GREEN MICRO FINANCE: A NEW HORIZON FOR MICROFINANCE INSTITUTIONS IN INDIA

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ABSTRACT

This research paper investigates the perceptions of employees within Microfinance Institutions (MFIs) regarding green microfinance initiatives and their impact on the overall operational and financial performance of these institutions. The study employs Likert-based surveys to gauge employee perspectives on the integration of environmentally sustainable practices, exploring aspects such as image enhancement, relationship influence, organizational values alignment, and perceived contributions to environmental responsibility. The findings reveal overwhelmingly positive perceptions among employees, suggesting a favorable environment for the implementation of green microfinance initiatives within MFIs. Additionally, the study identifies correlations between these perceptions and indicators of operational efficiency, financial stability, and resource efficiency, providing valuable insights for both the microfinance industry and policymakers.

Keywords: *Green Microfinance, Employee Perceptions, Microfinance Institutions, Operational Efficiency, Financial Performance, Environmental Sustainability, Likert Scale, Organizational Values, Image Enhancement, Resource Efficiency.*

Introduction

In the realm of microfinance institutions (MFIs) in India, the emergence of Green Micro Finance represents a pivotal paradigm shift. This burgeoning concept is not merely an evolution of traditional microfinance practices but rather an innovative approach that intertwines financial inclusion with environmental sustainability. As we delve into this exploration, it becomes evident that Green Micro Finance has the potential to redefine the trajectory of MFIs, offering a new horizon that aligns economic progress with ecological responsibility. India, with its diverse economic landscape and myriad socio-environmental challenges, serves as a fertile ground for the inception of Green Micro Finance. The conventional microfinance sector has played a pivotal role in uplifting marginalized communities by providing financial resources and empowering individuals to break the shackles of poverty. However, the relentless pursuit of economic development has often come at the cost of environmental degradation, posing a significant threat to the very communities microfinance intends to uplift. The introduction of Green Micro Finance signifies a departure from this dichotomy, envisioning a future where financial prosperity is intricately woven with environmental stewardship. This paradigm shift is not only a response to the pressing need for sustainable practices but also a proactive strategy to address the vulnerabilities of the economically disadvantaged, who are disproportionately affected by climate change and environmental degradation. At its core, Green Micro Finance embodies the ethos of sustainable development, seeking to strike a delicate balance between economic growth and ecological preservation. This innovative model acknowledges the interconnectedness of financial well-being and environmental health, recognizing that the two are not mutually exclusive but rather mutually reinforcing. By incorporating eco-friendly practices into the microfinance framework, Green Micro Finance aims to create a synergistic relationship between poverty alleviation and environmental conservation. The journey of Green Micro Finance unfolds against the backdrop of a changing global consciousness, where discussions on climate change, sustainability, and social responsibility have gained unprecedented prominence. In this context, the introduction of environmentally conscious financial services in the microfinance sector reflects a timely response to the imperatives of the 21st century.

Green Microfinance Institutions (MFIs) have the potential to implement a range of initiatives

that align their operations with environmentally sustainable practices. One significant avenue is renewable energy financing, where these institutions can provide microloans to individuals and businesses for investments in solar panels, wind turbines, or biogas systems. This not only promotes access to clean and sustainable energy for off-grid communities but also contributes to reducing the carbon footprint. Another crucial aspect involves financing energy-efficient technologies and appliances. Green MFIs can support the adoption of energy-efficient cookstoves, LED lighting, and cooling systems. By encouraging businesses to invest in technologies that reduce energy consumption, these institutions play a role in fostering sustainable practices and environmental responsibility. In the agricultural sector, green microfinance can promote and finance eco-friendly practices such as organic farming and permaculture. Microloans can be extended for the adoption of sustainable irrigation systems and water conservation practices, contributing to environmentally conscious agricultural activities.

Waste management initiatives represent another area of focus. Green MFIs can fund projects related to waste recycling and management, supporting businesses or individuals involved in eco-friendly waste disposal, composting, or recycling initiatives. The concept of green housing loans is integral to promoting sustainable living. Green MFIs can offer microfinance solutions for the construction or retrofitting of energy-efficient and environmentally friendly homes. This involves encouraging the use of sustainable building materials and energy-saving technologies. Microfinance institutions can also contribute to climate-resilient livelihoods by supporting microenterprises engaged in activities such as eco-tourism, sustainable forestry, or climate-smart agriculture. Financial assistance can be provided to businesses adapting to the challenges posed by climate change. Engaging in carbon credit projects is another avenue for green microfinance. By financing initiatives that reduce greenhouse gas emissions and collaborating with eligible organizations, these institutions contribute to both environmental and financial sustainability. In addition to financial support, green MFIs can invest in environmental education and training programs. These initiatives enhance environmental awareness within communities and provide training on sustainable practices for both clients and staff. Water and sanitation projects represent a crucial focus area for green microfinance. Financing projects that improve access to clean water and sanitation facilities, along with initiatives addressing water conservation and sustainable water management, contribute to broader environmental goals. Furthermore, green microfinance can fund projects aimed at biodiversity conservation, supporting initiatives related to sustainable forestry, wildlife conservation, or habitat restoration. Encouraging businesses to attain green certifications is another strategy. By providing financial incentives, green MFIs support microenterprises in obtaining certifications that validate their commitment to environmental sustainability. Implementing these diverse initiatives enables green microfinance institutions to contribute significantly to the twin objectives of financial inclusion and environmental sustainability, fostering positive impacts on clients and the environment alike.

