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Customer-Centric Analysis of Green Banking Practices and Their Triple Bottom Line Impact: Evidence from Public Sector Banks in Karnataka

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Abstract-- **Green banking has emerged as an important strategy for promoting sustainable development in the banking sector by integrating environmental, social, and economic considerations into banking operations. The present study aims to examine green banking practices from a customer-centric perspective and analyze their impact on the Triple Bottom Line, namely environmental sustainability, social responsibility, and economic performance, in public sector banks in Karnataka.**

The study adopts a descriptive and analytical research design and is based on both primary and secondary data. Primary data were collected through a structured questionnaire from 101 respondents using convenience sampling. The collected data were analyzed using statistical tools such as percentage analysis, mean score analysis, reliability analysis, and regression analysis with the help of SPSS software.

The results indicate that customers have moderate to high awareness of green banking practices and generally hold a positive perception toward environmentally friendly banking initiatives. The findings also reveal that green banking practices contribute positively to environmental protection, customer satisfaction, and operational efficiency. Regression analysis further confirms a significant relationship between green banking practices and Triple Bottom Line outcomes. The study concludes that strengthening green banking initiatives can enhance sustainability and improve the overall performance of banks.

Keywords-- **Green Banking, Sustainability, Triple Bottom Line, Customer Perception, Public Sector Banks.**

I. Introduction

In recent years, sustainability has become a central concern for financial institutions due to increasing environmental risks, social responsibilities, and stakeholder pressure. Banks are no longer viewed merely as financial intermediaries but as catalysts for sustainable development. In this context, green banking has emerged as an important strategy that integrates environmental protection, social responsibility, and economic efficiency into banking operations.

Green banking includes initiatives such as digital and paperless banking, green loans, renewable energy financing, eco-friendly branch operations, green cards, and sustainable investment products.

In India, public sector banks play a dominant role in promoting inclusive and sustainable growth due to their extensive branch networks and alignment with government policies. The Reserve Bank of India has also encouraged sustainable finance through regulatory guidelines and policy frameworks.

Although several public sector banks have introduced green banking initiatives, the real success of these initiatives depends on customer awareness, perception, and adoption. Most prior studies in India and abroad have examined green banking either from a policy perspective, institutional strategy viewpoint, or employee-centric approach. Further, the majority of studies focus only on environmental outcomes and ignore the social and economic dimensions of sustainability.

The Triple Bottom Line (People, Planet, and Profit) framework provides a holistic lens to evaluate sustainability by balancing social well-being, environmental protection, and economic performance. However, empirical studies linking green banking practices to all three dimensions of the Triple Bottom Line from a customer-centric perspective are extremely limited, particularly in the Indian public sector banking context.

Therefore, the present study proposes to analyse green banking practices from a customer-centric perspective and examine their impact on the Triple Bottom Line in a selected public sector bank in Karnataka. This regional focus will help capture ground-level customer responses and provide practical insights into how sustainable banking initiatives translate into real social, environmental, and economic outcomes.

II. Literature Review

Prakash, Kumar & Srivastava (2018), India examined sustainable development readiness of Indian public sector banks using content analysis of sustainability disclosures. The study found that most public sector banks follow defensive or reactive sustainability strategies, indicating limited proactive green initiatives. However, the study was bank-centric and disclosure-focused, without assessing customer perception or Triple Bottom Line outcomes.

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Gulzar et al. (2024), India analysed green banking practices and environmental performance using a survey-based quantitative approach with data collected from bank employees. The findings revealed that operational green practices significantly enhance environmental sustainability. Nevertheless, the study focused only on environmental outcomes, remained employee-centric, and did not evaluate financial or social sustainability dimensions.

Fakruddin & Shekhar (2025), India studied green banking strategies adopted by the State Bank of India using a qualitative case study approach. The study found that SBI has adopted several initiatives such as paperless processes and green financing instruments. However, the research was SBI-specific and descriptive in nature, lacking empirical measurement of customer perception and Triple Bottom Line impact.

Galamadien & Smit (2013), South Africa examined sustainability and Triple Bottom Line reporting practices in the banking industry using content analysis of large corporate disclosures. The study found that TBL reporting is largely voluntary and disclosure levels vary significantly across banks. However, the study focused on reporting practices rather than green banking implementation and did not assess customer-level sustainability outcomes.

Nazma, Bhopal & Devi (2023), India analysed sustainable development using green finance and the Triple Bottom Line framework through a bibliometric review. The study revealed a strong positive association between green finance initiatives and environmental sustainability. However, the study synthesized global literature and did not provide empirical customer-level evidence or integrate regional public sector banking data.

Chen et al. (2022), Bangladesh examined the effect of green banking practices on banks' environmental performance and green financing using an analytical Structural Equation Modelling (SEM) approach. The study found that employee-related, operational, customer-related, and policy-related green banking practices significantly enhance environmental performance and green financing efficiency. However, the study adopted an employee-centric perspective and focused mainly on environmental outcomes, without assessing social and economic sustainability dimensions.

