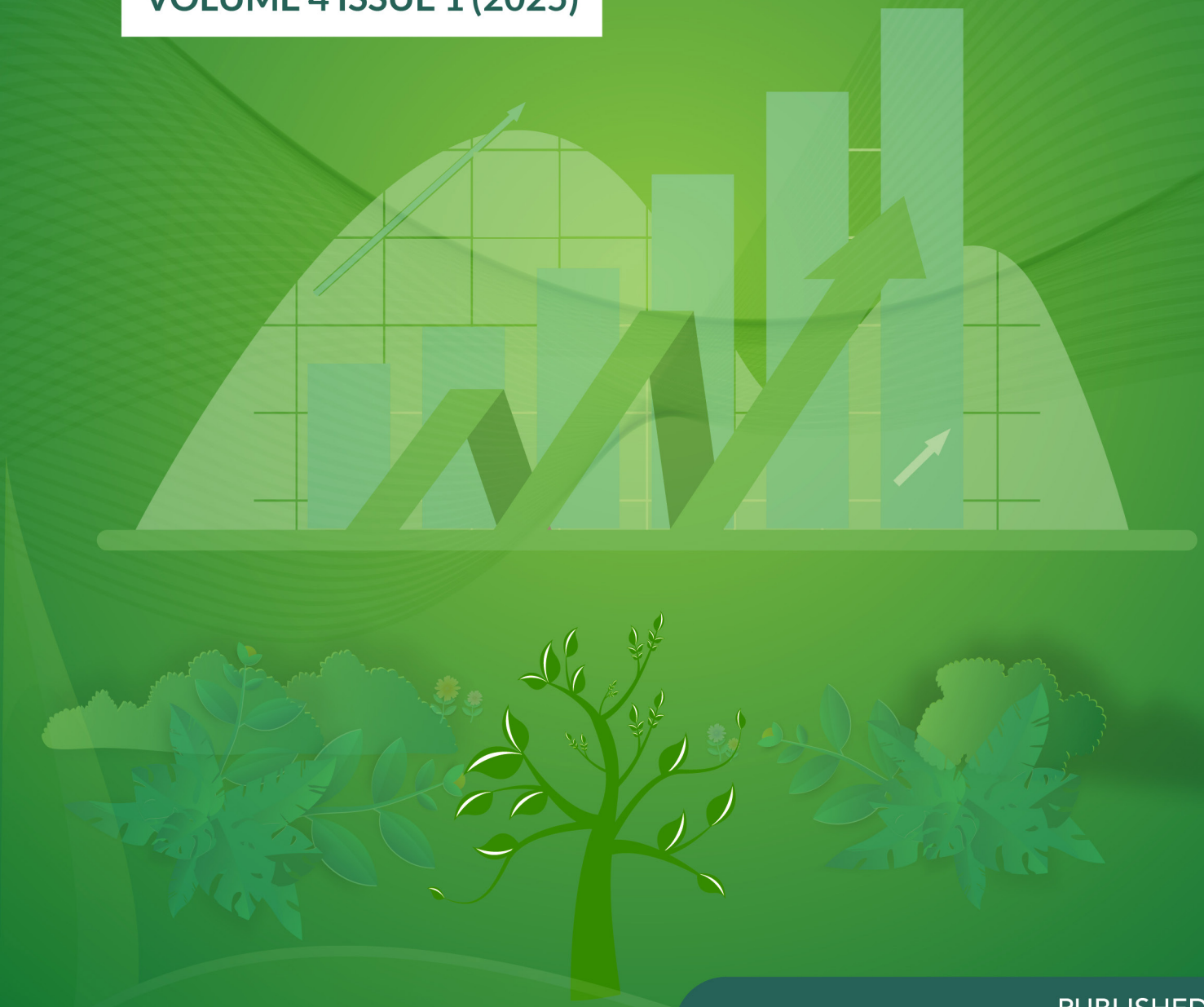
American Journal of Environmental Economics (AJEE)

ISSN: 2833-7905 (ONLINE)

VOLUME 4 ISSUE 1 (2025)



PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

American Journal of Environmental Economics (AJEE)

Volume 4 Issue 1, Year 2025
ISSN: 2833-7905 (Online)
DOI: https://doi.org/10.54536/ajee.v4i1.3670
https://journals.e-palli.com/home/index.php/ajee

Green Literacy, Green Loyalty and Satisfaction among Banking Customers in Kerala: Insight from Kerala Gramin Bank and State Bank of India

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Article Information

Received: August 19, 2024

Accepted: September 25, 2024

Published: February 20, 2025

Keywords

Green Banking, Green Literacy, Green Loyalty, Perceived Benefits, Satisfaction, SDG

ABSTRACT

The banking industry has embraced green banking to reduce environmental impact amidst a growing emphasis on sustainability. Kerala has consistently ranked first in India in the Sustainable Development Goals (SDG) index. Against this backdrop, a combined as well as comparative study was initiated in the Kerala context to examine how customers' green literacy influences their loyalty towards one largest commercial banks, the State Bank of India and one Regional Rural bank, Kerala Gramin Bank. 200 customers from both banks in Kozhikode District participated through Simple Random Sampling, providing data via surveys and interviews. Ethical standards were followed with informed consent, confidentiality, and voluntary participation. Data analysis included descriptive statistics, One-Way ANOVA, T-test, and Pearson correlation. Results show high green literacy in Kerala, impacting loyalty. The study underscores the existence of significant differences in satisfaction rates with the green banking practices of both banks. State Bank of India scored a higher rate of satisfaction in ease of using green services, green banking information clarity, and the availability of ample green products, while Kerala Gramin Bank excelled in staff assistance in green banking services. Study suggests for imparting more green literacy among bank customers for fostering green loyalty in banking.