Review of Literature

Allet and Hudon (2015) conducted a pioneering study examining the characteristics of microfinance institutions (MFIs) engaged in environmental management, shedding light on a crucial aspect of the evolving microfinance landscape. In recent years, the paradigm of microfinance has expanded beyond traditional financial and social objectives to incorporate environmental considerations. This empirical investigation, based on a sample of 160 MFIs worldwide, provides valuable insights into the traits of institutions actively addressing their environmental bottom line. The findings indicate that larger MFIs and those registered as banks exhibit superior performance in environmental policy and risk assessment. Additionally, the study reveals that more mature MFIs tend to demonstrate enhanced environmental performance, particularly in the provision of green microcredit and non-financial environmental services. Notably, the authors observe that financial performance is not significantly correlated with environmental

performance, challenging the notion that 'green' MFIs are inherently more or less profitable than their counterparts. This scholarly work contributes essential knowledge to the discourse on microfinance institutions, providing a foundation for understanding the characteristics that define environmentally conscious practices. As the microfinance sector in India explores the horizon of Green Micro Finance, this literature review draws upon Allet and Hudon's insights to underscore the importance of considering institutional characteristics, maturity, and financial structure in shaping environmentally responsible microfinance initiatives on the Indian subcontinent.

Huybrechs, Bastiaensen, and Van Hecken (2019) critically examine the potential contribution of green microfinance to sustainability transformations. Green microfinance, with its dual focus on environmental objectives alongside traditional financial and social goals, represents an evolving frontier in the microfinance landscape. The review highlights a critical gap in understanding whether and how these instruments contribute to tangible social-ecological changes at the grassroots level. It also underscores the nascent nature of green microfinance practices, which sometimes adopt individualistic economic framings of social-ecological dynamics, possibly perpetuating structures that reinforce social exclusion and environmental degradation. The authors advocate for a comprehensive and power-sensitive approach to the theory and practice of green microfinance, emphasizing the need for a systemic understanding to unravel its true potential in fostering sustainability transformations. As the concept of Green Micro Finance emerges as a new horizon for microfinance institutions in India, the insights from Huybrechs et al.'s review prompt a critical evaluation of the systemic and power dynamics inherent in the adoption and implementation of environmentally conscious microfinance practices on the Indian subcontinent.

Forcella and Hudon (2016) contribute to the understanding of green microfinance by examining its presence in the European context. While microfinance institutions (MFIs) have traditionally been associated with developing countries, this study sheds light on the emerging and underexplored microfinance sector in Europe. Analyzing the environmental performance of 58 European MFIs, the research identifies key factors influencing their ecological practices. The study reveals a significant relationship between the size of the MFI, investor concern for environmental performance, and to a lesser extent, donor interest, with the institution's environmental performance. Additionally, the provision of loans beyond microcredits is found to be associated with better environmental performance, suggesting that cross-subsidies from these larger loans may contribute to strengthening the environmental bottom line of MFIs. Importantly, the study dismisses the notion that profit status alone explains environmental performance, emphasizing the multifaceted factors shaping the ecological stance of European MFIs. As Green Micro Finance gains traction globally, insights from Forcella and Hudon's examination of European MFIs provide valuable considerations for the evolving landscape of environmentally conscious microfinance institutions in India, offering a comparative perspective that enriches the discourse on sustainable financial practices.

Abdur Rouf (2012) contributes to the discourse on green microfinance by examining its role in promoting green enterprise development. Focused on microcredit and renewable energy programs, the paper engages in a comparative analysis of the Grameen Bank and credit systems in Bangladesh with Alterna Savings credit programs in Canada. The study assesses the impact of these initiatives on Toronto's local living economics and environmental development. The findings highlight the positive influence of such programs on environmental sustainable development. The originality of the research lies in addressing the underserved area of green microfinancing and green micro business development, which has received comparatively less attention from various public, private, and non-governmental organizations. The paper explores the potential of introducing market-based green business development in Canada, drawing inspiration from the successful models of the Grameen

Bank and its sister organizations. As the concept of Green Micro Finance emerges as a new horizon for microfinance institutions in India, insights from Rouf's research can inform discussions and strategies for integrating environmentally sustainable practices into the microfinance landscape, providing a valuable perspective on the potential impact of such initiatives.

Allet (2014) investigates the motivations behind microfinance institutions (MFIs) embracing environmental sustainability, marking a notable shift in the industry's focus beyond financial and social objectives. The study, utilizing both quantitative data from a survey of 160 MFIs and qualitative insights from semi-structured interviews with 23 top managers, employs the ecological responsiveness model by Bansal and Roth (2000) for analysis. The findings reveal that MFIs driven primarily by legitimation (stakeholder pressure) tend to adopt a defensive approach, implementing superficial and reactive strategies to project a green image. In contrast, those motivated by social responsibility exhibit a more proactive and innovative stance, developing tailored financial and non-financial services to actively promote environmentally friendly practices. As the landscape of microfinance in India explores the realms of Green Micro Finance, Allet's study serves as a valuable resource for understanding the diverse motivations that drive MFIs toward environmental sustainability, offering insights that can inform the development and implementation of similar initiatives in the Indian microfinance sector.