Gazi et al. (2024), Bangladesh analysed the effect of green banking practices on sustainability performance and brand image using a survey-based empirical approach. The findings revealed that green practices positively influence sustainability performance and improve brand image. However, the study did not focus on public sector banks and failed to integrate customer perception with Triple Bottom Line performance measures.

Kalita, Manohar & Sai Vinod (2025), India examined how Indian public sector banks are adopting green banking initiatives using a qualitative comparative review approach. The study found that only about 47% of public sector banks have implemented structured green programs. However, the study was descriptive in nature and did not empirically assess customer-level sustainability outcomes or Triple Bottom Line impacts.

Nassar (2025), Lebanon studied sustainable management for green competitiveness in the banking sector using a doctoral-level empirical framework. The findings revealed that green processes enhance competitive advantage and sustainability performance. However, the study focused on a non-Indian context and did not examine customer-centric or public sector banking dimensions.

III. Research Gap

Despite the growing literature on green banking and sustainability, several gaps remain. Most studies adopt employee- or bank-centric perspectives, with limited focus on customer-centric analysis. Further, prior research mainly emphasizes environmental performance, while the social and economic dimensions of the Triple Bottom Line remain underexplored.

Only a few studies examine the impact of green banking across all three TBL dimensions within a single framework, and research on public sector banks in India, particularly at a regional level like Karnataka, is limited. Many studies are descriptive or institution-specific, lacking broader empirical validation. Additionally, there is limited research on customer perception and its impact on sustainability outcomes. Therefore, this study addresses these gaps by adopting a customer-centric approach and analysing the relationship between green banking practices and Triple Bottom Line outcomes.

IV. Objectives Of The Study

1. To study the level of awareness of customers regarding green banking practices adopted by public sector banks in Karnataka.
2. To examine the perception and attitude of customers towards green banking initiatives implemented by public sector banks in Karnataka.
3. To examine the level of customer usage and experience of green banking services (such as digital banking, paperless transactions, and green products) in public sector banks in Karnataka.
4. To evaluate the perceived environmental, social, and economic impacts of green banking practices among customers.

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To analyse the relationship between green banking practices and Triple Bottom Line outcomes (environmental, social, and economic sustainability) from a customer perspective.

V. Research Methodology

5.1 Research Design

The study adopts a descriptive and analytical research design. The descriptive design is used to understand customer awareness, perception, and usage of green banking practices. The analytical design is used to examine the relationship between green banking practices and sustainability outcomes using statistical tools such as regression analysis.

5.2 Research Approach

The study follows a quantitative approach, with data collected through a structured questionnaire using Likert scale responses. These responses were converted into numerical values for statistical analysis, enabling the use of SPSS to examine relationships between variables.

5.3 Sources of Data Primary Data

Primary data were collected through a structured questionnaire using Google Forms. The questionnaire captured customer awareness, perception, and usage of green banking practices, along with their perceived environmental, social, and economic impacts. A total of 101 valid responses were used for analysis.

Secondary Data

Secondary data was used only to support the literature review and was collected from research articles, journals, academic publications, and relevant online sources on green banking and sustainability. It was not used for statistical analysis in this study.

5.4 Sampling Design

Sampling Method: The study uses convenience sampling, a non-probability technique where respondents are selected based on ease of access and availability. This approach was suitable due to time and resource constraints, allowing quick data collection through platforms like Google Forms. However, as the sample is not randomly selected, it may not fully represent the entire population.

Sample Size: The sample size was determined using Cochran's formula at a 95% confidence level and 5% margin of error, assuming maximum variability, resulting in an ideal size of approximately 384 respondents. However, due to time and response constraints, 101 valid responses were collected.

Despite being smaller than the ideal size, it is considered adequate for statistical analysis and identifying general trends.

Sampling Unit: The sampling unit consists of customers of public sector banks in Karnataka. They are selected as active users of banking services who can provide relevant insights into green banking practices. This helps in understanding real-world adoption, awareness, and perception, ensuring the study reflects the practical impact from a customer perspective.

5.5 Variables of the Study

Independent Variable: Green Banking Practices (Measured through awareness, perception, and usage)

Dependent Variable: Triple Bottom Line (TBL), which includes:

- Environmental impact
- Social impact
- Economic impact

5.6 Tools and Techniques of Analysis

The data collected through the questionnaire were analyzed using descriptive and inferential statistical techniques. Percentage analysis was used to summarize the demographic profile and identify patterns in awareness, perception, and usage of green banking practices, supported by charts and graphical representations.

