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AWARENESS TOWARDS GREEN BANKING - A STUDY ON COOPERATIVE BANKS

Dr Jay Desai, MS Janki Prajapati

Assistant Professor BK School of Management Gujarat University Ahmedabad

Research Scholar BK School of Management Gujarat University

Abstract

Green banking has emerged as a crucial aspect of sustainable development, encouraging environmentally responsible banking practices. This study explores green banking practices in selected cooperative banks of Gujarat, focusing on awareness levels among stakeholders and the impact of demographic factors on green banking initiatives. The research employs a quantitative approach, utilizing ANOVA to examine variations in awareness levels based on branch location, CEO/manager age, service tenure, and number of staff members. The findings suggest that branch location significantly influences awareness regarding RBI programs, branch banking, and internet banking. Similarly, service tenure impacts awareness of RBI initiatives, while staff size influences RBI awareness programs and branch banking introductions. However, basic banking functions and internet banking awareness appear to be uniformly promoted across demographic groups. The study highlights the need for cooperative banks to implement standardized green banking awareness programs to bridge disparities across locations and tenure groups. Managerial implications suggest targeted training programs and uniform policy implementation to enhance green banking adoption. The research contributes to the understanding of sustainable banking practices in cooperative banks, providing valuable insights for policymakers and banking institutions.

Keywords: *Green Banking, Green Finance, Cooperative Banks, Sustainable Finance, Banking Awareness*

1. INTRODUCTION

In recent years, environmental sustainability has emerged as a global priority, and the banking sector plays a crucial role in promoting eco-friendly practices. Green banking is a concept that integrates sustainable development with financial activities by encouraging paperless banking, digital transactions, and eco-friendly loan policies. It aims to minimize the negative environmental impact of banking operations while fostering investment in green projects such as renewable energy and carbon footprint reduction (Choudhary & Raju, 2020). Cooperative banks, which primarily serve rural and semi-urban populations, have a unique opportunity to promote green banking due to their close customer relationships and grassroots presence (Reddy, 2021). However, despite its significance, awareness and adoption of green banking practices remain limited in this sector.

Green banking is an essential component of sustainable development, as it helps mitigate climate change risks and reduces environmental degradation. By influencing industries and individuals through green financial products and services, banks contribute to the global sustainability agenda (Mishra, 2022). Cooperative banks, being customer-centric and community-focused, can drive green banking initiatives effectively. However, their limited technological adoption, lack of regulatory guidance, and insufficient awareness among employees and customers hinder the successful implementation of these practices (Sharma & Verma, 2020).

Although green banking offers numerous benefits, awareness among cooperative banks and their customers remains low. The primary objective of this study is to examine the level of awareness regarding green banking in cooperative banks and analyze the factors that influence its adoption. Additionally, the study seeks to identify the barriers faced by cooperative banks in implementing green banking initiatives and suggest strategies to enhance their participation in sustainable banking practices. The key research questions explored in this study include: What is the level of awareness of green banking among cooperative banks? What factors influence the adoption of green banking? What challenges do cooperative banks face in implementing green banking?

This study focuses on selected cooperative banks in Gujarat to evaluate their awareness and adoption of green banking practices. The findings of the study will be useful for policymakers, bank officials, and other stakeholders in formulating strategies to enhance green banking awareness and implementation. The research is structured into seven chapters, beginning with an introduction, followed by a literature review, research methodology, data analysis, findings, and concluding with recommendations for promoting green banking in cooperative banks.

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2. LITERATURE REVIEW

2.1 Introduction to Green Banking Literature

Green banking has emerged as a significant approach in the banking sector, integrating financial activities with environmental sustainability. It involves adopting eco-friendly policies, promoting digital transactions, and encouraging green financing. Various studies have explored the importance of green banking in mitigating environmental degradation and fostering sustainable economic growth. Researchers have examined its role in reducing carbon footprints through paperless banking, energy-efficient banking operations, and investments in green projects (Choudhary & Raju, 2020). While commercial banks have been at the forefront of green banking initiatives, cooperative banks have been relatively slow in adopting these practices due to various structural and operational challenges.