Atahau et al. (2021) contribute to the intersection of gender equality, renewable energy, and microfinance in their study focusing on East Sumba. With women's empowerment recognized as the fifth sustainable development goal (SDG 5) and renewable energy development as the seventh (SDG 7: Affordable and clean energy), the paper explores the dynamics in empowering women in this context. Specifically, it investigates the role of rural microfinance institutions (MFIs) in facilitating women's empowerment through the management of energy resources. Employing Partial Least Squares-Structural Equation Model (PLS-SEM) with bootstrapping technique and Sobel test, the study assesses the direct and mediated effects of renewable energy on women's empowerment via green MFIs. The findings affirm a direct relationship between renewable energy and green MFIs, providing empirical evidence of the mediating role played by green MFIs. This underscores the sustainability of green MFIs operating based on a gender mainstreaming integration model in the renewable energy sector. The study's implications extend to the pro-gender policies of local governments, emphasizing the importance of aligning renewable energy availability with supportive measures such as the development of green MFIs. As the concept of Green Micro Finance gains prominence, this study offers valuable insights into the mediating role of green microfinance in promoting gender equality through renewable energy integration, providing a nuanced perspective for considerations in similar contexts, including the evolving landscape of microfinance in India.

Nugroho et al. (2017) delve into the challenges faced by Microfinance Institutions (MFIs) in their efforts to empower micro and small entrepreneurs towards incorporating environmentally sustainable practices. The study, situated in Indonesia, a developing country grappling with environmental degradation exacerbated by micro and small entrepreneurs, recognizes the pivotal role that MFIs play in achieving a balance between profit objectives and social and environmental considerations. The paper addresses three key research questions: (i) the role of MFIs in environmental preservation, (ii) the influence of corporate governance in MFIs, and (iii) the implementation of corporate governance in MFIs to empower micro-entrepreneurs in adopting green activities, drawing evidence from Indonesia. The research underscores the multifaceted nature of the challenge, emphasizing the need for a commitment to corporate governance within MFIs to ensure compliance with sustainability concerns. The study advocates for a conscious alignment with Act No. 1 of 2013, emphasizing the importance of not only having regulations but also fostering a collective awareness among all stakeholders regarding the compliance and

implementation of green activities. As the concept of Green Micro Finance gains prominence globally, the insights from this study provide a pertinent perspective, offering considerations for the development and implementation of environmentally conscious practices within the microfinance sector, particularly in the context of the challenges faced by micro and small entrepreneurs in developing countries like Indonesia.

Moser, Barbosa, and Gonzalez (2016) contribute to the discourse on environmentally sustainable financial services with their exploration of "Green Microfinance," positioning it as a novel frontier for inclusive financial services. In the context of climate change and associated disruptions, the study delineates two fundamental concepts: adaptation and mitigation. Adaptation involves adjustments in natural and/or human systems to respond to actual or anticipated climatic stimuli, aiming to moderate harms or exploit benefits arising from climate change. On the other hand, mitigation entails human interventions to reduce greenhouse gas emissions and enhance their removal from the atmosphere. While mitigation instruments traditionally operate at national or international levels, the paper suggests that Microfinance Institutions (MFIs) have a role in promoting low-scale clean energy financing, including biofuels and solar energy. Moreover, MFIs can participate in the carbon credit market to finance site-specific mitigation projects. The study emphasizes the potential for strategic partnerships with specialized agencies for project preparation in this regard. As Green Micro Finance emerges as a new frontier in financial services globally, the insights from Moser et al.'s work provide a foundation for understanding the role of MFIs in addressing climate change through both adaptation and mitigation strategies. These considerations are relevant for the ongoing discourse on inclusive financial services, particularly in the context of environmental sustainability in the microfinance sector.

Archer and Jones-Christensen (2011) present an examination of the integration of environmental concern into microfinance practices, specifically focusing on Asian microfinance institutions (MFIs). Acknowledging the proliferation of microfinance as a tool for poverty alleviation and support for small-scale entrepreneurs, the article explores four rationales for incorporating environmental considerations into microfinance. The study proposes a typology categorizing microfinance sustainability initiatives as preserving, evolving, sustaining, or restoring. The research, based on a binomial descriptive content analysis of publicly available lending criteria from 40 Asian MFIs, members of the Banking with the Poor Network across various countries, sheds light on the prevalence of 'green microfinance.' Despite viable rationales supporting the proliferation of environmentally conscious microfinance, the study finds that very few MFIs actually embed such a commitment into the structure of their financial products. This discrepancy raises concerns about the potential impact on the environment, suggesting that current microfinance practices in Asia may neglect environmental considerations, potentially endangering the well-being of the very people the microfinance system aims to assist. The study positions itself as investigative and advocates for replication in other regions. Nevertheless, it highlights critical contradictions within current microfinance practices and suggests strategic redirections for the microfinance field in Asia and beyond. As Green Micro Finance gains prominence as a vehicle for sustainable development, this study's findings underscore the importance of aligning microfinance practices with environmental considerations and offer insights that can inform strategic shifts in the microfinance landscape, not only in Asia but globally.

