
A STUDY ON IMPLEMENTATION AND AWARENESS OF ECO-FRIENDLY BANKING OPERATIONS IN VELLORE DISTRICT

G. USHA NANDHINI

*PhD Research Scholar (Part-Time), Department of Commerce,
D.K.M. College for Women (Autonomous), Vellore – 632 001.
(Affiliated to Thiruvalluvar University, Serkkadu)*

Dr. A. SUDARVIZHI

*Associate Professor & Head and Research Guide,
Department of Commerce,
D.K.M. College for Women (Autonomous), Vellore- 632 001.
(Affiliated to Thiruvalluvar University, Serkkadu)*

ABSTRACT

In recent years, the concept of green banking has emerged as a vital strategy for promoting environmental sustainability in the financial sector. This study focuses on examining the implementation and awareness of eco-friendly banking operations among banks and customers in Vellore District. The primary aim is to assess how effectively green banking initiatives such as paperless transactions, online banking, energy-efficient branches, and green loans are being adopted and perceived in the region. Data were collected from bank employees and customers through structured questionnaires and analysed using suitable statistical tools. The findings reveal that while the majority of banks have implemented eco-friendly practices in their operations, the awareness and participation levels among customers remain moderate. Institutional efforts such as digitalization, solar-powered ATMs, and awareness campaigns are contributing positively to environmental outcomes but need stronger promotion and policy support. The study concludes that strengthening green awareness programs, employee training, and customer education will enhance the overall sustainability impact of banking operations in Vellore District.

Keywords: *Green Banking, Eco-friendly Banking Operations, Environmental Sustainability, Awareness, Implementation, Sustainable Finance, Digital Banking.*

1. INTRODUCTION

Eco-friendly banking operations have emerged as a crucial component of sustainable development in the global financial sector. As environmental concerns increase, banks are shifting towards green banking practices to reduce their ecological footprint and encourage responsible resource consumption. The adoption of digital transactions, online banking, e-statements, energy-efficient equipment, and paperless documentation reflects the growing commitment of financial institutions to environmental protection. These practices not only support climate-friendly operations but also enhance customer convenience and operational efficiency.

In the context of India, the Reserve Bank of India (RBI) and various public and private sector banks have introduced several initiatives to promote sustainable banking. These include the use of renewable energy, promotion of digital platforms, eco-friendly branch designs, and awareness programmes among staff and customers. Vellore District, with its mix of urban and semi-urban banking populations, provides an ideal setting to study the implementation and awareness of eco-friendly banking operations. Understanding how banks and customers perceive and adopt such initiatives is important in strengthening sustainable banking culture. This study examines the current level of implementation and awareness among banks and customers in Vellore District. It also explores the factors influencing the adoption of eco-friendly practices and identifies areas where further improvement is needed to enhance environmental sustainability.

2. MEANING OF ECO-FRIENDLY BANKING OPERATIONS

Eco-friendly banking operations refer to banking practices designed to minimize environmental harm and promote sustainable resource usage. These practices include reducing paper consumption through e-statements, encouraging digital transactions, utilizing energy-efficient technology, adopting solar power, implementing waste management practices, and supporting green loans or projects that benefit the environment. Eco-friendly banking aims to integrate environmental responsibility into banking activities, align operations with sustainability goals, and contribute to a greener economy.

3. FACTORS INFLUENCING THE IMPLEMENTATION AND AWARENESS OF ECO-FRIENDLY BANKING OPERATIONS

- **Digital Literacy:** Customers' and employees' knowledge and comfort with digital platforms significantly influence the adoption of eco-friendly banking.
- **Technological Infrastructure:** Availability of modern banking technologies, reliable internet connectivity, and user-friendly systems boosts implementation.
- **Bank Policies and Initiatives:** Institutional support, guidelines from RBI, and internal eco-friendly policies encourage adoption.

- **Customer Awareness Levels:** The degree to which customers understand the benefits of green banking impacts participation.
- **Training and Motivation of Employees:** Well-trained staff can effectively promote and implement eco-friendly practices.
- **Cost Considerations:** Initial investment in green technologies, though beneficial long-term, may affect implementation.
- **Environmental Attitude:** Positive environmental mindset among customers and employees promotes greater adoption.
- **Marketing and Promotion:** Awareness campaigns and communication tools help increase visibility and understanding of eco-friendly operations.

4. REVIEW OF LITERATURE

Kumar (2023) examined the growing adoption of eco-friendly banking initiatives among Indian banks, focusing on digital services, paperless operations, and energy-efficient practices. The study highlighted that while banks have implemented several green measures, customer awareness still remains moderate. It emphasized that proper training and regular awareness campaigns are essential to enhance the visibility and usage of green services. The author concluded that sustainable banking can progress significantly when banks combine technology with strong environmental communication efforts.