2.2 Evolution of Green Banking Practices

The concept of green banking has evolved over the past few decades as financial institutions worldwide recognize their role in environmental conservation. Initially, green banking focused on reducing operational impacts, such as minimizing paper usage and implementing energy-efficient infrastructure. Over time, banks expanded their green initiatives by offering environment-friendly loan products, supporting renewable energy projects, and incorporating Environmental, Social, and Governance (ESG) criteria into their lending decisions (Singh & Pandey, 2019). In developed economies, stringent regulatory frameworks and public awareness have accelerated green banking adoption, whereas in developing countries like India, the process has been slower due to financial and infrastructural constraints.

2.3 Green Banking in India and Global Perspective

Globally, green banking practices have gained momentum with regulatory bodies enforcing sustainability guidelines for financial institutions. In developed countries, banks actively participate in green financing, carbon trading, and sustainable investment funds. In contrast, India has seen a gradual adoption of green banking, primarily driven by regulatory frameworks introduced by the Reserve Bank of India (RBI) and other financial institutions. The RBI has encouraged banks to integrate sustainability into their operations through policies such as priority sector lending for renewable energy projects and green credit lines (Mishra, 2022). Despite these efforts, Indian banks, particularly cooperative banks, lag in implementing comprehensive green banking strategies due to limited resources and lack of awareness.

2.4 Awareness and Adoption of Green Banking in Cooperative Banks

Awareness of green banking is a critical factor in its successful implementation. Studies indicate that while large commercial banks have undertaken significant green banking initiatives, cooperative banks often lack the knowledge and infrastructure to follow suit (Sharma & Verma, 2020). A limited understanding of green banking benefits among bank employees and customers has contributed to slow adoption rates. Cooperative banks, which primarily serve rural and semi-urban populations, face additional challenges in spreading awareness due to low digital literacy and traditional banking habits among their clientele. However, with the growing push for sustainable development, cooperative banks are beginning to recognize the potential of green banking in enhancing their competitiveness and contributing to environmental goals.

2.5 Factors Influencing Green Banking Awareness

Several factors influence the awareness and adoption of green banking practices. Regulatory policies play a crucial role in shaping banking practices, and banks with clear sustainability guidelines tend to perform better in green banking initiatives (Reddy, 2021). Additionally, technological advancements, digital banking services, and eco-friendly banking infrastructure contribute to greater awareness and implementation. Consumer behavior is another critical factor, as customers' preference for green banking services depends on their environmental consciousness and digital literacy. Training programs for bank employees and targeted awareness campaigns can also significantly enhance green banking adoption.

2.6 Challenges and Barriers in Implementing Green Banking

Despite the benefits of green banking, its implementation faces several challenges, particularly in cooperative banks. A significant barrier is the lack of awareness among both bank employees and customers, which results in low adoption rates. Additionally, cooperative banks often struggle with limited financial resources and outdated technological infrastructure, making it difficult to integrate green banking practices (Sharma & Verma, 2020). Regulatory compliance and the absence of well-defined sustainability guidelines further hinder the growth of green banking in this sector. Resistance to change, coupled with customers' preference for traditional banking methods, poses another challenge to widespread adoption. Addressing these barriers requires a collaborative approach involving financial institutions, regulatory bodies, and policymakers.

2.7 Research Gaps Identified

Although various studies have explored green banking practices, there are still gaps in understanding its adoption among cooperative banks. Most research focuses on commercial banks, with limited studies addressing the unique challenges faced by cooperative banks in implementing green banking initiatives. There is also a lack of empirical studies examining customer awareness and perceptions of green banking in the cooperative banking sector. Furthermore, the effectiveness of existing policies and initiatives in promoting green banking among cooperative banks remains underexplored. This study aims to bridge these research gaps