Uddin et al. (2021) contribute to the discourse on Green Microfinance with a focus on its role in promoting Sustainable Development Goals (SDGs) in Bangladesh. The paper highlights the encouragement for Microfinance Institutions (MFIs) to provide green microfinance as a means to foster environmentally friendly practices for substantial financial development aligned with SDGs. The study specifically explores the relationship between profitability and green microfinancing among MFIs in Bangladesh. The paper not only observes the intersection of

microfinance and SDGs but also underscores the significance of green microfinancing in contributing to the SDGs. The findings suggest a strong alignment between the essential aspects of green microfinancing and the goals outlined in the SDGs. The research investigates the extent to which MFIs in Bangladesh have adopted green microfinancing, providing insights into the future trajectory of green microfinancing and its potential impact on SDGs in the context of Bangladesh. This study is positioned as one of the first to critically examine green microfinance from the perspectives of MFIs, offering valuable insights for organizations and policymakers in assessing the role and contribution of MFIs in addressing environmental issues in Bangladesh. Additionally, the meticulous evaluation of adherence to existing green microfinance policy makes this research a potential blueprint for encouraging the development of green MFIs in Bangladesh. As Green Micro Finance emerges as a catalyst for sustainable development, this study provides essential considerations for the integration of environmental objectives within the microfinance sector, particularly in the context of Bangladesh.

In conclusion, the synthesized literature review offers a comprehensive exploration of the evolving realm of Green Micro Finance (GMF) and its intertwining with microfinance institutions (MFIs) globally. The reviewed studies illuminate the drivers, obstacles, and potential contributions of MFIs engaged in environmentally sustainable practices, revealing an increasing acknowledgment within the microfinance sector of the necessity to address ecological concerns alongside traditional financial and social goals. The groundbreaking study in environmental management provides crucial insights into the traits of actively engaged MFIs in environmental management, emphasizing the multifaceted nature of their initiatives. The research underscores the significance of institutional characteristics, maturity, and financial structure in shaping environmentally responsible microfinance practices. The critical examination highlights a notable gap in understanding the concrete social-ecological changes brought about by green microfinance, stressing the necessity for a systemic and power-sensitive approach to unlock its true potential. Exploration of European MFIs contributes a comparative perspective, emphasizing factors influencing ecological practices and dismissing the notion that profit status alone explains environmental performance. Research on green enterprise development provides a unique cross-cultural comparison, drawing on successful models to explore the potential of market-based green business development. Investigation into the motivations of MFIs reveals the diverse drivers behind their embrace of environmental sustainability, distinguishing between defensive and proactive approaches. The study at the intersection of gender equality, renewable energy, and microfinance offers valuable insights into the mediating role of green microfinance in empowering women. Exploration of challenges faced by MFIs in Indonesia underlines the importance of corporate governance in ensuring compliance with sustainability concerns. Study on Green Microfinance as a frontier for inclusive financial services emphasizes the role of MFIs in both adaptation and mitigation strategies in the face of climate change. Investigations into Asian MFIs reveal a concerning discrepancy between viable rationales and the actual embedding of environmental commitment in financial products. Study in Bangladesh focuses on the alignment between profitability and green microfinancing, contributing to the understanding of the potential impact of GMF on Sustainable Development Goals (SDGs). Together, these studies provide a rich tapestry of insights into the multifaceted dimensions of GMF. Despite the valuable contributions of the reviewed literature, a notable research gap emerges. There is a need for more empirical studies that rigorously evaluate the actual impact of GMF initiatives on environmental sustainability and social well-being at the grassroots level. Existing studies often highlight motivations, challenges, and institutional characteristics, but a comprehensive assessment of the tangible outcomes and effectiveness of GMF initiatives remains limited. Future research should focus on longitudinal studies and impact assessments that measure the real-world implications of

GMF practices on the ground, considering factors such as community well-being, environmental conservation, and economic sustainability. Moreover, while the literature presents insights from various regions, there is a lack of comprehensive cross-regional studies that compare the effectiveness of GMF initiatives in diverse socio-economic and environmental contexts. Understanding the contextual factors that influence the success or challenges of GMF practices across different regions can contribute to the development of more tailored and effective strategies. In summary, the current literature provides a solid foundation for understanding the motivations and characteristics of GMF initiatives. However, to bridge the existing research gap, future studies should focus on rigorous impact assessments and cross-regional comparisons to advance our understanding of the real-world implications and effectiveness of Green Micro Finance in achieving its environmental and social objectives.

Objectives

1. To study the perception of the employees working in Microfinance Institutions regarding green microfinance.
2. To study the impact of green microfinance initiatives on the overall operational and financial performance of Microfinance Institutions.

Hypotheses

H1: There is a positive perception of the employees working in Microfinance Institutions regarding green microfinance.
H2: Implementation of green microfinance initiatives has a positive impact on the overall operational and financial performance of Microfinance Institutions.

Research Methodology

In this quantitative research study, a structured survey methodology was employed to investigate the perceptions of employees in Microfinance Institutions (MFIs) regarding green microfinance. The study utilized a stratified random sampling technique to select 258 employees from different levels within the MFIs. A well-designed questionnaire was administered to collect data on employees' perceptions, incorporating Likert scale items to measure the extent of agreement or disagreement. The survey instrument underwent pre-testing to ensure clarity and reliability. Data collection occurred through face-to-face interviews and electronic surveys, depending on the convenience of the participants. The collected data were subjected to statistical analysis, including descriptive statistics and inferential tests, to draw conclusions about the employees' perceptions of green microfinance. Additionally, the study explored the impact of green microfinance initiatives on the overall operational and financial performance of the MFIs. The research design and methodology aimed to provide a comprehensive understanding of both employee perspectives and the organizational outcomes associated with green microfinance initiatives within the targeted MFIs.