INTRODUCTION

Green banking has emerged as a prominent trend in the financial sector, emphasizing sustainable technologies and environmentally-friendly initiatives (Ellahi *et al.*, 2021; Ahmad *et al.*, 2013). This shift reflects a growing recognition of the importance of clean energy, reforestation projects, and carbon offsets in combating climate change. Green banking has gained significant traction among financial institutions, particularly after the Paris Climate Agreement, positioning itself as a critical component in promoting sustainable development (Leonard, 2014). According to Hermawan & Khoirunisa (2024), green banking involves implementing practices that promote environmental sustainability and this includes financing renewable energy projects, supporting reforestation efforts, and offering products that encourage sustainable consumer behaviour. Green banking will remain crucial in advancing a green economy as India works towards meeting its Sustainable Development Goals by 2030 (Sarkar & Latta, 2022). Green banking measures, like green loans and managing environmental risks, are essential for aligning financial sector activities with sustainability objectives. They urge banks to back initiatives that prioritize renewable energy, energy efficiency, and sustainable agriculture (Doe & Smith, 2021). Green literacy is a new idea that goes beyond standard information literacy to include environmental sustainability within library operations and learning. It includes changing library services, resources, and teaching to encourage environmentally friendly actions and knowledge (Kurbanoglu & Boustany, 2014; Vyas & Parmar, 2021). In regions with high literacy rates, such as Kerala, there is a notable penetration of green banking awareness among customers (Praveen & Harina, 2022). Green loyalty, a crucial factor influencing consumers' sustainable purchasing behavior, has gained increasing attention in recent years (Zhang *et al.*, 2023). Research shows that green perceived value, satisfaction, and trust positively impact green loyalty, both directly and indirectly (Chen, 2013).

The State Bank of India (SBI), the largest commercial bank in India, initiated green banking in 2007 with policies like the Green Banking Policy, Green PIN, Green Fund, and Green Rupee Term Deposit. They installed windmills, financed renewable energy projects, and were a CDP signatory. SBI aimed to promote sustainability and address climate change through various initiatives under their green banking framework (Rahman *et al.*, 2023). Kerala Gramin Bank (KGB), a popular Regional Rural Bank, sponsored by Canara Bank (4th largest public sector bank in India), launched its Green Banking initiative in 2015, aimed at promoting eco-friendly banking practices, including paperless transactions and energy-efficient operations (Kerala Gramin Bank, 2015). Both KGB and SBI have undertaken various green banking initiatives: Gramin Bank focuses on community-based projects, including microfinance for renewable energy installations and agricultural loans for sustainable farming practices (Rajput *et al.*, 2014). The bank's grassroots approach aims to directly benefit local communities and the environment (George & Rashmi, 2021). On the other hand, the SBI has a broad range of green banking initiatives, such as green bonds, loans for electric vehicles, and investment

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in large-scale renewable energy projects. SBI leverages its extensive network to promote sustainability on a national scale (Deka, 2015). Therefore, this study focuses on understanding how green (banking) literacy among SBI and KGB customers enhances their satisfaction, green loyalty, and intention in both combined and comparative approaches. As customers in Kerala are generally known to be enlightened, an understanding on their green literacy, perceptions and satisfaction on green banking practices, and consequential loyalty are crucial for the successful implementation of sustainable practices. Factors influencing customer acceptance and support include awareness and knowledge, trust and transparency, and perceived benefits (Rai *et al.*, 2019). Customers who are well-informed about environmental issues and green banking practices are more likely to support and engage with green banking initiatives. Trust in the bank's commitment to sustainability and transparency in their practices enhances customer confidence and loyalty (Ibe-enwo *et al.*, 2019). Additionally, customers are more inclined to support green banking if they perceive tangible benefits, such as cost savings, improved service quality, and positive environmental impact (Herath & Herath, 2019).

Problem Statement

With growing environmental worries and the rising significance of sustainable practices, banks are implementing green banking initiatives to support environmental protection and sustainability efforts. Nevertheless, the success of these programs greatly relies on how customers perceive and accept the banks' endeavors. Besides, it is generally accepted that the customers in Kerala has 100 percent literacy and a very high level of financial literacy. But no studies related to green or green banking literacy of consumers seem to have been conducted. Hence, the objective of this research is to examine and compare the existing green banking literacy of customers and its effect on green banking loyalty towards SBI and KGB. It also evaluates perceived green banking benefits and customers satisfaction with green banking practices.

