Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2025-23.1.0073

RESEARCH ARTICLE

Impact of Green Banking Practices on Bank Reputation; Moderating Role of Environmental Awareness

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ARTICLE INFO

Received: Oct 14, 2024

Accepted: Dec 27, 2024

Keywords

Employees Related Practices

Daily Operation Related Practices

Customer Related Practices

Bank Policy Related Practices

Bank Reputation and Environmental Awareness

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ABSTRACT

This study examines green banking practices within Pakistan's Islamic banking sector, focusing on their influence on sustainability and reputation. Islamic banks in Pakistan, guided by ethical and Shariah principles, hold a unique position to lead eco-friendly initiatives. The research utilizes a survey of 390 employees across Islamic banks in Punjab to analyze the impact of employee, operational, customer, and policy-based green practices on bank reputation, with environmental awareness as a moderating factor. Findings reveal that customer- and policy-related practices significantly enhance reputation, particularly when coupled with environmental awareness. However, employee and daily operational practices did not show a direct effect on bank reputation. This study emphasizes the importance of promoting green banking practices to achieve both ecological and reputational gains in the Islamic banking sector.

INTRODUCTION

The banking industry's change toward green practices aligns with the United Nations Sustainable Development Goals (SDGs), emphasizing the need for banks to evolve beyond traditional finance into sustainability-focused entities (Carè, 2018). While operating for profit motive in the past, banks have been forced to consider and respond to environmental factors like climate change that result from other factors such as reliance on fossil fuels and industrialization (Wang & Zhang, 2021). To deal with all these challenges, there is a growing adoption of green financing and investments, especially in environmental activities such as the manufacture of renewable energy and equipment and the construction of green infrastructure. Thus, the banks aim to minimize the negative effects on the environment, encourage the development of economies, and decrease expenses incurred in operation (Nizam et al., 2019). Aside from improving its image, green banking increases banks' appeal to environmentally friendly clients, giving them a competitive advantage (Sharma & Choubey 2022). Some of these practices are particularly crucial in emerging economies experiencing severe environmental issues, and, therefore, banks need to act as catalysts for growth while taking care of the environment. Therefore, green banking includes an ecological awareness to preserve the

environment and corresponds to an international economic and social trend in which banks play a major role in seeking a more sustainable future for the world (Linh & Anh, 2017; Nizam et al., 2019).

Global warming has affected financial systems and forced institutions to consider ESG factors to sustain their financial systems (Park & Kim, 2020). Banks play a critical role in sustainability because loaning money for green industries and inventive environmentally friendly technologies is a priority (Park & Kim 2020). This role extends beyond adapting to new legal requirements to meet evolving ethical standards; customers now expect their banks to finance environmentally sustainable projects and may experience guilt if their banks lack such commitments (Burhanudin et al., 2021). Important aspects of green banking are stakeholder awareness, institutional preparedness, and policy support. Bose et al. (2018) argue that green banking requires awareness among decision-makers in the organization. These green banking practices include online banking, green loans, and eco-friendly credit cards, which reduce environmental effects and customer allegiance (Khan et al., 2021; Giraudet et al., 2021; Huang & Fitzpatrick, 2018). Digital solutions enhance this change as banks provide energy-efficient branches and limit financing of climate change projects (Bukhari et al., 2020). Eco-friendly credit helps banks influence industries to become more environmentally friendly, increasing both image and customer satisfaction as credit seekers seek banks sensitive to ecological concerns (Sharmeen et al., 2019). Green banking thus transforms banking entities into environmentally friendly institutions that align with global trends and promote sustainable practices. Through practices that reduce the impact of climate change and by funding sustainable initiatives, banks are leading the charge towards a more sustainable future and are demonstrating the transformative potential of finance for the betterment of society.

Pakistan's ecological risks threaten human health, economic production, and social welfare overall, particularly urban pollution. Pollution, especially in large cities, significantly endangers air quality and health (Abbas et al., 2020). Pakistan is among the five countries most exposed to climate change, including heat waves and smog (Eckstein et al., 2019). According to Ullah & Takaaki (2016), contamination is four times the WHO recommendation due to carbon emissions and leads to respiratory and cardiovascular diseases that put pressure on the healthcare systems and reduce the efficiency of the workforce. This is why collective action is needed, and financial institutions are eager to act as climate enablers. Galaz et al. (2018) stated that banks are supposed to manage climate risks and take sustainable measures. In this manner, banks encourage emission reductions, abide by the rules that society requires for sustainability, and demonstrate how other sectors should act. Therefore, based on this research, it is impossible to achieve environmental sustainability and climate action in Pakistan without the banks' engagement.