Further, SPSS was used for statistical analysis, and regression analysis was applied to examine the relationship between green banking practices and sustainability outcomes. This helped analyse the impact of green banking practices (independent variable) on the Triple Bottom Line dimensions-environmental, social, and economic performance (dependent variables)

5.7 Ethical Considerations

The study followed proper ethical standards. Participation was voluntary, with informed consent obtained from respondents. They were informed about the study's purpose, and their responses were kept confidential. No personal or sensitive information was disclosed, and the data were used only for academic purposes, ensuring honesty and transparency in collection, analysis, and interpretation.

Cronbach's Alpha	N of Items
.969	34

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5.8 Reliability of the Study

The reliability of the questionnaire was tested using Cronbach's Alpha, a widely used measure of internal consistency that assesses how closely related a set of items are. The obtained Cronbach's Alpha value of 0.969 for 34 items indicates a very high level of internal consistency.

This suggests that the questionnaire items are reliable and suitable for measuring the variables of the study. Therefore, the data collected is considered reliable for further statistical analysis and interpretation.

5.9 Hypothesis of the Study H0(null hypothesis)

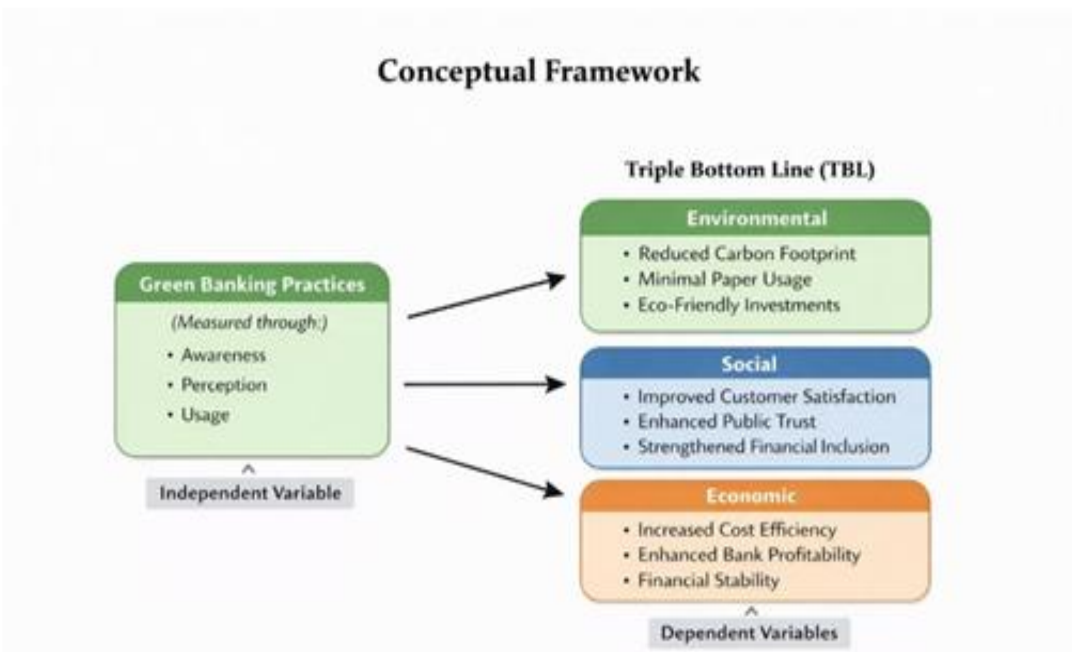
There is no significant relationship between green banking practices and Triple Bottom Line outcomes from a customer perspective in public sector banks in Karnataka.

H1(alternative)

There is a significant relationship between green banking practices and Triple Bottom Line outcomes from a customer perspective in public sector banks in Karnataka.

VI. CONCEPTUAL FRAMEWORK

The study is based on the Triple Bottom Line framework, evaluating sustainability across environmental, social, and economic dimensions. It develops a conceptual framework where green banking practices are the independent variable and TBL outcomes (environmental, social, and economic) are the dependent variables.



The above conceptual framework shows that green banking practices influence sustainability outcomes across three dimensions. The independent variable, green banking practices, is measured through dimensions such as awareness, perception, and usage of green banking services. The dependent variable, Triple Bottom Line, is evaluated through environmental, social, and economic impacts. The framework indicates that increased adoption of green banking practices leads to improved environmental sustainability, enhanced social outcomes such as customer satisfaction and trust, and better economic performance in terms of efficiency and cost savings.

VII. DATA ANALYSIS AND INTERPRETATION

7.1 Demographic analysis

This section presents the demographic profile of the respondents who participated in the study. The variables considered include gender, age group, occupation, and the public sector bank used by the respondents.