LITERATURE REVIEW

The banking industry has a vital role in integrating ecological factors into lending standards to maintain a balance between economic development and environmental preservation (Sahoo & Nayak, 2007). Kavitha and Rani (2016) emphasized the importance of banks in India taking an active role in promoting a greener economy. Green banking combines traditional and digital banking practices, focusing on ethical operations. By transitioning manual transactions to digital platforms, banks are able to save time, energy, and resources. Banks are now encouraging environmentally friendly practices among customers through online bill payments, fund transfers, and other options (Agarwal & Yajurvedi, 2022).

Green Banking and Its Importance

Green banking initiatives not only provide environmental benefits but also result in cost savings for banking operations (Jayadatta, 2017). Gulzar *et al.* (2024) and Bhat *et al.* (2022) highlighted the crucial importance of banks in advancing environmental sustainability and fostering low-carbon economies via green banking. In the same way, Choubey and Sharma (2022) pointed out that green banking improves brand reputation and trust through the use of eco-friendly products and sustainable practices. Dhamija and Sahni (2021) centered their study on how customers perceive and their willingness to embrace green banking, whereas Herath and Herath (2019) constructed a theoretical framework connecting green banking attributes to customer contentment. Overall, green banking is seen as a beneficial mechanism for both banks and customers, contributing to environmental sustainability and development (Praveen & Harina, 2022). Ragupathi and Sujatha (2015) pointed out the growing importance of banks in promoting environmental sustainability, and talked about the shared advantages of green banking for banks, industries, and the economy. Saho and Singh's (2016) study focused on the impact of green banking on reducing stress in bank workers. Jayabal and Soundarya (2016) highlighted the possible financial gains of green banking despite initial hurdles. Nath *et al.* (2014) suggested the implementation of electronic banking and other environmentally conscious measures. Several research papers (e.g., Dhamija & Sahni, 2021; Herath & Herath, 2019) center on customer opinion and contentment regarding green banking, yet there is limited investigation into the various obstacles (e.g., psychological, technological, financial) hindering the broader utilization of green banking services. Banks that practice green banking comply with regulations and improve their reputation. Customers now prefer banks with green initiatives, leading to greater customer loyalty and financial stability in the long run (Lee & Martinez, 2020).

Determinants of Green Banking Awareness and Adoption

Awareness and adoption of green banking practices are influenced by factors such as age, gender, and occupation. These demographic traits play a crucial role in shaping customer perceptions and responses to green banking (Praveen & Harina, 2022). De Silva (2019) talked about how green banking can help reduce environmental impact and enhance resource efficiency. Giramkar, S (2018) suggested the need for increased awareness of green banking among older adults. Deepa and Karpagam (2018) observed that although customers are informed about alternative energy, awareness about green banking is lacking. Risal and Joshi (2018) found that the use of innovative, environmentally friendly banking technologies has a positive effect on environmental sustainability in Nepal. Menon *et al.* (2017) examined India's transition to green banking for social responsibility, while Raj and

Rajan (2017) highlighted the importance of increasing customer awareness to enhance the impact of green banking initiatives.

Green Literacy

Green literacy expands traditional information literacy to incorporate environmental sustainability (Kurbanoglu & Boustany, 2014). Green libraries aim to reduce their environmental impact through energy-efficient designs, sustainable collections, and educating users on environmental issues. Librarians can play a key role in promoting sustainability literacy to address global challenges (Vyas & Parmar, 2021). In order to advance sustainable development through green banking, it is essential to raise green literacy among both internal and external stakeholders and provide education on the topic (Tandon & Setia, 2017). This method helps in the shift towards a sustainable economy and industry (Dipti Gadhavi *et al.*, 2023).

Green Loyalty

In recent years, there has been a growing focus on green loyalty as a significant element that impacts consumers' decisions to make sustainable purchases (Zhang *et al.*, 2023). Studies indicate that positive green perceptions, satisfaction, and trust have a beneficial effect on green loyalty, whether through direct or indirect means (Chen, 2013). On the other hand, green image, trust, and satisfaction are all negatively impacted by green perceived risk (Chrisjatmiko, 2018). Research has also examined how value orientations influence green loyalty, finding that egoistic and biospheric values have a positive impact (Imaningsih *et al.*, 2019) and the researchers later stated that value orientations influence green loyalty through the mediating factors of green functional benefits and monetary costs. In order to increase customers' loyalty towards environmentally friendly products, businesses should work on enhancing the perceived value, satisfaction, and trust in green options, instead of focusing on non-green alternatives (Chen, 2013). Understanding these connections and integrating appropriate values into marketing plans can assist companies in efficiently endorsing eco-friendly products and cultivating customer allegiance during the ecological era (Imaningsih *et al.*, 2019; Chen, 2013). In tune with findings of Le (2023), it may be stated that eco-friendly corporate image of an organization has a significant influence on customers' green loyalty.

Gaps in Existing Research

Current studies on sustainable banking emphasize how it contributes to sustainability, boosts brand image, and increases customer approval. Yet, there are still important gaps to address, such as the requirement for practical methods to assess the customers' green literacy rate and its effect on green loyalty towards eco-friendly banking practices, as well as tactics for raising customer satisfaction and intention. Tackling these deficiencies could lead to a better understanding of how to improve green banking methods and boost their impact on environmental and financial sustainability.