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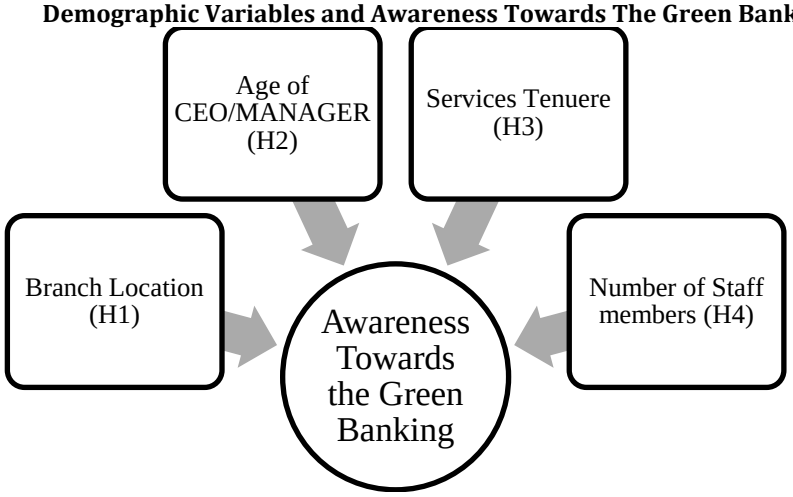
by assessing the level of awareness, challenges, and opportunities for green banking in selected cooperative banks in Gujarat.

3. RESEARCH METHODOLOGY

The study employs a descriptive research design to analyze the level of awareness, influencing factors, and challenges faced in implementing green banking. A survey-based approach is used, collecting primary data through structured questionnaires from bank employees of selected cooperative banks in Gujarat. Secondary data is obtained from research papers, banking reports, and regulatory guidelines.
The study follows a random sampling technique, selecting cooperative banks based on their operational scale and regional presence. The sample size consists of approximately 200 respondents, ensuring a balanced representation. Data analysis techniques such as descriptive statistics, correlation, and regression analysis are applied to interpret the findings. Ethical considerations, including respondent confidentiality and unbiased data collection, are strictly maintained. This methodology ensures a comprehensive understanding of green banking awareness in cooperative banks.

3.1. Research Framwork:

Demographic Variables and Awareness Towards The Green Banking



Hypothesis:

$H1_0$: There is no significant differences of mean between branch location and awareness towards green banking factors.
$H1_1$: There is significant differences of mean between branch location and awareness towards green banking factors.
$H2_0$: There is no significant differences of mean between age of CEO/Manager and awareness towards green banking factors.
$H2_1$: There is significant differences of mean between age of CEO/Manager and awareness towards green banking factors.
$H3_0$: There is no significant differences of mean between service tenure and awareness towards green banking factors.
$H3_1$: There is significant differences of mean between service tenure and awareness towards green banking factors.
$H4_0$: There is no significant differences of mean between number of staff members and awareness towards green banking factors.
$H4_1$: There is significant differences of mean between number of staff members and awareness towards green banking factors.

4.0. DATA ANALYSIS

Table:1_Demographic Data		%
Location of the Branch	Rural Area	47
	Semi Urban	14
	Urban	40
	Total	100

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Age of the CEO/MANAGER Of the Branch	18-25 Years	3
	26-40 Years	58
	41-58 Years	38
	Above 58 Years	2
	Total	**100**
Services in years	0-10 Years	31
	11-20 Years	51
	21-30 Years	12
	30 and Above Years	7
	Total	**100**
Total Clerical Staff Members at Branch Level.	3-10 EMPLOYEES	92
	11-20 EMPLOYEES	3
	ABOVE 30 EMPLOYEES	6
	Total	100

The demographic table provides insights into the characteristics of cooperative bank branches, covering branch location, age of the CEO/manager, years of service, and total clerical staff at the branch level.

1. Location of the Branch

- 47% of the branches are located in rural areas, indicating that cooperative banks primarily cater to rural populations, aligning with their objective of financial inclusion.
- 40% of the branches are in urban areas, showing a strong presence in cities and towns where financial services are more structured.
- 14% of the branches operate in semi-urban areas, suggesting a smaller but significant presence in developing regions.

This distribution highlights that cooperative banks play a crucial role in both rural and urban economies, though their semi-urban penetration is relatively low.