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7.1.a. Gender Distribution of Respondents

Gender	Frequency	Percentage
Female	66	65.3%
Male	35	34.7%
Total	101	100%

7.1.b Age Group of Respondents

Age Group	Frequency	Percentage
Below 25	84	83.2%
26–35	15	14.9%
36–45	2	1.9%
46–55	0	0%
55 above	0	0%
Total	101	100%

7.1.c. Occupation of Respondents

Occupation	Frequency	Percentage
Student	78	77.2%
Private Employee	18	17.8%
Government Employee	1	1.0%
Business	3	3.0%
Others	1	1.0%
Total	101	100%

7.1.d. Public Sector Bank Used by Respondents

Bank	Frequency	Percentage
Canara Bank	50	49.5%
State Bank of India	39	38.6%
Bank of Baroda	17	16.8%
Union Bank of India	12	11.9%
Bank of India	8	7.9%
Bank of Maharashtra	6	5.9%
Indian Bank	5	5%
Punjab National Bank	3	3%
Indian Overseas Bank	3	3%
Central Bank of India	2	2%

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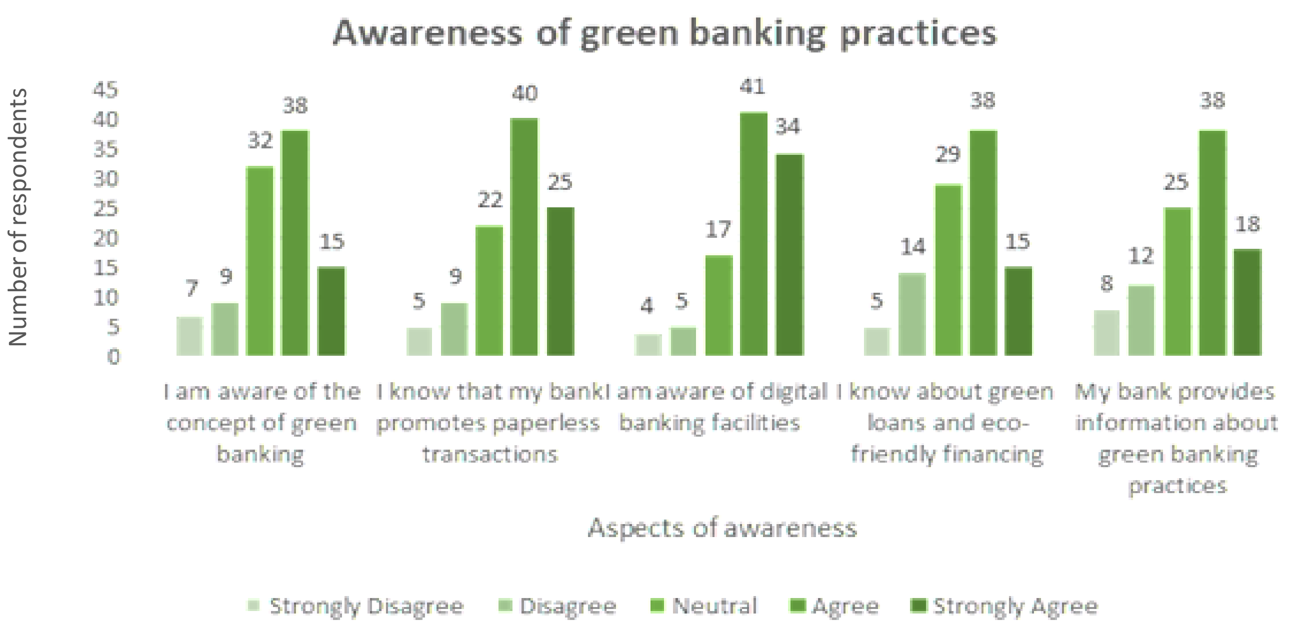
Overall Interpretation of Demographic Profile

The demographic profile indicates that the sample is predominantly composed of young individuals, with a significant majority belonging to the below 25 age group. A higher proportion of respondents are female, suggesting greater participation from this segment. In terms of occupation, most respondents are students, reflecting a young and educated population that is likely to be more familiar with digital banking services. With respect to banking preferences, the majority of respondents are associated with leading public sector banks such as Canara Bank and State Bank of India. Overall, the sample represents a digitally active and informed customer base, making it suitable for examining awareness, usage, and perception.

7.2 Awareness of Green Banking Practices

This section examines the level of awareness among customers regarding green banking practices adopted by public sector banks in Karnataka. The analysis is based on responses collected using a five-point Likert scale, where 1 represents strongly disagree and 5 represents strongly agree. The results are presented below.



Interpretation

The findings indicate that customers exhibit a moderate to high level of awareness of green banking practices. A high level of awareness is observed for digital banking services such as mobile and internet banking, as well as paperless transactions, showing strong familiarity with commonly used practices.

However, awareness of the overall concept of green banking and information provided by banks is moderate. Awareness of specialized products such as green loans and eco-friendly financing is relatively low to moderate, with many respondents showing neutral or lower agreement.

Overall, while customers show high awareness of basic digital practices, awareness of specific green initiatives remains limited, highlighting the need for improved communication by banks.

7.3. Customer Perception and Attitude toward Green Banking

This section analyses customer perception and attitude toward green banking initiatives implemented by public sector banks. The responses were collected using a five-point Likert scale, where 1 represents strongly disagree and 5 represents strongly agree. The results are presented below.