MATERIALS AND METHODS

Based on the comprehensive literature survey and research gap found this study analyzes customers' green literacy, green loyalty, perceived green banking benefits and satisfaction on green banking practices in SBI and KGB. The study follows a combined- comparative approach. It is combine approach as the variables, green literacy, green loyalty, perceived green banking benefits and green banking satisfaction etc., are studied by combining customers of both banks (200 respondents). It is comparative when it analyses the differences in satisfaction of customers towards the green banking practices of both banks (100 respondents each).

The specific objectives of the study are:

1. Understand the green (banking) literacy and loyalty of SBI and KGB
2. Examine the customers' perception towards the benefits of green banking
3. Analyze the customer satisfaction on green banking initiatives of SBI and KGB
4. Analyze the relationship a between green literacy and green loyalty
5. Compare the green banking practices and resultant customer satisfaction of SBI and KGB

The study's research design is primarily descriptive. The sample design includes 200 customers in total, with 100 customers from Gramin Bank and 100 customers from SBI Bank. The research utilizes a simple random sampling method to gather information from participants, and the study specifically focuses on the Kozhikode district in Kerala. Information was gathered via a formal survey, dispersed electronically and in print to guarantee a varied group of participants. Both primary and secondary sources are utilized in the process of collecting data. Information provided by customers in surveys and interviews is considered primary data, whereas secondary data is collected from published studies, financial reports, and bank reports. The survey addressed important topics like awareness, attitude, and embrace of eco-friendly banking methods, along with possible obstacles to its approval. It utilized closed-ended questions and Likert's-scale items to assess attitudes and behaviors. Additional inquiries were initiated to evaluate the level of support from the organization in promoting green banking among selected banks. Statistical analysis consists of summarizing important variables with descriptive statistics, and then using inferential statistics, One-Way ANOVA and T-tests, etc., for examine the association and differences between factors like awareness, perception, and adoption behavior. The study also uses tables and charts, as well as statistical methods like for data presentation.

To uphold ethical standards, individuals had to provide informed consent and were assured confidentiality and voluntary participation. However, the study acknowledged

limitations like potential bias in sampling from utilizing convenience sampling and the chance of bias in self-reported responses. Despite the constraints, the study aimed to provide valuable insight on the adoption of green banking and its impact on customer and vice versa.

RESULTS AND DISCUSSION

Result

This part consists of 6 sub sections which depicts and discusses demographic particulars of green banking customers, their green banking literacy level (Green Literacy), green banking customers' attitudinal loyalty (Green Loyalty), green banking satisfaction, green banking perceived benefits, and hypotheses testing.

Demographic Profile of Respondents

Primary data of the study were collected from the respondents of customer's behavioral intention and loyalty towards green banking practices in SBI and Gramin Bank, which together contribute a total of 200 customers. The demographic profile of respondents concerning gender, age, monthly income and employment status are very essential for the analysis of perception of customers.

Table 1: Demographic profile of respondents (combined form)

Category		**Frequency**	**Percentage**
Gender	Male	112	56
	Female	88	44
	Other	0	0
	Total	**200**	**100**
Age	18-25	108	54
	26-35	60	30
	36-45	12	6
	Above 45 years	20	10
	Total	200	100
Monthly Income	Below 25000	98	49
	25001 - 50000	50	25
	50001 - 75000	28	14
	Above 75000	24	12
	Total	**200**	**100**
Employment Status	Employed	122	61
	Unemployed	0	0
	Student	42	21
	Retired	17	8.5
	Other	19	9.5
	Total	**200**	**100**

Source: Primary Data

The demographics (Table 1) show that the study sample has an even split between genders, with 56 per cent being male and 44 per cent being female. A large percentage (54 per cent) of participants falls within the 18-25 age range, with 30 per cent in the 26-35 categories. Almost half of the participants (49per cent) earn less than ₹25,000 per month, whereas a small percentage (12per cent) makes more than ₹75,000. 61 per cent of participants are employed public and private sectors, while 21 per cent are student customers. No participants are unemployed. Retired persons constitute 8.5 per cent, while 9.5 percent belongs to other occupation categories. The demographic profile of green banking customers reveals a nearly equal gender split, with a youthful majority. Majority of sample respondents belongs to low and middle income class. As a result, this study can be seen as reflection of behavioral intention and loyalty on green banking mainly among youth and middle class earners.

Banking Customers' Green Literacy

To study the customer's green literacy and education on sustainable banking practices of Kerala Gramin bank and SBI, given 4 statements to respond on 5 point Likert's scale: strongly agree, agree, neutral, disagree, and strongly disagree. The response are collected were tabulated in the Table 2.