In the context of Pakistan, this research is unique as it examines the concept of green banking in Islamic banks, while the existing literature has followed studies of advanced economies and conventional banking systems (Nizam et al., 2019; Ratnasari et al., 2021). This paper aims to explore the green banking strategies of Islamic banks, particularly concerning employee-related measures and strategies, operation-focused and customer-oriented activities, and policy-level activities based on the Islamic banking concepts of profit-and-loss sharing and Shariah compliance (Khan et al., 2018). It can be balanced with sustainable actions and supports trade and investments that are beneficial for society and the world's environment. While the green banking concept has not emerged fully in Islamic finance, it is a good sign because Islamic banks have the opportunity to promote sustainable initiatives that are acceptable in the Islamic culture and attract environment-friendly consumers. This paper also seeks to discuss the possibility of the Islamic banking industry increasing its role in the achievement of international climate goals, including those of the UN Framework Convention on Climate Change (Park & Kim, 2020). Therefore, Islamic banks can initiate environmental initiatives in societies where Islamic values are highly esteemed through green causes. Such measures are equally relevant to climate issues and achieving ethical and social objectives in Islamic finance, improving the company's image and increasing customer confidence.

Therefore, this research focuses on how Islamic banks might contribute to SDs, describing a model of ethical finance and environmentalism for sustainability on both the national and international levels (Chen et al., 2022).

This research examines the corporate reputation challenges facing Islamic banks in Pakistan, focusing on environmental impact as a critical factor in public trust. Islamic banks have established new sustainability benchmarks in Pakistan's financial sector by facilitating the adoption of green products and services, adding economic and environmental value (Mehreen et al., 2020; Qureshi & Hussain, 2020). In that capacity, the banks become agents of change, affecting that change in consumers and industries, which aligns with the United Nations' Sustainable Development Goals (SDGs). Islamic banks' sustainable initiatives improve corporate image, thus promoting environmental conservation among commercial banks. They act as role models for other institutions since they promote sustainable models for financial success and social responsibility. This study also noted a need to increase awareness of environmental issues among bank employees. The employees might have resources regarding environmental problems; therefore, they are better positioned to support sustainable practices at the bank (Borah & Baruah, 2020). First, this research fills a literature gap in green banking by assessing the relationship between employee awareness and green initiatives. The present study argued that regulatory frameworks should add environmental training to improve the corporate culture of responsibility for Islamic banks and conform to current global green finance. The research also highlights that environmental initiatives in Islamic banks improve their image by promoting sustainable development in Pakistan's environment with eco-friendly financing.

LITERATURE REVIEW

Theory and hypotheses development:

This research uses Frooman's (1999) stakeholder theory to analyze green banking growth because green banking requires the cooperation and support of customers, employees, communities, and management. Due to the nature of the stakeholders ' interests, their support is essential for adopting sustainable practices among banks. According to Lin et al. (2014), customer pressure, government pressure, supplier pressure, and competitor pressure collectively exert pressure on the banks to seek green strategies that will help to minimize negative environmental effects. Employee education about sustainable practices like paperless working, energy saving, and using renewable energy are important strategies to improve the image of a bank (Zafar et al., 2019). All these practices demonstrate CSR and create internal and external goodwill in an organization. In addition, the implementation of sustainable activities in business practices such as managing the use of papers, managing waste, and using online banking and mobile banking as a channel of banking for the customers also benefits the economy, improves the image of the bank and is favorable to the green economy objectives (Shaumya & Arulrajah, 2017). The other objective of green banking also includes supporting customers in sustainable initiatives. When they sponsor sustainable projects, banks make themselves relevant to the environment, meaning people sensitive to the environment will be attracted to such banks. However, they also offer consultations and information to customers ready to invest in green projects, thus expanding their environmental impact. According to the stakeholder theory, stakeholders demand to define sustainability and affect the bank's reputation. In meeting these demands, the banks can build stakeholder relations and gain legitimacy and reputation as sustainable institutions for environmental management and development for a sustainable economy in the future.