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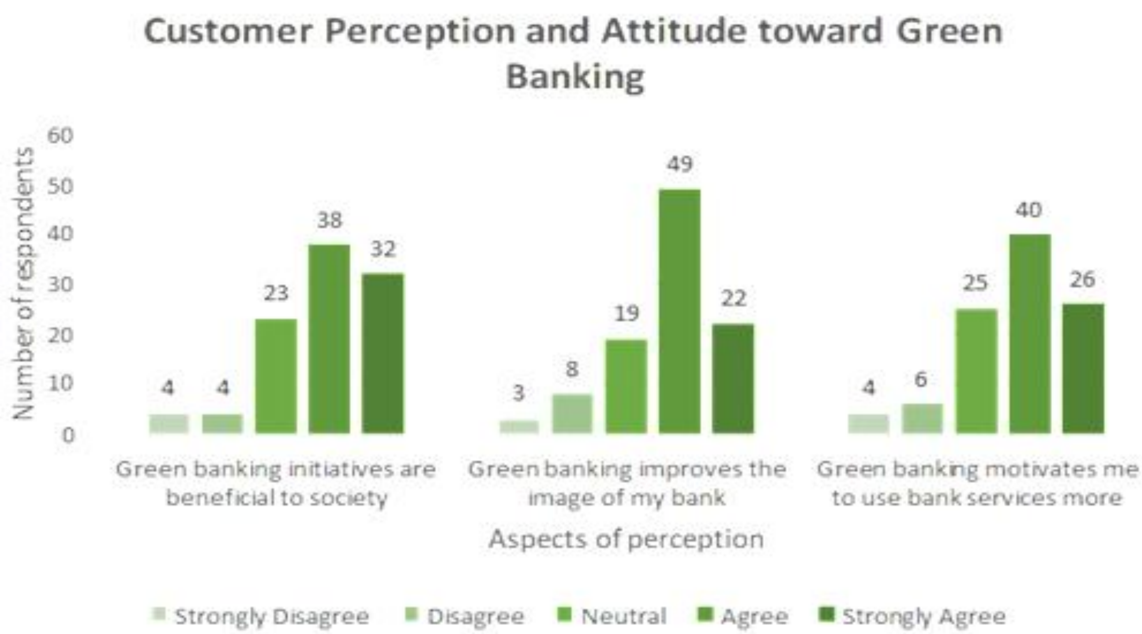

Interpretation

The results indicate that customers generally hold a positive perception toward green banking initiatives. A large proportion of respondents agreed that green banking initiatives are beneficial to society, suggesting that customers recognize the environmental and social importance of sustainable banking practices.

Similarly, many respondents agreed that green banking improves the image and reputation of their bank, indicating that environmentally responsible initiatives enhance customer perception of banking institutions. In addition, a considerable number of respondents stated that green banking motivates them to use banking services more frequently.

Overall, the findings suggest that customers perceive green banking practices positively and believe that such initiatives contribute to both societal welfare and the reputation of banks.

7.3 Usage and Experience of Green Banking Services

This section analyses the extent to which customers use and experience green banking services provided by public sector banks. The responses were measured using a five-point scale, where 1 represents "Never" and 5 represents "Always." The results are presented below.

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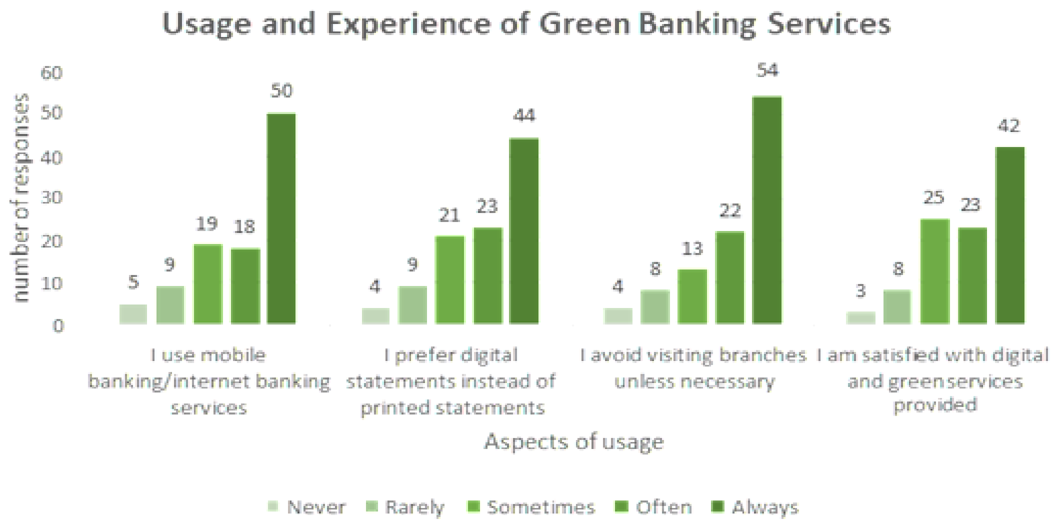


Interpretation

The findings indicate that customers exhibit a high level of usage and positive experience with green banking services provided by public sector banks. A high level of usage is observed for mobile and internet banking, as many respondents reported using these services often or always, reflecting strong adoption of digital platforms.