Data Analysis

Table 1. Age

		Freq.	%
Valid	18-30 years	19	7.4
	30-40 years	166	64.3
	40-50 years	48	18.6
	50-60 years	17	6.6
	Above 60 years	8	3.1
	Total	258	100.0

Table 1 presents the distribution of respondents based on their age groups. The majority of participants, constituting 64.3%, fell within the 30-40 years category, indicating a significant representation from this age bracket. The second-largest group was individuals aged 40-50 years, comprising 18.6% of the total respondents. Those aged 18-30 years constituted 7.4% of the participants, followed by respondents in the 50-60 years age group with a representation of 6.6%. The smallest proportion was observed among participants above 60 years, accounting for 3.1% of the total. This age-wise breakdown provides insights into the demographic composition of the surveyed individuals, emphasizing the prevalence of respondents in the 30-40 years age range in this study.

Table 2. Gender

		Freq.	%
Valid	Male	121	46.9
	Female	137	53.1
	Total	258	100.0

Table 2 displays the gender distribution of the respondents. Among the total participants, 46.9% identified as male, while 53.1% identified as female. This balanced representation indicates a relatively equal inclusion of both genders in the study, providing a diverse perspective on the research objectives. The data suggests that efforts were made to ensure a gender-inclusive sample, contributing to the overall robustness and inclusivity of the study findings.

Table 3. I believe that integrating green initiatives enhances our Microfinance Institution's overall image and reputation.

		Freq.	%
Valid	Firmly Disagree	11	4.3
	Disagree	10	3.9
	Neutral	10	3.9
	Agree	54	20.9
	Firmly Agree	173	67.1
	Total	258	100.0

Table 3 presents respondents' perceptions on the statement "I believe that integrating green initiatives enhances our Microfinance Institution's overall image and reputation." The majority of participants, constituting 67.1%, firmly agree with this statement, indicating a prevalent positive perception regarding the enhancement of the institution's image and reputation through the integration of green initiatives. Additionally, 20.9% of respondents agree with the statement, further supporting the notion that there is a generally favorable view among the participants toward the positive impact of green initiatives on the overall image and reputation of their Microfinance Institution. The relatively low percentages of those in disagreement or firmly disagree suggest a consensus in favor of the positive correlation between green initiatives and institutional image.

Table 4. I perceive that incorporating environmentally sustainable practices positively influences my relationships with clients in our Microfinance Institution.

		Freq.	%
Valid	Firmly Disagree	17	6.6
	Disagree	14	5.4
	Neutral	5	1.9
	Agree	66	25.6
	Firmly Agree	156	60.5
	Total	258	100.0

Table 4 outlines participants' perceptions regarding the statement "I perceive that incorporating environmentally sustainable practices positively influences my relationships with clients in our Microfinance Institution." The results indicate a strong positive inclination among the respondents, with 60.5% firmly agreeing and an additional 25.6% expressing agreement. This substantial combined percentage reflects a prevailing belief that the integration of environmentally sustainable practices has a positive impact on relationships with clients within their Microfinance Institution. Conversely, the percentages for those in disagreement or strong disagreement are notably lower at 5.4% and 6.6%, respectively, suggesting a consensus among participants that environmentally sustainable practices contribute positively to client relationships in their Microfinance Institution. The minimal proportion of respondents in the neutral category further emphasizes the predominant positive perception regarding the influence of green practices on client relationships.

Table 5. There is a consensus among us that participating in green microfinance initiatives aligns with our institution's values and mission.

		Freq.	%
Valid	Firmly Disagree	14	5.4
	Disagree	14	5.4
	Neutral	7	2.7
	Agree	33	12.8
	Firmly Agree	190	73.6
	Total	258	100.0

Table 5 presents the participants' perspectives on the statement "There is a consensus among us that participating in green microfinance initiatives aligns with our institution's values and mission." The results indicate a dominant agreement with this notion, as 73.6% of respondents firmly agree and an additional 12.8% express agreement. This high combined percentage suggests a strong alignment between participants' beliefs and the institution's values and mission concerning green microfinance initiatives. Conversely, the percentages for disagreement and strong disagreement are notably lower at 5.4% each, indicating a minimal portion of participants expressing discordance with the idea. The

neutral category represents 2.7% of respondents, further highlighting the prevailing consensus among participants regarding the congruence of green microfinance initiatives with the institution's values and mission. These results underscore a collective belief that participating in environmentally sustainable practices is in harmony with the core values and mission of the Microfinance Institution.

Table 6. I agree that green microfinance contributes to a sense of environmental responsibility within our organization.

		Freq.	%
Valid	Firmly Disagree	17	6.6
	Disagree	8	3.1
	Neutral	7	2.7
	Agree	64	24.8
	Firmly Agree	162	62.8
	Total	258	100.0

Table 6 outlines the participants' viewpoints on the statement "I agree that green microfinance contributes to a sense of environmental responsibility within our organization." The results exhibit a strong consensus, with 62.8% of respondents firmly agreeing and an additional 24.8% expressing agreement. This collective affirmation indicates a prevailing belief among participants that green microfinance initiatives actively foster a sense of environmental responsibility within the organization. Conversely, disagreement and strong disagreement are minimal, accounting for 3.1% and 6.6%, respectively. The neutral category comprises 2.7% of respondents, suggesting a minor portion expressing neither agreement nor disagreement. The overwhelmingly positive response underscores the perception that green microfinance plays a significant role in cultivating a heightened sense of environmental responsibility among employees within the organization.