Table 2: Customers' green literacy and education (Combined form)

Statements	SD	D	N	A	SA	Total	Mean
I am aware of the green banking practices offered by my bank.	0	25	8	89	78	200	4.10
I understand the environmental benefits of participating in green banking initiatives.	0	40	12	92	76	200	4.32
My bank provides sufficient information on how to engage in green banking.	0	23	11	86	80	200	4.12
I feel confident in my knowledge of how green banking practices can reduce carbon footprint.	0	19	24	90	67	200	4.03
I know the environmental threats of non- green banking	18	21	10	83	68	200	3.81
I got some environmental education in my schools or colleges(geography/geology/EVS)	0	9	19	102	80	200	4.42
Govt. Provides me green awareness messages through various agencies (local bodies/ kudumbasree/Haritha karma sena etc.)	15	17	15	76	77	200	3.92

Source: Primary Data

Table 2 reveals that most respondents are knowledgeable and self-assured when it comes to green banking practices. The table presents insights on respondents' views on green banking practices using a Likert's scale, focusing on their green literacy (Kurbanoglu & Boustany, 2014). A majority of participants show high awareness (mean 4.10), understanding (mean 4.32), and satisfaction with the green banking information provided by their banks (mean 4.12). However, some respondents feel unsure about their knowledge of carbon footprint reduction (mean 4.03), suggesting room for improvement through education. Most participants generally agree, with scores above 4.0, that they are informed about their bank's environmentally-friendly efforts, comprehend the ecological advantages, and believe their bank furnishes adequate details on participating in these actions. Moreover, participants are confident in their capacity to decrease their carbon footprint by utilizing green banking services, indicating a close match between customer awareness and their banks' environmental objectives and relatively high level of green literacy rate among banking customers highlighted by the resultant data. Awareness of environmental risks from non-eco-friendly banking is rated at an average score of 3.81, ranging from moderate to strong. Regarding environmental education, most respondents have been taught about the environment in school, which is evident from the high average score, 4.42. In the case of government communication of sustainability, even though most individuals admit to getting eco-friendly messages from government and other agencies, there are differing views, with some dissenting or staying impartial, average rating stood at 3.92. Overall, the findings indicate that environmental education is common, but there may need to be a greater emphasis on raising awareness about certain environmental risks, such as those associated with non-eco-friendly banking, by educational and government institutions.

Customers' Green Loyalty

To analyze the customer's Green loyalty towards green banking on preference level of customer's on Kerala Gramin bank or SBI, seven statements are given to respondents to answer on Likert's scales, ranging from strongly disagree to strongly agree. The response are tabulated in Table 3

Table 3: Customers' Green loyalty towards green banking (Combined form)

Statements	SD	D	N	A	SA	Total	Mean
I prefer to use banking services that are environmentally friendly	8	21	9	72	100	200	4.26
I am willing to pay higher fees for banking services that promote environmental sustainability.	12	12	12	90	76	200	4.10
I actively seek out information about my bank's environmental initiatives.	0	20	9	81	88	200	4.20
I feel more loyal to banks that have strong environmental policies	3	17	13	92	72	200	4.12
I would recommend a bank with green practices to my friends and family.	13	14	10	90	74	200	4.10
I am likely to continue using my bank if it adopts more environmentally friendly practices	5	20	8	83	84	100	4.18
I believe my bank's commitment to green practices reflects its overall integrity and values	10	16	16	86	72	200	4.10

Source: Primary Data

The data from the customers green loyalty (Table 3) shows that customers have a strong preference for using eco-friendly banking services, demonstrated by a high mean value of 4.26. Nevertheless, they are more hesitant to suggest a bank with environmentally friendly practices to their friends and relatives, and have doubts about whether a bank's dedication to green practices truly represents its overall honesty. However, they are prepared to pay increased costs for banking services that support eco-friendliness, averaging at 4.10, which reflects the environmental concern of banking customers.

Green Banking Satisfaction

To analyze the customer's satisfaction level with four statements given to respondents to answer in Likert's scale: strongly disagree, disagree, neutral, agree, and strongly agree. The following is depicted in Table 4 and Figure 1.

Table 4: Customer's satisfaction towards green banking services (Combined form)

Statements	SD	D	N	A	SA	Total	Mean
Convenience of using Green Banking services	34	66	20	52	28	200	2.87
Clarity of green banking Information	26	62	12	60	40	200	3.13
Staff Assistance for using green banking	25	55	9	68	32	200	2.97
Availability of ample green banking products	9	31	10	84	66	200	3.84

