banks. *Journal of Management and Social Science*, 1, 41–54.
- Drobnjaković, M. (2013). Green banking. *Journal of Economic Development, Environment and People*, 2(2), 29.
<https://doi.org/10.26458/jedep.v2i2.21>
- Gazi, M. A. I., & Masud, A. A. (2024). The effect of green banking practices on banks' sustainability performance. *Journal of Sustainability Research*, 17.
- Gupta, R. (2015). Role of green banking in environment sustainability: A study of selected commercial banks in Himachal Pradesh. *International Journal of Multidisciplinary Research and Development*, 2, 349–353.
- Herath, H. M. A. K., & Herath, H. M. S. P. (2019). Impact of green banking initiatives on customer satisfaction: A conceptual model of customer satisfaction on green banking. *IOSR Journal of Business and Management*, 21(1), 24–35.
<https://www.researchgate.net/publication/330713991>
- Islam, M. R., Hossain, S., & Karim, M. (2021). Sustainable banking awareness among customers in emerging economies. *Banking & Finance Review*, 55(3), 65–82.
- Jayabal, G., & Soundarya, M. (2016). Green banking: As banks initiative for sustainable development. *International Journal of Management*, 7(7), 276–280.
<https://doi.org/10.34218/IJMET.11.3.2020.005>
- Kanu, C., Ogbakirigwe, C., Roseline, O., et al. (2020). Green banking awareness, challenges, and sustainability in Nigeria. *International Journal of Mechanical Engineering and Technology*, 11(3), 30–54.
<https://doi.org/10.34218/IJMET.11.3.2020.005>
- Kishore Kumar, et al. (2022). Factors influencing adoption of green banking practices: Evidence from commercial banks in India. *Journal of Asia Entrepreneurship and Sustainability*, 18(1), 41–57.
<https://www.researchgate.net/publication/362068825>
- Kumar, K., et al. (2022). Green banking strategies: A bibliometric approach. *Frontiers in Sustainable Cities*, 14.



- Malik, A., & Garg, C. (2020). Digital banking and green finance: A study on millennials. *Journal of Sustainable Finance & Investment*, 10(2), 315–332.
- Mozib Lalon, L. (2015). Green banking: Going international. *International Journal of Economics, Finance and Management Sciences*, 3, 34–42.
- Musthaq, I. A. W., & Jegadeeshwaran, M. (2022). Green human resource management practices: A modern tool of sustainability. *YMER*, 21(12).
- Musthaq, A. W., & Jegadeeshwaran, M. (2023). Influence of green HRM practices on employees' job satisfaction in select scheduled bank. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, 3(05).
- Musthaq, I. A. A. (2023). Impact of green HRM practices on job performance of faculties with special reference to select higher educational institutions, Tamil Nadu. *Jurnal Multidisiplin Madani*, 3(11), 2163–2171.
<https://doi.org/10.55927/mudima.v3i11.4856>
- Narayanan, M., & Chandrasekaran, S. (2021). Effectiveness of green banking initiatives – A special reference towards public sector and private sector banks in Tamilnadu. *International Journal of Innovative Research in Technology*, 8(7), 99–102.
<https://ijirt.org/Article?manuscript=153416>
- Neeraja, T. S., & Joseph, R. (2021). Green initiatives of SBI: A customer-centric study. *EPRA International Journal of Economic and Business Review*, 9(4), 14–19.
<https://eprajournals.com/IJES/article/4731/download>
- Qureshi, M. H., & Hussain, T. (2020). Green banking products: Challenges and issues in Islamic and traditional banks of Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 6(3), 703–712.
<https://doi.org/10.26710/jafee.v6i3.1177>
- Rahman, M., et al. (2017). Green banking: An emerging paradigm in sustainable finance. *International Journal of Business and Management*, 12(6), 87–98.
- Sahoo, B. P., Singh, A., & Jain, N. (2016). Green banking in India: Problems and prospects. **International Journal of Research -GRANTHAALAYAH*, 4*(8), 92–99.
<https://doi.org/10.29121/granthaalayah.v4.i8.2016.2566>
- Shafique, O., & Majeed, A. (2020). Factors influencing bankers' intention to adopt green finance in Pakistan. *Review of Economics and Development Studies*, 6(4), 773–



785.

<https://doi.org/10.47067/reads.v6i4.277>

- Shakkeela, C. (2016). Green banking – An overview. *IJARIE*, 1(4), 13–26.
https://ijarie.com/AdminUploadPdf/GREEN_BANKING_%E2%80%93AN_OVERVIEW_1326.pdf
- Shrivastava, D., et al. (2019). A study on factors affecting the usage of green banking in Indore City. *International Journal of Research*, 6(8), 229–236.
<https://journals.pen2print.org/index.php/ijr/article/download/19170/18853>
- Singh, R., & Singh, P. (2012). Consumer awareness and green banking adoption. *Indian Journal of Finance*, 6(2), 35–47.
- Solekah, N. A. (2019). The effect of green banking product and green corporate image on green customer loyalty mediated by green customer satisfaction in Syariah banking. **Management and Economics Journal (MEC-J)*, 3*(1), 81.
<https://doi.org/10.18860/mec-j.v0i2.5837>
- Vijai, C. (2018). A study on customer's awareness on green banking initiatives in selected public and private sector banks with special reference to Cuddalore District. *Journal of Innovative Research in Science, Engineering and Technology*, 7(11), 9362–9364.