Table 7. I acknowledge the importance of my involvement in green microfinance activities to enhance our organization's sustainability.

		Freq.	%
Valid	Firmly Disagree	13	5.0
	Disagree	14	5.4
	Neutral	7	2.7
	Agree	31	12.0
	Firmly Agree	193	74.8
	Total	258	100.0

Table 7 presents the participants' perspectives on the statement "I acknowledge the importance of my involvement in green microfinance activities to enhance our organization's sustainability." The results reveal a substantial consensus, with 74.8% of respondents firmly agreeing and an additional 12.0% expressing agreement. This overwhelming agreement underscores the acknowledgment among participants regarding the significance of their personal involvement in green microfinance activities for enhancing the sustainability of the organization. Conversely, dissenting opinions are minimal, with 5.4% disagreeing and 5.0% firmly disagreeing. The neutral category represents a minor proportion, accounting for 2.7% of respondents. These findings emphasize the strong belief among participants in the positive impact of individual contributions to green microfinance initiatives for fostering sustainability within the organization.

Table 8. I believe that implementing green microfinance initiatives positively influences the operational efficiency of our Microfinance Institution.

		Freq.	%
Valid	Firmly Disagree	16	6.2
	Disagree	11	4.3
	Neutral	13	5.0
	Agree	99	38.4
	Firmly Agree	119	46.1
	Total	258	100.0

Table 8 outlines respondents' beliefs concerning the statement "I believe that implementing green microfinance initiatives positively influences the operational efficiency of our Microfinance Institution." The data indicates a strong alignment with the positive influence of green microfinance initiatives on operational efficiency. Notably, 46.1% of participants firmly agree, and an additional 38.4% express agreement. This overwhelming agreement suggests a prevailing conviction among respondents that integrating green initiatives has a beneficial impact on the operational efficiency of the Microfinance Institution. Dissenting perspectives are minimal, with 4.3% in disagreement and 6.2% firmly disagreeing. The neutral stance is held

by 5.0% of participants. These findings highlight a widespread belief in the constructive role of green microfinance initiatives in enhancing the operational efficiency of the Microfinance Institution, reinforcing the idea that environmentally sustainable practices contribute positively to operational aspects within the organization.

Table 9. I perceive a positive correlation between green microfinance practices and our institution's financial stability.

		Freq.	%
Valid	Firmly Disagree	15	5.8
	Disagree	11	4.3
	Neutral	8	3.1
	Agree	36	14.0
	Firmly Agree	188	72.9
	Total	258	100.0

Table 9 presents respondents' perceptions regarding the statement "I perceive a positive correlation between green microfinance practices and our institution's financial stability." The data underscores a prevailing positive perception, with a substantial 72.9% firmly agreeing and an additional 14.0% expressing agreement. This overwhelming consensus suggests that the majority of participants perceive a strong positive correlation between the implementation of green microfinance practices and the financial stability of their institution. Dissent is minimal, with 4.3% in disagreement and 5.8% firmly disagreeing. A small percentage (3.1%) adopts a neutral stance. These findings underscore a widely held belief among respondents that embracing green microfinance practices contributes positively to the financial stability of the Microfinance Institution, indicating a recognition of the financial benefits associated with environmentally sustainable initiatives.

Table 10. There is a consensus among us that green microfinance initiatives contribute to cost savings and resource efficiency in our daily operations.

		Freq.	%
Valid	Firmly Disagree	10	3.9
	Disagree	18	7.0
	Neutral	12	4.7
	Agree	96	37.2
	Firmly Agree	122	47.3
	Total	258	100.0

Table 10 presents participants' collective viewpoint on the assertion "There is a consensus among us that green microfinance initiatives contribute to cost savings and resource efficiency in our daily operations." The data illustrates a strong consensus, with 47.3% firmly agreeing and an additional 37.2% expressing agreement. This substantial agreement suggests that a significant majority of respondents perceive green microfinance initiatives as instrumental in achieving cost savings and enhancing resource efficiency in the daily operations of their institution. Dissenting opinions are limited, with 7.0% in disagreement and 3.9% firmly disagreeing. A minor proportion (4.7%) maintains a neutral stance. These findings indicate a prevalent belief among respondents in the positive impact of green microfinance initiatives on cost-effectiveness and resource management within their Microfinance Institution, aligning with the broader understanding of the operational benefits associated with environmentally sustainable practices.

Table 11. I agree that embracing environmentally friendly practices enhances our competitiveness in the microfinance sector.

		Freq.	%
Valid	Firmly Disagree	16	6.2
	Disagree	9	3.5
	Neutral	9	3.5
	Agree	62	24.0
	Firmly Agree	162	62.8
	Total	258	100.0

Table 11 outlines respondents' perspectives on the statement "I agree that embracing environmentally friendly practices enhances our competitiveness in the microfinance sector." The data reveals a predominant positive sentiment, with 62.8% firmly agreeing and an additional 24.0% expressing agreement. This substantial agreement indicates a widespread belief among participants that adopting environmentally friendly practices contributes to enhancing competitiveness in the microfinance sector. Dissenting opinions are minimal, with 3.5% in disagreement and 6.2% firmly disagreeing. A small portion (3.5%) maintains a neutral stance. These findings underscore the perceived link between

environmentally friendly practices and increased competitiveness within the microfinance sector, aligning with the broader understanding of the strategic advantages associated with sustainability initiatives in financial institutions.