Similarly, there is a high preference for digital statements over printed ones, indicating a shift toward paperless and environmentally friendly practices. The results also show strong behavioural adoption, as most respondents prefer to avoid branch visits and rely on digital channels. However, satisfaction levels are moderate to high, with some neutral responses.

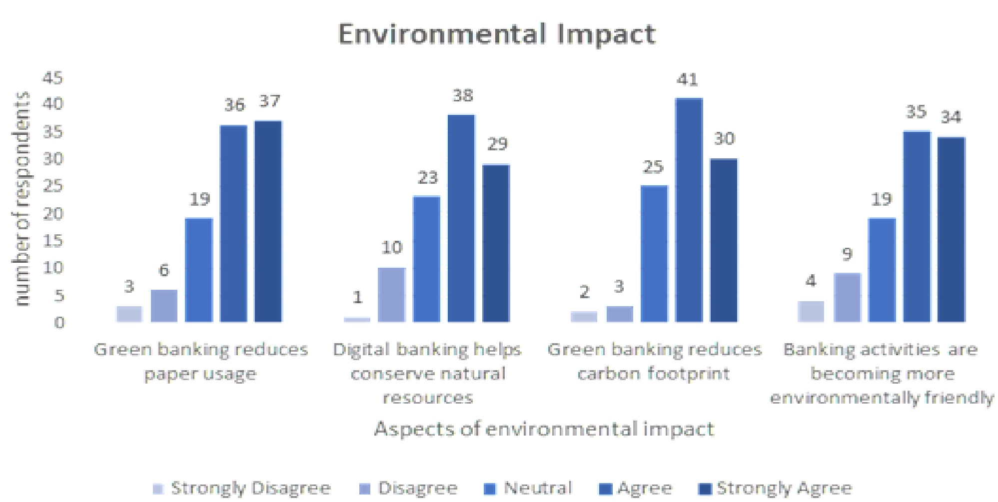
Overall, customers demonstrate high usage and generally positive experience, supporting the growing acceptance of sustainable banking practices.

7.5 Perceived Triple Bottom Line Impact

Green banking practices contribute to sustainability through three key dimensions known as the Triple Bottom Line, namely environmental (planet), social (people), and economic (profit) impacts. This section evaluates customers' perceptions regarding these sustainability outcomes using a five-point Likert scale where 1 being strongly disagree and 5 being strongly agree.

7.5.1 Environmental Impact (Planet)

This section examines customer perceptions regarding the environmental benefits of green banking practices.



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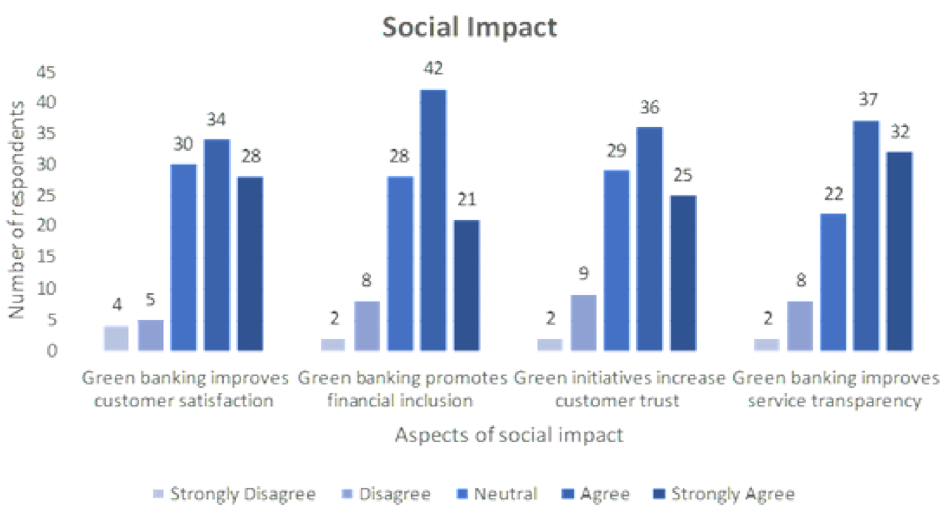
Interpretation

The results indicate that customers perceive green banking practices as contributing positively to environmental sustainability. A large proportion of respondents agreed that green banking helps reduce paper usage, showing that customers recognize the role of digital banking in minimizing paper consumption.