2. Age of the CEO/Manager of the Branch

- The majority (58%) of CEOs/managers fall within the 26-40 years age group, reflecting a younger leadership base that may be more adaptable to modern banking innovations such as green banking.
- 38% of managers are aged 41-58 years, indicating that a significant proportion of leaders bring extensive experience to their roles.
- Only 3% of CEOs/managers are between 18-25 years, showing that very few young professionals hold top managerial positions.
- A small proportion (2%) of managers are above 58 years, suggesting that most leadership transitions occur before retirement age.

3. Years of Service in the Bank

- 51% of employees have been in service for 11-20 years, indicating a stable and experienced workforce.
- 31% of employees have served for 0-10 years, suggesting that new talent is continuously entering the sector.
- Only 12% of employees have 21-30 years of experience, and 7% have served 30 years or more, showing that long-term retention rates are relatively lower.

This distribution highlights that while cooperative banks have a good balance of new and experienced employees, very few individuals stay in service beyond three decades.

4. Total Clerical Staff Members at the Branch Level

- The majority (92%) of cooperative bank branches have a small workforce of 3-10 employees, indicating a lean operational structure.
- Only 3% of branches have 11-20 employees, suggesting that larger staffing models are rare.
- 6% of branches have more than 30 employees, showing that only a few cooperative banks operate on a larger scale.

This suggests that most cooperative bank branches function with limited human resources, which may pose challenges in implementing green banking initiatives that require training and technological adaptation.

ANOVA Test: Demography * Awareness

H1: ANOVA Test to know the DIFFERENCE OF MEANS between Branch location and awareness towards the green banking

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$H1_0$: There is no significant differences of mean between branch location and awareness towards green banking factors.
$H1_1$: There is significant differences of mean between branch location and awareness towards green banking factors.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
"The bank provides information about basic functions and services to its customers.	Between Groups	.696	2	.348	1.085	.340
	Within Groups	63.179	197	.321		
	Total	63.875	199			
Does your bank run any RBI awareness programme?	Between Groups	.279	2	.140	3.717	.026
	Within Groups	7.401	197	.038		
	Total	7.680	199			
Gives introduction to any branch banking	Between Groups	6.061	2	3.030	6.411	.002
	Within Groups	93.119	197	.473		
	Total	99.180	199			
Spreads Awareness of Internet Banking to its Existing and New Customers	Between Groups	3.226	2	1.613	3.456	.033
	Within Groups	91.929	197	.467		
	Total	95.155	199			

The ANOVA analysis presented examines whether there is a significant association between branch location and awareness of green banking factors. The null hypothesis (H_0) states that there is no significant association between branch location and awareness of green banking factors, while the alternative hypothesis (H_1) suggests that there is a significant association.

The first variable, "The bank provides information about basic functions and services to its customers," has an F-value of 1.085 and a p-value of 0.340. Since the p-value is greater than 0.05, the result is not statistically significant. This means that the provision of information about basic banking functions does not significantly differ based on branch location, implying that banks likely follow a uniform approach in educating customers about their services.

The second variable, "Does your bank run any RBI awareness programme?" has an F-value of 3.717 and a p-value of 0.026. Since the p-value is less than 0.05, the result is statistically significant. This indicates that there is a significant difference in how RBI awareness programs are conducted across different branch locations. Some branches may be more proactive in implementing these programs, while others may not focus as much on RBI-mandated awareness initiatives.

For the third variable, "Gives introduction to any branch banking," the F-value is 6.411, with a p-value of 0.002. This p-value is well below 0.05, indicating a highly significant difference among branch locations. This suggests that the introduction to branch banking varies significantly depending on the location, possibly due to differences in customer demographics, local banking policies, or operational strategies.

The fourth variable, "Spreads awareness of Internet Banking to its Existing and New Customers," has an F-value of 3.456 and a p-value of 0.033. Since this p-value is less than 0.05, the result is statistically significant, indicating that branch location plays a role in how internet banking awareness is promoted. Certain branches may be more active in educating customers about online banking services, while others may not prioritize it as much.

The ANOVA results indicate that three out of the four factors—RBI awareness programs, branch banking introductions, and internet banking awareness—show significant differences across branch locations. This suggests that customer awareness of these banking practices is influenced by branch location, supporting the alternative hypothesis (H_1). However, the provision of basic banking information does not significantly differ by location, indicating that banks maintain consistency in this aspect.