Table 12. I believe that the successful implementation of green microfinance initiatives leads to improved financial performance and profitability for our Microfinance Institution.

		Freq.	%
Valid	Firmly Disagree	14	5.4
	Disagree	16	6.2
	Neutral	8	3.1
	Agree	29	11.2
	Firmly Agree	191	74.0
	Total	258	100.0

Table 12 illustrates respondents' perspectives on the statement "I believe that the successful implementation of green microfinance initiatives leads to improved financial performance and profitability for our Microfinance Institution." The data indicates a strong consensus among participants, with 74.0% firmly agreeing and an additional 11.2% expressing agreement. This overwhelming agreement suggests a widespread belief in the positive correlation between the successful implementation of green microfinance initiatives and enhanced financial performance and profitability. Dissenting opinions are limited, with 6.2% in disagreement and 5.4% firmly disagreeing. A small portion (3.1%) maintains a neutral stance. These findings highlight a prevailing positive perception among respondents regarding the financial benefits associated with the successful integration of green microfinance initiatives, reinforcing the notion that environmentally sustainable practices can contribute significantly to the overall financial health of Microfinance Institutions.

H1: There is a positive perception of the employees working in Microfinance Institutions regarding green microfinance.

Table 13. One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
I believe that integrating green initiatives enhances our Microfinance Institution's overall image and reputation.	22.144	257	.000	1.42636	1.2995	1.5532
I perceive that incorporating environmentally sustainable practices positively influences my relationships with clients in our Microfinance Institution.	17.607	257	.000	1.27907	1.1360	1.4221
There is a consensus among us that participating in green microfinance initiatives aligns with our institution's values and mission.	20.398	257	.000	1.43798	1.2992	1.5768
I agree that green microfinance contributes to a sense of environmental responsibility within our organization.	19.185	257	.000	1.34109	1.2034	1.4787
I acknowledge the importance of my involvement in green microfinance activities to enhance our organization's sustainability.	21.096	257	.000	1.46124	1.3248	1.5976

The results of the one-sample t-test provide valuable insights into employees' perceptions regarding green microfinance initiatives, supporting Hypothesis 1, which posits a positive perception among Microfinance Institution (MFI) employees in this context. Firstly, respondents firmly believe that integrating green initiatives enhances their MFI's overall image and reputation. The mean difference of 1.42636, with a 95% confidence interval ranging from 1.2995 to 1.5532, is statistically significant ($t = 22.144$, $df = 257$, $p < 0.001$). This suggests that employees, on average, perceive a substantial positive impact on their institution's image and reputation through the integration of green initiatives.

Similarly, employees express a strong belief that incorporating environmentally sustainable practices positively influences their relationships with clients in the MFI. The mean difference of 1.27907, with a confidence interval between 1.1360 and 1.4221, is statistically significant ($t = 17.607$, $df = 257$, $p < 0.001$). This indicates a robust consensus among employees regarding the positive influence of green practices on client relationships. Furthermore, there is a clear consensus among employees that participating in green microfinance initiatives aligns with the institution's values and mission. The mean difference of 1.43798, along with a confidence interval from 1.2992 to 1.5768, is statistically significant ($t = 20.398$, $df = 257$, $p < 0.001$), reinforcing the alignment of green initiatives with the core values and mission of the MFI as perceived by employees. Moreover, employees firmly agree that green microfinance contributes to a sense of environmental responsibility within their organization. The mean difference of 1.34109, with a confidence interval spanning from 1.2034 to 1.4787, is statistically significant ($t = 19.185$, $df = 257$, $p < 0.001$). This underscores the employees' acknowledgment of the environmental responsibility fostered by the adoption of green microfinance practices. Lastly, employees acknowledge the importance of their involvement in green microfinance activities to enhance their organization's sustainability. The mean difference of 1.46124, with a confidence interval ranging from 1.3248 to 1.5976, is statistically significant ($t = 21.096$, $df = 257$, $p < 0.001$). This highlights the employees' recognition of their crucial role in contributing to the overall sustainability of the MFI through active engagement in green microfinance initiatives. In summary, the results consistently support the hypothesis, revealing a positive perception among MFI employees regarding various aspects of green microfinance initiatives.

H2: Implementation of green microfinance initiatives has a positive impact on the overall operational and financial performance of Microfinance Institutions.

Table 14. One-Sample Test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
I believe that implementing green microfinance initiatives positively influences the operational efficiency of our Microfinance Institution.	16.533	257	.000	1.13953	1.0038	1.2753
I perceive a positive correlation between green microfinance practices and our institution's financial stability.	20.523	257	.000	1.43798	1.3000	1.5760
There is a consensus among us that green microfinance initiatives contribute to cost savings and resource efficiency in our daily operations.	17.746	257	.000	1.17054	1.0406	1.3004
I agree that embracing environmentally friendly practices enhances our competitiveness in the microfinance sector.	19.199	257	.000	1.33721	1.2001	1.4744
I believe that the successful implementation of green microfinance initiatives leads to improved financial performance and profitability for our Microfinance Institution.	19.779	257	.000	1.42248	1.2809	1.5641

The outcomes of the one-sample t-test provide substantial evidence in support of Hypothesis 2, affirming that the implementation of green microfinance initiatives has a positive impact on the overall operational and financial performance of Microfinance Institutions (MFIs).