Source: Primary Data

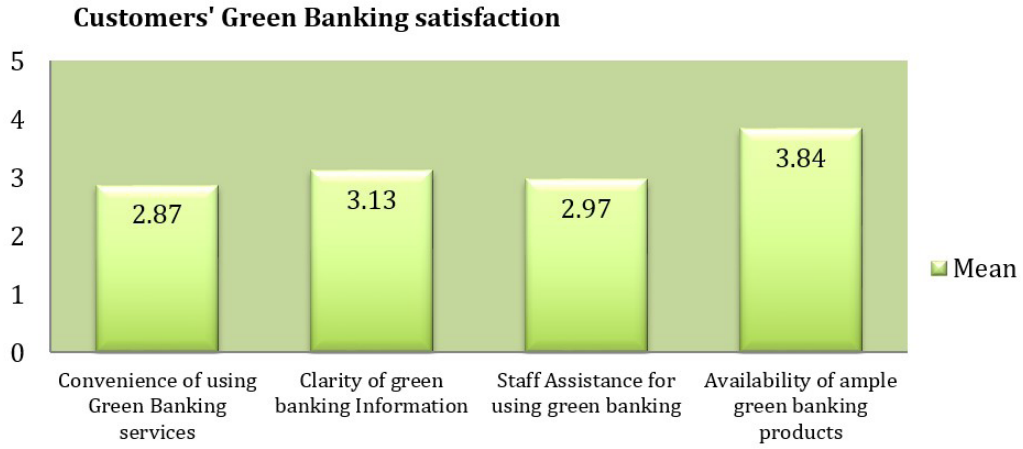

Figure 1: Customers' satisfaction on Green Banking Practices

The customer satisfaction data for green banking services shows different levels of satisfaction for various factors. Customers are very satisfied with the availability of green banking products, given the average score of 3.84, showing their approval of the range of green banking products provided. Green banking information clarity received a mean score of 3.13, indicating that although it is quite clear, there is still room for enhancement. Yet, there is a decrease in satisfaction when it comes to staff assistance to use green banking services and convenience of using green banking services, averaging at 2.97 and 2.87, raising relatively an issues about service conduct and the general convenience of utilizing these services. This indicates that, although customers value the variety of products offered, there is a need for improvement in customer service interactions.

Perceived benefits of Green Banking

This section intent to reveal what the benefits available to the banks are as perceived by the customers, when their transacting bank follows green banking practices. Customers' responses are tabulated in Table 5.

Table 5: Perceived benefits on green banking (Combined form)

Statements	SD	D	N	A	SA	Total	Mean
Knowing my bank's efforts in promoting sustainability, I will recommend my banks to others	0	12	34	40	112	200	4.24
My bank's green practices enhance my overall satisfaction with the bank	4	18	30	48	100	200	4.14
I feel more loyal to my bank due its fits commitment to green practices	0	8	44	60	88	200	4.14
The green banking initiatives of my bank positively influence my decision to continue the bank	5	6	52	44	96	200	4.08

Source: Primary Data

The data shows a strong belief in the positive impact of the green banking practices. 74 per cent of respondents strongly agree or agree that they would be inclined to recommend the bank because of its sustainability initiatives, with an average rating of 4.24. In the same way, 70 per cent of participants support or strongly support the idea that the eco-friendly actions of the bank improve their overall satisfaction with their banks, resulting in an average score of 4.14. The bank's environmentally friendly practices positively impact loyalty as shown by 74 per cent agreement and a mean score of 4.14. Moreover, 68 per cent of participants affirm or strongly affirm that the bank's environmentally-friendly initiatives influence their choice to keep utilizing its services, leading to an average of 4.08. In general, the bank's dedication to sustainability noticeably improves customer satisfaction, loyalty, and advocacy.

Testing of Hypotheses

There are two set of hypothesis formulated for this study, one is to test there any variation in the green practices and initiatives between SBI (A nationalized Commercial Bank) and Kerala Gramin Bank(A Regional Rural Bank in Kerala)

Differences in Green Banking Practices of Banks Selected (Comparative Form)

H01: Customer Satisfaction with Green Banking Practices is Not Statistically Different between Customers of SBI and Gramin Bank

Table 6: Group Statistics for t-test

	Preference of The Bank	N	Mean	Std. Deviation	Std. Error Mean
Customer Satisfaction	Kerala Gramin Bank	100	5.18	1.587	.224
	SBI	100	6.22	1.888	.267

Table 7: Independent t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Customer Satisfaction	Equal variances assumed	.077	.782	-2.982	98	.004	-1.040	.349	-1.732	-.348
	Equal variances not assumed			-2.982	95.19	.004	-1.040	.349	-1.732	-.348

Source: Compile by authors

The independent samples t-test is applied to compare the satisfaction level of customers of SBI and Gramin Bank towards green banking practices. The test results show t-statistic of -2.982 and p-value of 0.004. Since the p value is less than 0.05, the null hypothesis is rejected at the 5per cent level of significance and an alternative hypothesis is accepted. Hence Customer satisfaction with green banking practices is statistically different between customers of SBI and Gramin Bank. Further, the mean score of customer satisfaction on green banking practices were analyzed for these two banks and given in Table 8.

Table 8: Mean score analysis between banks (Comparative Form)

Satisfaction Factors	Samples		Mean Score	
	SBI	KGB	SBI	KGB
Convenience	100	100	3.11	2.63
Clarity of Information	100	100	3.38	2.88
Bank Staff assistance	100	100	2.92	3.02
Ample Green banking products	100	100	4.27	3.41
Combined Mean Score			**3.42**	**2.99**