Similarly, respondents agreed that digital banking helps conserve natural resources and reduce carbon footprint, reflecting awareness of environmental benefits. Customers also believe that banking activities are becoming more environmentally friendly due to digital and paperless services. Overall, the findings suggest that green banking is viewed as an effective tool for promoting environmental sustainability and reducing the ecological impact of banking operations.

7.5.2 Social Impact (People)

This section examines customer perceptions regarding the social impact of green banking practices. Social sustainability refers to the ability of banking practices to enhance customer satisfaction, financial inclusion, trust, and transparency in banking services.



Interpretation

The results indicate that customers perceive green banking practices as contributing positively to social sustainability. A majority of respondents agreed that green banking improves customer satisfaction and enhances the overall banking experience.

Respondents also believe that green banking promotes financial inclusion by enabling easier access through digital platforms. The findings further show that green initiatives increase customer trust and improve service transparency by allowing easier access to information and transactions. Overall, green banking practices contribute positively to social sustainability by improving satisfaction, trust, and transparency.

7.5.3 Economic Impact (Profit)

This section examines customers' perceptions regarding the economic impact of green banking practices. Economic sustainability refers to the ability of green banking practices to improve efficiency, reduce transaction costs, save time and money, and enhance the reputation of banks.

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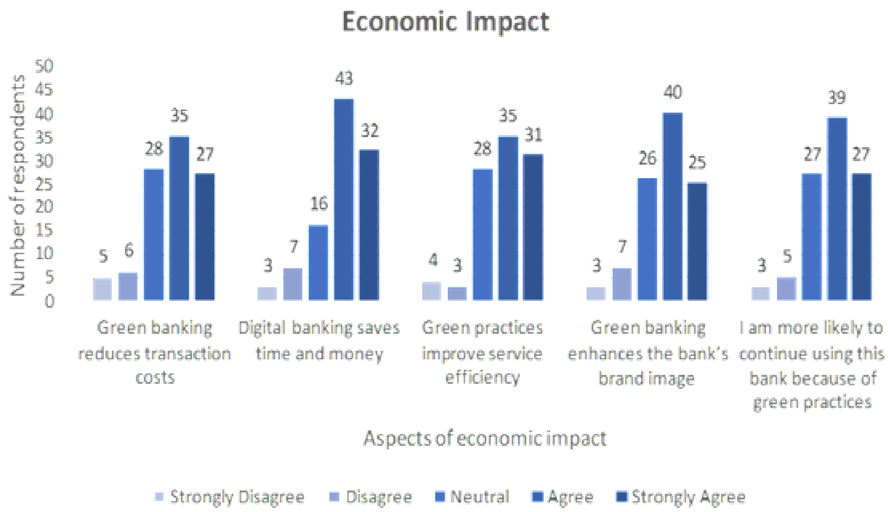

Interpretation

The findings indicate that customers perceive green banking practices as positively impacting the economic performance of banks. Respondents agreed that green banking reduces transaction costs, improves service efficiency, and saves time through faster transactions, highlighting the cost-effectiveness of digital platforms.

Customers also believe that green banking enhances the bank's brand image and influences their continued usage, supporting long-term relationships.

Overall, green banking contributes to the economic dimension by improving efficiency, reducing costs, and strengthening reputation.

7.6. Hypothesis testing

7.6.1 Regression analysis

To examine the relationship between green banking practices and Triple Bottom Line outcomes, regression analysis was conducted.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.816ª	.666	.663	.482

Interpretation

The model summary indicates that the R value of 0.816 reflects a strong positive relationship between green banking practices and Triple Bottom Line outcomes. The R Square (R^2) value of 0.666 shows that approximately 66.6% of the variation in sustainability outcomes is explained by green banking practices, indicating a high explanatory power of the model. The Adjusted R Square value of 0.663 further confirms the reliability of the model.

Additionally, the standard error of the estimate (0.482) suggests that the model has a reasonable level of accuracy in predicting the dependent variable.

7.6.1 ANOVA

To test the overall significance of the regression model, ANOVA analysis was performed. The results of the ANOVA test are presented in the table below.

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ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.895	1	45.895	197.552	.000[b]
	Residual	23.000	99	.232		
	Total	68.895	100			
a. Dependent Variable: TBL						
b. Predictors: (Constant), green banking practices						

Interpretation

The ANOVA results indicate that the F-value of 197.552 is significantly high, suggesting that the regression model is strong and meaningful. The significance value ($p = 0.000$) is less than the standard threshold of 0.05, which confirms that the model is statistically significant.

This implies that the relationship between green banking practices and Triple Bottom Line outcomes is not due to random chance.

Therefore, the regression model is valid and suitable for analysing the relationship between the variables.