Zheng et al. (2021) proposed that the green finance strategies of banks depend on four dimensions, including employee, operational, customer, and policy-related practices that support environmental goals. Rehman et al. (2021) also established the relationship between these practices. They enhanced EP in commercial banks and stated that green human resource management, customer management,

operation management, and institutional environmental management all result in positive environmental impacts despite incurring some financial costs. Based on this framework, the current study recommends that Islamic banks operating on ethical finance principles can reposition themselves through green activities such as customer screening based on environmental standards and sustainable infrastructure pledges. Islamic banks' ''Go Green banking schemes are in tandem with the international climate vision of financial institutions to address environmental and social responsibility obligations (Qureshi & Hussain, 2020). Resource conservation and waste reduction in an organization are green practices aimed at employee satisfaction and improved reputation in sustainability within the banking sector. Based on this research, the author believes that employees with environmental training improve the bank's public image because customers trust institutions that invest in sustainably trained personnel. Customer-oriented and policy-based green practices make Islamic banks pioneers in green finance, and their role in sustainable development is reemphasized.

H1: Employees Related Practices has significant impact on bank reputation.

H2: Daily Operation related practices has significant impact on bank reputation.

H3: Customer Related Practices has significant impact on bank reputation.

H4: Bank Policy Related Practices has significant impact on bank reputation.

Table 1: Prior studies on Green Banking

Study	Context	Predictors	Outcomes and Findings
Rehman et al. (2021)	Conventional banking in Pakistan	Green HRM, sustainability investments	Environmental performance, reputation. Green HRM and sustainability investments positively impact environmental performance and reputation in Pakistan's banking sector.
Zheng et al. (2021)	Commercial banking in China	Employee practices, customer relations	Customer satisfaction, bank reputation. Employee and customer-focused green practices enhance customer satisfaction and reputation, especially in environmentally sensitive areas.
Ibe-Enwo et al. (2019)	Banking industry in Nigeria	Green finance initiatives, eco-friendly policies	Corporate image, competitive advantage. Green finance initiatives and eco-friendly policies help improve corporate image and provide a competitive advantage by attracting eco-conscious customers.
Khan et al. (2021)	Banking sector in South Asia	Digital banking, green loans, paperless banking	Environmental impact, customer loyalty. Digital and paperless banking improve environmental impact and customer loyalty as customers value banks with sustainability-focused services.
Julia & Kassim (2019)	Green banking in Southeast Asia	Institutional policies, stakeholder awareness	Public trust, environmental sustainability. Institutional policies and stakeholder awareness positively impact public trust and support environmental sustainability in green banking practices.

Moderating the role of environmental awareness:

Awareness of the organizational environment is crucial to sustainable management, including in organizations such as banks. According to Kokkinen (2013), employees' awareness of environmental policies is central to planning and implementation. Nevertheless, there is still a gap between declared

green attitudes and actual green behaviors, Gadenne et al. (2009), who established that although there is a high level of acceptance of green policies among Cordite's members, there is a low environmental sensitivity that hinders such policies from being implemented. In this respect, employees who better understand the environmental policies put in place are likely to practice sustainable behaviors that will create a sustainable culture within the organization. Studies have indicated that environmental sensitivity plays a moderating role in green activities. For instance, Arocena et al. (2021) concluded that it magnifies the positive impact of ISO standardization on environmental performance; Cao and Chen (2019a, 2019b) established that green innovation policies are more effective in organizations with high employee awareness. Khan et al. (2022) proved that awareness increases sustainable development in the hospitality industry. Similar to the study's findings, Rustam et al. (2020) also established that employee awareness influences environmental disclosure and customer green behavior. In Pakistani Islamic banks, raising awareness of the environment should further solidify operational procedures related to customers and executives, as well as policies and regulations, which should improve reputation. Islamic banks can comply with regulations and be proactive and sustainable by offering awareness.