These findings highlight the need for banks to standardize their efforts in promoting RBI awareness programs, branch banking introductions, and internet banking education across all locations to ensure uniform customer awareness and engagement with green banking initiatives.

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H2: ANOVA Test to know the DIFFERENCE OF MEANS between age of CEO/Manager and awareness towards the green banking

$H2_0$: There is no significant differences of mean between age of CEO/Manager and awareness towards green banking factors.
$H2_1$: There is significant differences of mean between age of CEO/Manager and awareness towards green banking factors.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
"The bank provides information about basic functions and services to its customers.	Between Groups	.637	3	.212	.658	.579
	Within Groups	63.238	196	.323		
	Total	63.875	199			
Does your bank run any RBI awareness programme?	Between Groups	.188	3	.063	1.641	.181
	Within Groups	7.492	196	.038		
	Total	7.680	199			
Gives introduction to any branch banking	Between Groups	4.273	3	1.424	2.942	.034
	Within Groups	94.907	196	.484		
	Total	99.180	199			
Spreads Awareness of Internet Banking to its Existing and New Customers	Between Groups	3.229	3	1.076	2.295	.079
	Within Groups	91.926	196	.469		
	Total	95.155	199			

The ANOVA (Analysis of Variance) results presented in the table help to determine whether there are significant differences between groups regarding various aspects of banking practices. The significance (p-value) in the table indicates whether the differences between groups are statistically significant.
For the first variable, "The bank provides information about basic functions and services to its customers," the F-value is 0.658, and the corresponding p-value is 0.579. Since the p-value is greater than the standard significance level of 0.05, it suggests that there is no statistically significant difference between the groups. This implies that the provision of basic banking information does not vary significantly among the different groups analyzed.
Similarly, for the second variable, "Does your bank run any RBI awareness programme?", the F-value is 1.641, with a p-value of 0.181. Again, since the p-value exceeds 0.05, there is no significant difference in the responses among the groups. This indicates that awareness programs initiated by banks under RBI guidelines are uniformly conducted across different groups without notable variation.
However, for the third variable, "Gives introduction to any branch banking," the ANOVA results show an F-value of 2.942, with a p-value of 0.034. Since the p-value is less than 0.05, it suggests a statistically significant difference among the groups. This means that different groups have varied experiences regarding branch banking introductions, which could be due to differences in bank policies, customer engagement strategies, or regional practices.
Lastly, for the fourth variable, "Spreads awareness of Internet Banking to its Existing and New Customers," the F-value is 2.295, with a p-value of 0.079. Although this value is closer to the 0.05 threshold, it is still greater than 0.05, indicating that the differences among groups are not statistically significant. This suggests that efforts to promote internet banking awareness do not significantly vary across different groups.
The ANOVA analysis reveals that among the four banking practices examined, only the introduction to branch banking shows a significant difference among the groups. The other three factors—providing information about basic functions, running RBI awareness programs, and spreading awareness of internet banking—do not exhibit statistically significant differences. This analysis highlights that while most banking awareness and education initiatives are consistent across groups, branch banking introductions may be influenced by factors such as location, customer demographics, or bank-specific policies.

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H3: ANOVA Test to know the DIFFERENCE OF MEANS between service tenure and awareness towards the green banking

$H3_0$: There is no significant differences of mean between service tenure and awareness towards green banking factors.
$H3_1$: There is significant differences of mean between service tenure and awareness towards green banking factors.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
"The bank provides information about basic functions and services to its customers.	Between Groups	.895	3	.298	.929	.428
	Within Groups	62.980	196	.321		
	Total	63.875	199			
Does your bank run any RBI awareness programme?	Between Groups	.525	3	.175	4.794	.003
	Within Groups	7.155	196	.037		
	Total	7.680	199			
Gives introduction to any branch banking	Between Groups	2.501	3	.834	1.690	.170
	Within Groups	96.679	196	.493		
	Total	99.180	199			
Spreads Awareness of Internet Banking to its Existing and New Customers	Between Groups	3.296	3	1.099	2.344	.074
	Within Groups	91.859	196	.469		
	Total	95.155	199			

The ANOVA analysis presented examines whether service tenure has a significant impact on awareness towards green banking factors. The null hypothesis (H_0) states that there is no significant association between service tenure and awareness of green banking factors, while the alternative hypothesis (H_1) suggests that there is a significant association.