Source: Primary Data

The data in the table 7 displays customer satisfaction ratings for four green banking factor in banking services offered by two banks: State Bank of India (SBI) and Kerala Gramin Bank (KGB). Every category indicates the banks' performance regarding convenience, clarity of information, Assistance from bank staff, and

green banking product accessibility. Regarding ease or convenience, SBI has a mean score of 3.11 which is higher than KGB's mean score of 2.63. When it comes to convenience, customers appear to be more satisfied with SBI's eco-friendly banking initiatives. Regarding clarity of information, SBI continues to outperform KGB with a score of 3.5 compared to KGB's score of 2.9. This indicates that SBI offers more transparent information to its clients regarding green banking. With regard to staff assistance, the scores are near, with SBI scoring 2.9 and KGB just slightly higher at 3.02. This suggests that KGB clients slightly favor their bank's staff performance in sustainable banking activities over SBI. While analyzing green banking product availability, SBI received a much higher score of 4.3 in comparison to KGB's score of 3.4. This shows that customers perceive SBI as offering a greater or superior range of green banking products. Over all, SBI generally receives higher ratings in most areas (comfort, clarity of information, product availability), with the exception of employee conduct where KGB slightly outperforms. Customers tend to be more content with SBI's eco-friendly banking services, specifically with the range of products offered. Hence, null hypothesis (1) rejected accordingly.

Relationship between Green Literacy and Green Loyalty

H03: There is Significant Association between Green Literacy and Green Loyalty among Banking Customers

To test the relationship between green literacy and green loyalty among banking customers, Pearson correlation coefficient tool is applied here.

Table 9: Correlations between Green Literacy and Loyalty (Combined form)

Variables	Values						
X Values -Green Literacy (A+ SA)*	167	168	166	157	151	182	153
Y Values -Green Loyalty (A+SA)*	172	166	169	164	164	167	158

**Total of agreed responses and strongly agreed responses (A+SA)*

Out of 200 respondents (100 of SBI and 100 of KGB), correlation analysis considered only the respondents who agreed or strongly agreed on the statements given in questionnaire of the study

X Values, $\sum = 1144$, *Mean* $= 163.429$, $\sum(X - Mx)^2 = SSx = 689.714$, *R Calculation,* $r = \sum((X - My)(Y - Mx)) / \sqrt{((SSx)(SSy))}$

Y Values, $\sum = 1160$, *Mean* $= 165.714$, $\sum(Y - My)^2 = SSy = 117.429$, $= 168.857 / \sqrt{((689.714)(117.429))}$, $= 0.5933$

X and Y Combined, $N = 7$, $\sum(X - Mx)(Y - My)$, $= 168.857$, *Meta Numeric (cross-check),* $r = 0.5933$

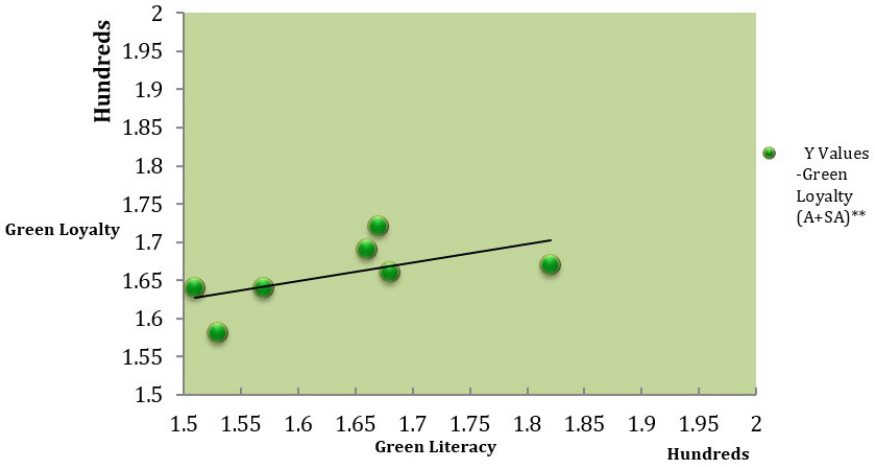

Figure 2: Correlations between green literacy and loyalty

Both algebraic and figure confirm that there is a moderate positive correlation, which means there is a tendency for high X variable scores go with high Y variable scores (and vice versa). Hence, there is positive correlation between green literacy and green loyalty of bank customer. The value of R^2, the coefficient of determination, is 0.352. The P-Value is < .00001. The result is significant at $p < .01$. So, there is a significant association between green banking literacy and green banking loyalty of both SBI and KGB. It is noteworthy that green literacy among banking customers will have direct positive impact on their loyalty towards banks.

Discussion

The survey findings and analysis provide crucial information about customers' green literacy perception, loyalty, and satisfaction regarding eco-friendly banking services. The initial analysis part of the study examines demographic profile, customers green literacy, loyalty, perceived benefits, and satisfaction in a combined approach (taking 200 samples: 100 SBI customer+100 KGB customer), the customers' satisfaction in green banking practices is also analyzed in comparative form(by taking respondents of both banks separately). The study sample is evenly split between genders, with 56 per cent