Environmental awareness moderated between **(H5)** Employees Related Practices and bank reputation **(H6)** Daily Operation related practices and bank reputation **(H7)** Customer Related Practices and bank reputation **(H8)** Bank Policy Related Practices and bank reputation.

MATERIALS AND METHODS

In the current study, the respondents were the employees of Islamic banks and Islamic branches of conventional banks in Punjab, Pakistan. In this research, 378 respondents were chosen purposively. Convenience purposive sampling was used because the researcher could directly contact the target persons, and the respondents were selected according to their awareness of green banking in the Islamic finance industry. According to Rehman et al. (2021), this approach aligns with targeted sampling approaches used in banking research when existing information about sustainability practices is needed. Therefore, to address the current state of urban banking in Punjab province, the researchers targeted more than a hundred branches in four cities: Lahore, Faisalabad, Gujranwala and Sialkot. According to Hair et al. (2017), 378 responses decision was based on the methodological adequacy of Structural Equation Modeling (SEM). The approach enhanced the credibility of findings, particularly in green banking a promising field that might benefit from identifying purposive samples to encompass the richness of the employees' experiences (Khan et al., 2021).

Measurement:

The responses were collected using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), which has been found effective in measuring the variation in attitudes and satisfaction levelling, enabling a suitable analysis in line with the SEM analysis for enhanced predictive accuracy. Environmental awareness measures by using point Likert scale using the scale of (Lillemo, 2014), where employee's ecological consciousness was an important factor in the sustainability of an organization. For bank reputation, the study adopted a seven-item scale developed by Walsh et al. (2009) but modified to fit the aspects of Islamic banks' reputation. This structured questionnaire facilitated a comprehensive evaluation of green banking and the image of Pakistan's Islamic banking sector regarding employees' environmental involvement and overall sustainability commitment.

RESULTS

Descriptive statistics were presented to show that the mean was 4.5 around all the variables, and standard deviations were one fourth of the range of the data, which is acceptable, illustrating that the responses were generally moderately positive with some variability. In order to minimize the CMB, the paper employed the single-factor test as a standard way of identifying CMB in various datasets (Podsakoff et al., 2003). In this approach, all the variables were subjected to a principal component

analysis (PCA), which gave six factors, explaining 61.26% of the variance; the first factor was as low as 40.67%, below 50%. This shows that CMB is not a critical issue in this research, as the first factor did not contribute much to the variance. On the same note, the researchers evaluated the multicollinearity using the VIF and tolerance coefficients. According to Cohen et al. (2003), VIF values below 5.0 mean low multicollinearity. In this study, VIF scores were between 1.64 and 4.20, therefore within an acceptable range. Tolerance values also conformed to the established standard values, verifying that multicollinearity did not affect the data. These statistical checks affirmed that there was no issue of multicollinearity or CMB; therefore, the study results are accurate.

Measurement model:

Table 2: Validity Statistics

Variables	Item	Cronbach Alpha	Factor loadings	F^2	CR	AVE
Employees-related practices (ERP)		0.901		0.004	0.916	0.784
	ERP1		0.982			
	ERP2		0.843			
	ERP3		0.823			
Daily operations-related practices (DOP)		0.885		0.000	0.882	0.654
	DOP1		0.952			
	DOP2		0.764			
	DOP3		0.707			
	DOP4		0.792			
Customers-related practices (CRP)		0.914		0.125	0.940	0.796
	CRP1		0.919			
	CRP2		0.915			
	CRP3		0.857			
	CRP4		0.876			
Bank policy-related practices (BPP)		0.911		0.056	0.934	0.738
	BPP1		0.859			
	BPP2		0.876			
	BPP3		0.898			
	BPP4		0.839			
	BPP5		0.823			
Bank reputation (BR)		0.910			0.928	0.649
	BR1		0.766			
	BR2		0.792			
	BR3		0.817			
	BR4		0.850			
	BR5		0.789			
	BR6		0.827			
	BR7		0.798			
Environmental awareness (EA)		0.880		0.299	0.912	0.675
	EA1		0.808			
	EA2		0.827			
	EA3		0.836			