For the first variable, "The bank provides information about basic functions and services to its customers," the F-value is 0.929, with a p-value of 0.428. Since the p-value is greater than 0.05, the result is not statistically significant. This suggests that awareness of basic banking functions does not significantly vary based on the service tenure of employees or customers, indicating that this information is likely provided consistently regardless of tenure.

For the second variable, "Does your bank run any RBI awareness programme?" the F-value is 4.794, with a p-value of 0.003. Since the p-value is less than 0.05, the result is statistically significant. This indicates that there is a significant difference in awareness of RBI awareness programs based on service tenure. Employees or customers with different service tenures may have varying levels of exposure to or participation in these programs, suggesting that tenure influences awareness in this area.

For the third variable, "Gives introduction to any branch banking," the F-value is 1.690, with a p-value of 0.170. Since the p-value is greater than 0.05, this result is not statistically significant. This means that awareness of branch banking introductions does not significantly differ based on service tenure, implying that banks likely offer branch banking introductions in a uniform manner across different tenure groups.

For the fourth variable, "Spreads Awareness of Internet Banking to its Existing and New Customers," the F-value is 2.344, with a p-value of 0.074. While this p-value is relatively close to 0.05, it is still greater than the threshold, meaning the result is not statistically significant. This suggests that awareness of internet banking services does not differ significantly based on service tenure.

Among the four factors analyzed, only RBI awareness programs show a statistically significant difference based on service tenure. This supports the alternative hypothesis (H_1) in this specific case, indicating that tenure influences awareness of RBI awareness programs. However, for the other three factors—providing information about basic banking functions, introduction to branch banking, and internet banking awareness—there is no significant difference, meaning service tenure does not play a major role in these areas.

These findings suggest that banks should focus on making RBI awareness programs more uniformly accessible across different tenure groups while maintaining their existing approaches for other awareness initiatives.

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H4: ANOVA Test to know the DIFFERENCE OF MEANS between number of staff members and awareness towards the green banking

$H4_0$: There is no significant differences of mean between number of staff members and awareness towards green banking factors.
$H4_1$: There is significant differences of mean between number of staff members and awareness towards green banking factors.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
"The bank provides information about basic functions and services to its customers.	Between Groups	.239	2	.120	.370	.691
	Within Groups	63.636	197	.323		
	Total	63.875	199			
Does your bank run any RBI awarenes programme ?	Between Groups	.567	2	.283	7.846	.001
	Within Groups	7.113	197	.036		
	Total	7.680	199			
Gives introduction to any branch banking	Between Groups	4.648	2	2.324	4.843	.009
	Within Groups	94.532	197	.480		
	Total	99.180	199			
Spreads Awareness of Internet Banking to its Existing and New Customers	Between Groups	.088	2	.044	.091	.913
	Within Groups	95.067	197	.483		
	Total	95.155	199			

The ANOVA analysis examines whether the number of staff members in a bank has a significant impact on awareness towards green banking factors. The null hypothesis (H_0) states that there is no significant association between the number of staff members and awareness of green banking factors, while the alternative hypothesis (H_1) suggests that such an association exists.
For the first variable, "The bank provides information about basic functions and services to its customers," the F-value is 0.370, with a p-value of 0.691. Since the p-value is much greater than 0.05, the result is not statistically significant. This implies that the awareness level regarding basic banking functions does not significantly vary based on the number of staff members, suggesting that banks follow a consistent approach in disseminating this information regardless of staff size.
For the second variable, "Does your bank run any RBI awareness programme?" the F-value is 7.846, with a p-value of 0.001. Since the p-value is less than 0.05, this result is statistically significant. This indicates that the number of staff members influences the implementation or awareness of RBI awareness programs. Banks with different staff sizes may differ in their ability to conduct awareness programs, possibly due to variations in training resources, workforce capacity, or institutional priorities.
For the third variable, "Gives introduction to any branch banking," the F-value is 4.843, with a p-value of 0.009. As this p-value is also below 0.05, the result is statistically significant. This suggests that the introduction to branch banking differs based on the number of staff members. It is possible that branches with more staff are better equipped to provide detailed introductions to branch banking, whereas smaller branches may have limited capacity for such initiatives.
For the fourth variable, "Spreads awareness of Internet Banking to its Existing and New Customers," the F-value is 0.091, with a p-value of 0.913. Since the p-value is much greater than 0.05, the result is not statistically significant. This suggests that awareness of internet banking does not significantly depend on the number of staff members, implying that banks may be using standardized digital or automated methods to spread awareness, reducing dependency on staff size.
The ANOVA results reveal that RBI awareness programs and branch banking introductions show a statistically significant association with the number of staff members, supporting the alternative hypothesis (H_1) for these two factors. This suggests that banks with different staff sizes have varying capacities to promote these initiatives. However, the other two factors—providing basic banking information and spreading awareness of