7.6.3 coefficients

To examine the impact of green banking practices on Triple Bottom Line outcomes, the coefficients of the regression model were analyzed. The results are presented in the table below.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.790	.220		3.593	.001
	Green banking practices	.797	.057	.816	14.055	.000
a. Dependent Variable: TBL						

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Interpretation

The coefficients table shows that green banking practices have a positive and statistically significant impact on Triple Bottom Line outcomes. The unstandardized coefficient (B = 0.797) indicates that a one-unit increase in green banking practices increases sustainability outcomes by 0.797. The standardized coefficient (Beta = 0.816) confirms a strong positive relationship, and the high t-value (14.055) indicates significant influence. The significance value ($p = 0.000 < 0.05$) confirms statistical reliability. Overall, green banking practices play a key role in improving environmental, social, and economic performance.

7.6.4 Hypothesis decision

Null Hypothesis (H_0)

There is no significant relationship between green banking practices and Triple Bottom Line outcomes from a customer perspective.

Alternative Hypothesis (H_1)

There is a significant relationship between green banking practices and Triple Bottom Line outcomes from a customer perspective.

Decision

Since the significance value ($p = 0.000$) is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted

VIII. Findings Of The Study

1. The study reveals that customers exhibit a moderate to high level of awareness regarding green banking practices, with higher awareness observed in digital banking services such as mobile and internet banking.
2. Awareness of paperless transactions is relatively high among customers, indicating familiarity with basic environmentally friendly banking practices.
3. However, awareness regarding specialized green products, such as green loans and eco-friendly financing, is comparatively low to moderate, suggesting a gap in communication by banks.
4. The findings indicate that customers have a positive perception and attitude toward green banking initiatives, recognizing their benefits to society and environmental sustainability.
5. Customers believe that green banking practices enhance the image and reputation of banks and contribute to responsible banking.
6. The study shows that customers demonstrate a high level of usage of green banking services, particularly digital banking platforms, reflecting strong adoption of technology-driven banking.
7. Customers also exhibit a high level of behavioural adoption, such as preferring digital statements and avoiding physical branch visits, indicating a shift toward paperless banking.
8. The findings reveal that customers perceive a moderately high to high environmental impact of green banking practices, particularly in reducing paper usage and conserving natural resources.
9. Green banking practices are perceived to have a positive social impact, including improved customer satisfaction, increased trust, enhanced transparency, and better financial inclusion.
10. The study indicates that green banking contributes positively to the economic dimension, including cost reduction, time savings, improved efficiency, and enhanced bank reputation.
11. The regression analysis confirms that there is a strong and statistically significant relationship between green banking practices and Triple Bottom Line outcomes.
12. Overall, the study finds that green banking practices play a significant role in promoting environmental sustainability, social well-being, and economic efficiency from a customer perspective.

IX. Suggestions

1. Public sector banks should increase awareness campaigns regarding green banking practices, especially focusing on specialized services such as green loans and eco-friendly financing.
2. Banks should conduct customer education programs and workshops to improve understanding of sustainable banking initiatives and their benefits.
3. Greater efforts should be made to promote digital banking adoption among customers who are less familiar with technology, ensuring inclusive participation.
4. Banks should enhance communication strategies, including notifications, emails, and in-app messages, to inform customers about green banking services.
5. Public sector banks should introduce incentives and rewards to encourage customers to adopt paperless and environmentally friendly banking practices.
6. Banks should continuously improve the quality, security, and user-friendliness of digital platforms to enhance customer satisfaction and trust.

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7. There is a need to strengthen green financing initiatives, such as loans for renewable energy and sustainable projects, to increase customer participation.
8. Banks should focus on building long-term customer relationships by promoting sustainability as a core value and aligning their services with customer expectations.

X. Limitations Of The Study

1. The study is based on a relatively small sample size of 101 respondents, which may limit the generalizability of the findings.
2. The research uses convenience sampling, which may introduce sampling bias and may not fully represent the entire population of bank customers.
3. The study is limited to public sector banks in Karnataka, and therefore, the findings may not be applicable to private sector banks or other regions.
4. The study focuses only on selected aspects of green banking practices and may not cover all possible dimensions of sustainable banking.
5. Time constraints and limited resources may have affected the depth of data collection and analysis.

XI. Conclusion

The present study examined green banking practices from a customer-centric perspective and analyzed their impact on the Triple Bottom Line, including environmental, social, and economic dimensions, in public sector banks in Karnataka. The findings reveal that customers exhibit a moderate to high level of awareness and a positive perception toward green banking initiatives. There is also a high level of usage of digital banking services, indicating a growing shift toward paperless and environmentally friendly banking practices.

The study further highlights that green banking practices contribute positively to environmental sustainability by reducing paper usage and conserving natural resources. In addition, they enhance social outcomes such as customer satisfaction, trust, and transparency, while also improving economic efficiency through cost and time savings.

The regression analysis confirms a strong and statistically significant relationship between green banking practices and Triple Bottom Line outcomes.

Overall, the study concludes that green banking practices play a crucial role in promoting sustainable development in the banking sector. Strengthening these initiatives and improving customer awareness can further enhance the effectiveness of sustainable banking practices and contribute to long-term environmental, social, and economic benefits.

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