	EA4		0.819			
	EA5		0.817			

Convergent validity and reliability of the measurement model in the study were checked prior to checking structural relationships through Partial Least Squares-Structural Equation Modeling (PLS-SEM). It assesses how the theoretical constructs are related to their indicators and lays down the framework for a good structural model. The reliability of each construct, as measured by factor loadings, ranged from 0.75 to above 0.90 (Nunnally, 1978). Cronbach's Alpha and Composite Reliability (CR) were used to assess the reliability of the constructs, and all values were above 0.7. Moreover, to test convergent validity, the Average Variance Extracted (AVE) value of each construct was checked, and all these values were found to be higher than 0.50, which ensures that the constructs are measuring a reasonable amount of variance from their indicators. Altogether, these evaluations indicate the reliability and validity of the measurement model and the structural model and conclusions in this study.

Discriminant Validity:

Table 3: Fornell Larcker Criteria

	BPP	BR	CRP	DOP	EA	ERP
BPP	0.859					
BR	0.674	0.806				
CRP	0.699	0.693	0.892			
DOP	0.221	0.173	0.090	0.809		
EA	0.642	0.743	0.591	0.233	0.822	
ERP	0.165	0.092	0.129	0.215	0.143	0.886

Fornell-Larcker criterion was used to test discriminant validity whereby the square of AVE of each construct was more significant than the inter-construct correlation. This result supports discriminant validity as it confirms that each construct measures a different aspect of the phenomena of interest, thus reducing measurement error when discriminating between the constructs.

Coefficient of determination, predictive relevance and size effect

The goodness of the model is determined by the strength of each structural path determined by the R^2 value for the dependent variable (Briones & Nieto, 2018); the value should be equal to or over 0.1 (Falk & Miller, 1992). The result shows that the R^2 value is 0.685 and over 0.1. Hence, the predictive capability is established. Further, Q^2 establishes the predictive relevance of the endogenous constructs. A Q^2 above 0 shows that the model has predictive relevance. The results show that the value of Q^2 is 0.666, and there is significance in the prediction of the constructs. The value reveals whether an exogenous construct has a significant influence on an endogenous construct. The value of f^2 within a range from 0.02 to 0.15 ranks as small in effect, while 0.15 to 0.35 is medium in effect, and above 0.35 returns a significant effect (Cohen, 2003). Table 2 details that ERP, DOP, CRP and BPP have a small effect; environmental awareness has a medium effect on a bank's reputation.

Hypothesis testing:

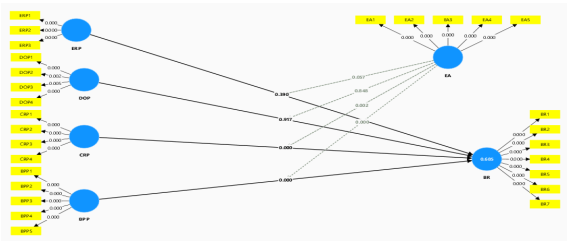

Figure 1: Hypotheses

Table 4: Results

Hypotheses	Original sample	Sample mean	Standard deviation	T statistics	P values	Results
H1: ERP -> BR	-0.035	-0.037	0.041	0.860	0.390	Not Supported
H2: DOP -> BR	0.003	0.009	0.033	0.104	0.917	Not Supported
H3: CRP -> BR	0.292	0.291	0.050	5.816	0.000	Supported
H4: BPP -> BR	0.208	0.207	0.054	3.873	0.000	Supported
H5: EA x ERP -> BR	-0.092	-0.079	0.049	1.904	0.057	Not Supported
H6: EA x DOP -> BR	0.006	0.004	0.032	0.191	0.848	Not Supported
H7: EA x CRP -> BR	-0.136	-0.132	0.045	3.032	0.002	Supported
H8: EA x BPP -> BR	0.144	0.142	0.041	3.522	0.000	Supported

Employee related practices do not significantly effect on bank's reputation ($\beta = -0.035$; $p > 0.05$). Daily operation practices within banks do not significantly boost bank reputation, as a result, shows ($\beta = 0.003$; $p > 0.05$). The model supports a positive impact of customer-related practices on bank reputation ($\beta = 0.292$; $p < 0.05$). The structural model demonstrates a substantial effect ($\beta = 0.208$; $p < 0.05$), indicating that bank policy-related practices significantly enhance bank reputation. EA significantly strengthens the effect of customer-related practices and bank policy-related practices on a bank's reputation. For instance, employees' environmental awareness intensifies the positive impact of customer-related practices ($\beta = -0.136$; $p < 0.05$) and bank policy-related practices ($\beta = 0.144$; $p < 0.05$), whilelated practices and daily operation-related practices do not significantly effect on bank reputation in the presence of environmental awareness ($\beta = -0.092$; $p > 0.05$), and ($\beta = 0.006$; $p > 0.05$) respectively.