internet banking—do not show significant differences, implying that these awareness efforts are relatively uniform across banks with varying staff sizes.

5. FINDINGS

5.1. Findings from the Demographic Data

Based on the demographic data, the following key findings have been observed regarding the structure and workforce composition of cooperative banks:

- ***Dominance in Rural Areas*** – A significant 47% of branches are located in rural areas, indicating that cooperative banks primarily cater to rural populations. While 40% of branches are in urban areas, the semi-urban presence is relatively low at 14%, suggesting a potential area for expansion.
- ***Young and Experienced Leadership*** – The majority (58%) of CEOs/managers are aged 26-40 years, indicating a balance between youthful leadership and experience. Additionally, 38% are in the 41-58 years range, highlighting the presence of seasoned professionals. However, very few managers (3%) are under 25 years, and only 2% are above 58 years, suggesting a structured leadership transition process.
- ***Stable and Experienced Workforce*** – More than half (51%) of employees have been in service for 11-20 years, ensuring institutional knowledge and expertise. A substantial 31% have 0-10 years of experience, reflecting the entry of new talent into the cooperative banking sector. However, long-term retention beyond 30 years is relatively low (7%), indicating a moderate rate of senior workforce attrition.
- ***Limited Staff at Branch Level*** – A vast majority (92%) of cooperative bank branches operate with 3-10 clerical staff members, suggesting a lean workforce structure. This could impact service efficiency and limit the banks' ability to adopt resource-intensive innovations like green banking. Only 6% of branches have more than 30 employees, indicating that large-scale operations are rare in cooperative banks.

5.2. Findings from ANOVA

The ANOVA tests were conducted to assess whether various demographic factors, such as branch location, age of the CEO/Manager, service tenure, and the number of staff members, influence awareness of green banking practices. The results of these tests provided valuable insights into the role of these factors in shaping customer awareness of different aspects of green banking.

Impact of Branch Location on Awareness of Green Banking

The results indicate that branch location does not significantly impact the dissemination of basic banking information to customers, suggesting a uniform approach across branches. However, branch location has a significant impact on awareness of RBI awareness programs ($p = 0.026$), introduction to branch banking ($p = 0.002$), and awareness of internet banking ($p = 0.033$). This suggests that certain branches are more proactive in implementing awareness initiatives related to RBI programs, customer onboarding to branch banking, and digital banking services. The variation in awareness levels across branches indicates that localized strategies and resources may influence the effectiveness of green banking education.

Impact of CEO/Manager's Age on Awareness of Green Banking

The findings suggest that the CEO/Manager's age does not significantly impact awareness of basic banking information ($p = 0.579$), RBI awareness programs ($p = 0.181$), or internet banking awareness ($p = 0.079$). However, there is a significant impact on the introduction to branch banking ($p = 0.034$), implying that the experience and leadership style of managers influence how customers are introduced to branch banking operations. This suggests that younger and older managers may adopt different engagement strategies, affecting customer interactions and information dissemination.