male and 44 per cent female. A majority (54 per cent) is aged 18-25, and 30per cent are 26-35. Almost half (49 per cent) earn less than ₹25,000 per month, while only 12 per cent make over ₹75,000. Most participants are employed, with a focus on youth and middle-class earners. The survey revealed that participants are well-informed and confident about green banking practices. The table displays their views using a Likert's scale, focusing on green literacy. Most participants show high awareness, understanding, and satisfaction with green banking information from their banks, which reflect relatively high green literacy in Bank customers in Kerala. However, some feel unsure about reducing their carbon footprint, suggesting a need for education. Participants generally agree that they are informed about their bank's eco-friendly efforts and feel confident in utilizing green banking services. The findings suggest a need for increased awareness of environmental risks from non-eco-friendly banking through education and government communication. The third section of analysis part reveals customers favour eco-friendly banking services (mean 4.26). They hesitate to recommend environmentally friendly banks, doubt their honesty, yet willing to pay for eco-friendly services (mean 4.10). The fourth section of data analysis, customer satisfaction data for green banking services revealed varying levels of satisfaction. Customers appreciate the availability of products (average score 3.84), but green banking information clarity needs improvement (mean score 3.13). Satisfaction levels decrease for staff assistance and convenience (averaging 2.97 and 2.87), suggesting issues with service conduct and overall convenience. Improving customer service interactions is essential despite the range of products available.

The research data indicates strong support for green banking practices, with high percentages of respondents agreeing that sustainability initiatives influence their recommendations, satisfaction, loyalty, and continued use of the bank's services. Overall, the bank's eco-friendly actions positively impact customer satisfaction, loyalty, and advocacy, with average ratings reflecting high levels of approval for the bank's commitment to sustainability. The independent samples t-test compared customer satisfaction with green banking practices between SBI and KGB. The test showed a t-statistic of -2.982 and p-value of 0.004, rejecting the null hypothesis at 5% significance level. Customer satisfaction levels differed significantly between the two banks. SBI had higher ratings for convenience, clarity of information, and green banking product availability compared to KGB. However, KGB scored slightly higher in staff assistance. Overall, customers were more satisfied with SBI's eco-friendly banking initiatives. The null hypothesis was rejected based on the statistical evidence. A moderate positive correlation between green banking literacy and loyalty among SBI and KGB customers was found, with an R2 value of 0.352 and a significant p-value of < .00001. This suggests that higher green literacy leads to higher loyalty towards banks, highlighting the importance of educating customers on sustainable practices.

Suggestions

Banks should prioritize improving transparency and communication regarding their environmental efforts to enhance their green banking initiatives and ensure that customers are well-informed. Providing rewards for adopting environmentally friendly banking practices and linking loyalty programs to eco-conscious behaviors can further motivate engagement. Frequent surveys to assess customer opinions and contentment, paired with educational initiatives showcasing the environmental consequences of banking decisions, are crucial. Comparing with top competitors in the industry can enhance green banking services, and establishing specific and quantifiable sustainability targets will keep both banks dedicated to their environmental goals. Moreover, enhancing staff training to educate customers about the advantages of green banking and partnering with environmental groups for joint projects can improve credibility and effectiveness. Banks should improve eco-friendly services, provide regular updates for green banking appeal, and ensure adherence to global environmental standards. Promoting employee involvement can cultivate a culture of sustainability. Options include green loan schemes, incentives for digital banking, and carbon footprint calculators in apps. Partnering with the local community and communicating effectively will enhance the bank's green banking strategy.

Implication

This study provides valuable insights into the dynamics of green banking and its impact on customer behaviour and loyalty. By examining the environmental literacy of customers of Kerala Gramin Bank and SBI, and comparing customer perception and satisfaction towards green banking, the research contributes to the broader discourse on sustainable banking practices. The findings highlight the importance of awareness and education, trust, perceived benefits, and alignment with customer values in fostering customer loyalty. Banks and policymakers can leverage these insights to enhance their sustainability efforts and promote green banking practices across the financial sector. This research represents a significant step towards understanding and advancing the role of green banking in sustainable development.

CONCLUSION

The present study is conducted to evaluate and compare the green literacy, loyalty, satisfaction and intention of customers regarding green banking practices of SBI and KGB. Both Gramin Bank and SBI have demonstrated a firm dedication to green banking by implementing initiatives such as digital banking services, investments in renewable energy, and the offering of eco-friendly financial products. Nevertheless, the research found notable disparities in how customers from each bank view and appreciate these efforts, with customer satisfaction showing statistically different levels between the two institutions. This underscores the importance of custom strategies to meet customer needs and improve their

satisfaction. Clients who trusted in the environmentally friendly aspects of a bank's products or operations were more inclined to stay loyal, stressing the significance of transparent communication in highlighting the concrete environmental advantages of green banking efforts. The detailed examination of attitudinal loyalty revealed subtle distinctions among customers of KGB and SBI, with satisfaction levels and perceived effectiveness playing a role in shaping loyalty actions. By focusing on improving service quality and interaction with customers, these variations can be addressed to increase overall satisfaction and loyalty even more. This research offers practical suggestions for banks to enhance their green banking efforts and enhance customer intention and loyalty. By prioritizing improved communication, addressing gaps in satisfaction, and showcasing measurable environmental effects, KGB and SBI can establish themselves as the forefront of sustainable banking practices in Kerala. Ongoing research and adjusting to customer preferences will be essential to stay competitive and relevant in the changing environment of green banking.

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