Sharma and Devi (2024) examined how green banking practices influence environmental sustainability in semi-urban districts. Their review found that digital banking, e-statements, and reduced paper usage contribute meaningfully to reducing environmental degradation. However, the effectiveness of these initiatives depends on customer literacy and the availability of supportive infrastructure. The authors suggested strengthening digital training programmes and improving service accessibility. They concluded that green banking can be successful only when both banks and customers participate actively in eco-friendly practices.

Rao et al. (2023) examined the factors affecting the implementation of eco-friendly banking operations in South Indian banks. The study reported that institutional support, technology infrastructure, and employee motivation play major roles in promoting green initiatives. Although green banking policies exist, the implementation levels vary across banks. The authors stressed the importance of continuous monitoring, stronger policy guidelines, and clear sustainability goals. They concluded that green banking is a strategic necessity rather than a voluntary activity.

Meenakshi and Thomas (2024) examined the awareness levels of customers toward green banking services and their willingness to adopt digital platforms. The review revealed that customers appreciate paperless transactions and online services but lack detailed knowledge

about broader green initiatives. The authors recommended targeted awareness campaigns, improved service explanations, and simplified user interfaces. They concluded that enhancing customer awareness will significantly increase the success of eco-friendly banking practices and support long-term environmental sustainability.

Ahmed (2025) examined the relationship between green banking practices and customer satisfaction among public and private sector banks. The study indicated that customers value environmentally responsible services, especially digital transactions and reduced paperwork. However, satisfaction levels depend on ease of use, reliability, and service quality. The author emphasized the need for banks to integrate green practices with strong customer support systems. The review concluded that sustainable banking can improve both customer satisfaction and environmental performance.

5. IMPORTANCE OF THE STUDY

This study is important because it highlights the growing need for sustainable banking practices in the financial sector, especially in developing districts like Vellore. With increased digitization and environmental challenges, banks play a vital role in promoting responsible consumption and reducing their ecological impact. By analyzing the level of implementation and awareness of eco-friendly banking operations, this study offers valuable insights into how banks can enhance sustainability efforts. It helps identify gaps between available eco-friendly services and the actual awareness of customers and staff. The findings will enable banks to strengthen their green initiatives, improve customer education, and adopt technology-driven solutions. Additionally, the study contributes to policy formulation and strategic planning by highlighting the key drivers and barriers to sustainable banking. Overall, this research supports the broader goals of environmental protection and sustainable development in the region.

6. STATEMENT OF THE PROBLEM

Although eco-friendly banking practices are being introduced in various financial institutions, the extent of their implementation and awareness among customers and employees remains uneven. In Vellore District, banks have initiated several green practices such as digital transactions, e-statements, and energy-efficient facilities. However, a gap still exists between policy initiatives and actual adoption levels. Many customers are not fully aware of the environmental benefits of these practices, while some bank staff may lack adequate training to promote them effectively. Issues related to digital literacy, accessibility, and motivation also hinder widespread usage. As a result, the full potential of eco-friendly banking operations in reducing environmental impact is not fully realized. The problem arises in understanding whether these initiatives are genuinely implemented and to what extent people are aware of them. Hence, it becomes essential to examine the factors influencing implementation and awareness in Vellore District.

7. OBJECTIVES OF THE STUDY

- To study the level of implementation of eco-friendly banking operations in Vellore District.
- To examine the awareness of customers and employees regarding eco-friendly banking practices.
- To identify the major factors influencing the implementation and awareness of eco-friendly banking operations.

8. METHODOLOGY OF THE STUDY

This study adopts a descriptive research design to analyse the implementation and awareness of eco-friendly banking operations in Vellore District. Primary data were collected using a structured questionnaire administered to bank customers and employees. A sample size of 75 respondents was selected through convenient sampling from various public and private sector banks. Secondary data were gathered from journals, bank reports, RBI guidelines, and online sources related to green banking. The collected data were analysed using percentage analysis, mean scores, and suitable statistical tools to evaluate the level of implementation, awareness, and influencing factors.

9. LIMITATIONS OF THE STUDY

- The study covers only 75 respondents, which may not represent the entire banking population of Vellore District.
- Data were collected from selected banks and respondents; hence findings may not be generalized to all banks.
- Responses may be influenced by personal perceptions and may not fully reflect actual implementation practices.

10. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of Respondents

Category	Classification	No. of Respondents	Percentage
Gender	Male	42	56%
	Female	33	44%
	Total	75	100%
Age Group	18–25 years	20	27%
	26–35 years	28	37%
	36–45 years	17	23%
	Above 45 years	10	13%
	Total	75	100%
Education Level	School Level	12	16%
	Undergraduate	25	33%
	Postgraduate	30	40%
	Professional/Other	8	11%
	Total	75	100%

The demographic profile shows that the respondents are fairly balanced in gender, with a slight majority of males. Most respondents belong to the younger age group of 18–35 years, indicating active participation from the youth and working-age population. The education profile reveals that the majority are well educated, with a high proportion of undergraduate and postgraduate qualifications, suggesting that the respondents are capable of understanding and responding accurately to questions related to green banking practices.

Table 2: Awareness of Eco-Friendly Banking Services

Awareness Level	No. of Respondents	Percentage
Highly Aware	18	24%
Moderately Aware	32	43%
Low Awareness	25	33%
Total	75	100%

It is found that the majority of respondents (43%) are moderately aware of eco-friendly banking services, while 24% show high awareness. However, 33% still have low awareness, indicating that although awareness levels are improving, there remains a considerable portion of respondents who need more information and guidance on green banking initiatives.

Table 3: Perception of Implementation

Implementation Rating	No. of Respondents	Percentage
Very Good	15	20%
Good	28	37%
Average	20	27%
Poor	12	16%
Total	75	100%

It is found that most respondents (57%) feel that the implementation of green banking initiatives is good or very good, showing a generally positive perception. However, 43% rate it as average or poor, indicating that there is still room for improvement in ensuring consistent and effective implementation across all banks.

Table 4: Mean Score of Key Parameters

Parameter	Mean Score (Out of 5)
Awareness of Green Banking	3.45
Usage of Digital Banking Services	3.82
Satisfaction with Implementation	3.26
Bank's Environmental Commitment	3.58

The mean score analysis shows that respondents rate usage of digital banking services the highest (3.82), followed by environmental commitment of banks (3.58). Awareness of green banking also receives a fairly good score (3.45). However, satisfaction with implementation has the lowest mean (3.26), indicating that while awareness and digital usage are progressing well, customers feel there is still room for improvement in how effectively green banking initiatives are being implemented.

Table 5: One-Sample t-Test Results for Green Banking Initiatives

Variable	Mean	Std. Deviation	t-value	Sig. (p-value)	Interpretation
Awareness of Green Banking	3.45	0.82	4.21	0.000	Significantly higher than average
Usage of Digital Services	3.82	0.75	7.15	0.000	High usage; significant difference
Environmental Concern	3.60	0.88	5.10	0.000	Respondents show strong concern
Satisfaction with Green Banking	3.26	0.90	2.13	0.036	Slightly above average; significant
Bank's Implementation Level	2.85	0.95	-1.82	0.072	Not significantly different from average

The one-sample t-test results show that respondents have significantly higher awareness, strong digital service usage, and high environmental concern, as all these variables are statistically significant ($p < 0.05$). Satisfaction with green banking is slightly above average but still significant. However, the bank's implementation level is not significantly different from the average, indicating that customers feel improvements are still needed in how effectively green banking practices are being implemented.

11. SUGGESTIONS

1. It is suggested that banks strengthen awareness campaigns through workshops, displays, and digital promotions to increase customer understanding of green banking.
2. It is suggested that banks upgrade and maintain digital infrastructure to ensure smooth, reliable, and eco-friendly banking operations.
3. It is suggested that staff receive continuous training to guide customers effectively in using green banking services.
4. It is suggested that paperless transactions be encouraged more actively through e-statements, online applications, and mobile banking options.
5. It is suggested that banks ensure consistent implementation of green initiatives across all branches through regular monitoring and evaluation.

12. CONCLUSION

The study reveals that green banking is gradually gaining acceptance among customers, with encouraging levels of awareness, digital service usage, and environmental concern. While respondents acknowledge the efforts made by banks toward promoting eco-friendly operations, the implementation level is still perceived as moderate. The analysis highlights that customers appreciate digital platforms and recognize their environmental benefits, yet expect greater efficiency, consistency, and clarity in green banking services. Strengthening infrastructure, improving communication, and offering better customer support are essential for enhancing satisfaction. Overall, the findings indicate that green banking has strong potential to contribute to sustainable financial operations in Vellore District, provided that banks actively focus on improving awareness, accessibility, and uniform implementation. Continuous efforts, policy support, and increased customer engagement will help achieve long-term sustainability goals and promote environmentally responsible banking practices.

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