Impact of Service Tenure on Awareness of Green Banking

The ANOVA results show that service tenure does not significantly impact awareness of basic banking information ($p = 0.428$), introduction to branch banking ($p = 0.170$), or awareness of internet banking ($p = 0.074$). However, a significant impact is observed in the case of awareness of RBI awareness programs ($p = 0.003$). This indicates that employees with longer service tenures may have greater exposure to and understanding of RBI-related green banking initiatives, allowing them to communicate these effectively to customers. The results suggest that employee experience plays a role in the effectiveness of regulatory awareness efforts.

Impact of Number of Staff Members on Awareness of Green Banking

The number of staff members does not significantly influence awareness of basic banking information ($p = 0.691$) or internet banking awareness ($p = 0.913$). However, it does have a significant impact on awareness of RBI awareness programs ($p = 0.001$) and introduction to branch banking ($p = 0.009$). This suggests that branches with a larger workforce may have more resources and structured programs for RBI initiatives and

customer onboarding processes. The presence of more employees might enable better communication and outreach efforts, ensuring that customers are well-informed about branch banking and regulatory programs.
The findings indicate that while branch location significantly influences awareness of RBI awareness programs, branch banking introductions, and internet banking, the CEO/Manager's age only impacts awareness of branch banking introductions. Service tenure plays a role in awareness of RBI programs, whereas the number of staff members affects awareness of RBI awareness programs and branch banking introductions. Based on these results, banks should focus on standardizing RBI awareness programs across all branches to ensure consistent customer education. Additional support should be provided to branches with fewer staff members to enhance their branch banking introduction efforts. Moreover, training programs should emphasize internet banking awareness across all locations to mitigate inconsistencies. Future research could further explore best practices adopted by high-performing branches and implement them across the network to improve overall green banking awareness.

6. CONCLUSION

This study aimed to assess awareness towards green banking among cooperative banks by analyzing key demographic factors and conducting ANOVA tests to examine variations in awareness across different groups.
The demographic analysis provided crucial insights into the distribution of bank branches across rural, semi-urban, and urban areas, as well as the age and experience of branch managers and staff. The majority of cooperative banks are led by managers aged between 26-40 years, with most having 11-20 years of service experience. This indicates a relatively young and experienced leadership, which could influence the adoption of green banking initiatives. Additionally, most branches operate with a smaller clerical staff (3-10 employees), highlighting possible resource limitations in promoting green banking awareness effectively.
The ANOVA findings revealed significant differences in awareness levels based on branch location, service tenure, and the number of staff members. While the provision of basic banking information remained consistent across all groups, factors such as RBI awareness programs, introduction to branch banking, and internet banking awareness varied significantly among different locations, tenures, and staff sizes. These findings suggest that awareness and implementation of green banking practices are not uniform and are influenced by branch-specific characteristics.
In alignment with the research objectives, the study highlights the gaps in green banking awareness and identifies key factors affecting its adoption in cooperative banks. The results emphasize the need for tailored awareness programs and standardized banking policies to ensure equal access to green banking knowledge across all branches. Strengthening training initiatives, especially in branches with fewer staff and in rural areas, can bridge the awareness gap and enhance the overall adoption of sustainable banking practices.\

7. MANAGERIAL IMPLICATIONS

The findings of this study provide valuable managerial insights for cooperative banks to enhance their green banking initiatives. Given the significant variation in awareness levels across different demographics and branch locations, bank managers must implement targeted awareness programs, especially in rural areas, where knowledge of green banking practices may be lower. Standardizing green banking practices across all branches is essential, ensuring uniformity in the promotion of RBI awareness programs, branch banking introductions, and internet banking services. Staff training and capacity building should be prioritized, as variations in awareness based on service tenure and staff size indicate that well-trained employees are key to successful green banking implementation. Additionally, banks should integrate technology-driven awareness mechanisms such as digital banking applications, online tutorials, and automated customer education programs to bridge gaps in internet banking adoption. Leadership training is also crucial, as the age and experience of bank managers influence their ability to drive green banking initiatives. Strengthening customer engagement through community outreach, workshops, and advisory services will further encourage sustainable banking behaviors. By adopting a structured and strategic approach, cooperative banks can improve awareness, increase customer participation, and drive the successful adoption of green banking, contributing to both environmental sustainability and long-term financial inclusion.

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