Firstly, employees firmly believe that implementing green microfinance initiatives positively influences the operational efficiency of their MFI. The mean difference of 1.13953,

with a 95% confidence interval ranging from 1.0038 to 1.2753, is statistically significant ($t = 16.533$, $df = 257$, $p < 0.001$). This indicates a robust consensus among employees regarding the positive impact of green initiatives on the operational efficiency of the MFI. Similarly, employees perceive a positive correlation between green microfinance practices and their institution's financial stability. The mean difference of 1.43798, along with a confidence interval from 1.3000 to 1.5760, is statistically significant ($t = 20.523$, $df = 257$, $p < 0.001$). This underscores the employees' perception of a strong positive relationship between the adoption of green microfinance practices and the financial stability of the MFI. Furthermore, there is a clear consensus among employees that green microfinance initiatives contribute to cost savings and resource efficiency in their daily operations. The mean difference of 1.17054, with a confidence interval spanning from 1.0406 to 1.3004, is statistically significant ($t = 17.746$, $df = 257$, $p < 0.001$), highlighting the employees' acknowledgment of the cost-saving and resource-efficient benefits associated with green microfinance initiatives. Moreover, employees agree that embracing environmentally friendly practices enhances their competitiveness in the microfinance sector. The mean difference of 1.33721, with a confidence interval ranging from 1.2001 to 1.4744, is statistically significant ($t = 19.199$, $df = 257$, $p < 0.001$). This emphasizes the employees' belief in the positive impact of environmentally friendly practices on the competitiveness of their MFI within the microfinance sector. Lastly, employees firmly believe that the successful implementation of green microfinance initiatives leads to improved financial performance and profitability for their MFI. The mean difference of 1.42248, with a confidence interval from 1.2809 to 1.5641, is statistically significant ($t = 19.779$, $df = 257$, $p < 0.001$). This suggests a robust consensus among employees regarding the positive impact of successful green microfinance implementation on the financial performance and profitability of the MFI. In summary, the results consistently support Hypothesis 2, indicating that employees perceive a positive impact of green microfinance initiatives on various aspects of the overall operational and financial performance of MFIs.

Findings

The findings of the study revealed insightful perspectives from employees within Microfinance Institutions (MFIs) regarding green microfinance initiatives. Firstly, the analysis of employees' perceptions indicated a robust positive outlook on the influence of green microfinance practices. Employees expressed a strong belief that integrating green initiatives enhances the overall image and reputation of their MFI. Additionally, there was a consensus among employees that participating in green microfinance initiatives aligns with the institution's values and mission, contributing to a sense of environmental responsibility within the organization. Furthermore, employees acknowledged the importance of their involvement in green microfinance activities to enhance the sustainability of their institution. These positive perceptions collectively underscored the potential of green microfinance to not only enhance the environmental standing of MFIs but also align with the organizational values and contribute to a heightened sense of environmental responsibility among employees.

Secondly, the study delved into the impact of green microfinance initiatives on the overall operational and financial performance of MFIs. The findings overwhelmingly supported the hypothesis that implementation of such initiatives has a positive effect. Employees believed that implementing green microfinance initiatives positively influences the operational efficiency of their MFI, indicating a perceived improvement in day-to-day operations. Moreover, there was a strong consensus among employees that green microfinance practices contribute to cost savings and resource efficiency in daily operations. These findings suggest that employees recognize the tangible benefits of green microfinance, not only in terms of environmental responsibility but also in enhancing operational efficiency and resource management within the microfinance sector.

Conclusion

In conclusion, the study provides valuable insights into the perceptions of employees within Microfinance Institutions (MFIs) regarding green microfinance initiatives and their impact on overall operational and financial performance. The positive employee perceptions, as evidenced by a belief in the enhancement of the institution's image and reputation through green initiatives, and a consensus on the alignment of such practices with organizational values, underscore the potential success of integrating environmentally sustainable practices within the microfinance sector. Moreover, employees recognize the importance of their involvement in green microfinance activities, indicating a growing awareness and commitment to environmental responsibility. The findings contribute to the broader discourse on the evolving role of microfinance institutions in embracing green practices, shedding light on the internal perspectives that play a crucial role in the successful implementation of green microfinance initiatives.

The implications of these findings extend to both the microfinance industry and policymakers. Firstly, the positive employee perceptions suggest that fostering a green organizational culture can enhance the overall image and reputation of MFIs. Organizations can leverage these positive perceptions to strengthen their commitment to environmental sustainability and attract environmentally conscious clients and stakeholders. Secondly, the recognized impact on operational efficiency, financial stability, and resource efficiency highlights the potential economic benefits of green microfinance initiatives. Policymakers and industry stakeholders can use these insights to formulate supportive policies and initiatives that encourage the integration of environmentally sustainable practices within the microfinance sector.

For future research, there is a need to explore the long-term effects of green microfinance initiatives on both employee perceptions and the overall performance of Microfinance Institutions. Longitudinal studies could provide a more comprehensive understanding of the sustainability and enduring impact of such practices. Additionally, further investigations could delve into the specific mechanisms through which green microfinance initiatives influence operational efficiency and financial stability, providing a nuanced understanding of the pathways through which these initiatives generate positive outcomes. Furthermore, comparative studies across different regions and types of MFIs could offer insights into the contextual variations in the adoption and impact of green microfinance practices.

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