DISCUSSION

The results show no significant impact of employee-related practices on the bank's reputation. Previous studies suggest that employee green awareness positively affects the environmental performance of banks, leading to a better reputation (Rehman et al., 2021). One explanation for the current non-significance might be that although ERP can enhance environmental performance, it does not necessarily translate into reputational gains without broader visibility or public awareness of these practices (Julia & Kassim, 2019). Daily operation related practices has no effect on a bank's reputation. Implementing sustainable practices in business day-to-day operations, like paperless policy and efficient energy use, may enhance the sustainability and reputation of a bank (Khan et al., 2024). However, our results imply that such practices may not influence reputation if not supported by other forms of publicity or incorporation into other strategic directions. Nath et al. (2014) also pointed out that positive reputational change resulting from green banking practices must be advertised, which may not be done sufficiently here.

The finding of this study lends support to the research hypothesis that customer-related practices enhance a bank's reputation. In literature, it is pointed out that, like promoting green loans and climate-friendly products, CRP increases reputation by making banks associated with environmentally appropriate activities that reflect public value (Zheng et al., 2021). Green activities initiated by customers establish social responsibility, enhancing the perceptions of the customers. This is consistent with Ruiz and García (2019), who suggest that customer alignment with sustainable values fosters trust and boosts reputation. Bank policy-related practices also have a substantial positive impact on a bank's reputation. A robust green policy framework within banks supports sustainable development and reputation, especially when policies are made visible to stakeholders (Park & Kim, 2020). Prior research aligns with this finding, noting that a visible commitment to environmental policies in banks not only supports reputation but also encourages sustainable investments (Galletta et al., 2021). Thus, internal solid green policies reflect a bank's alignment with public interest in sustainability, enhancing its reputation.

Environmental awareness does not significantly moderate the relationship between employee-related practices and bank reputation. This differs from the findings of Khan et al. (2024), where EA was posited as a critical factor in amplifying ERP's influence on reputation. One possible explanation is that while employee awareness may improve internal environmental initiatives, it does not directly impact external reputation unless explicitly marketed or recognized by stakeholders. EA does not significantly affect the impact of DOP on a bank's reputation. Previous studies suggested that employee awareness should enhance the reputation impact of daily green practices through responsible use of resources and operations (Shaumya & Arulrajah, 2017). However, without external visibility, these practices may remain unnoticed by stakeholders, potentially explaining their non-significance. The interaction between EA and CRP significantly impacts the bank's reputation. EA strengthens the effect of CRP on reputation, possibly by promoting more sustainable interactions with customers and aligning bank actions with societal values (Bukhari et al., 2020). Employees' environmental knowledge enables banks to implement better customer-focused green initiatives, which can enhance customer trust and reputation as customer's value green credentials highly. EA significantly moderates the relationship between bank policy-related practices and bank reputation. This finding is consistent with literature indicating that employee environmental awareness facilitates the effective implementation of green policies, boosting reputation through visible alignment with sustainable goals (Cao & Chen, 2019). Increased awareness ensures that employees uphold and advocate for these policies, which positively impacts public perception and enhances reputation.

Theoretical and Managerial Implications

This research focuses on green banking in Pakistan's Islamic banking industry and explores how employees' environmental attitudes and practices affect the bank's image. The literature review reveals that green banking is a nascent topic in Pakistan, particularly in Islamic banks; however, the sector has a significant opportunity to lead sustainability (Rehman et al., 2021). Therefore, Islamic banks' ethical and Shariah-compliant nature are consistent with global sustainability objectives, implying they can spearhead green finance in emergent markets. The study suggests future research on green banking using theoretical frameworks such as the Technology Acceptance Model (TAM) and Stakeholder Theory to improve knowledge of technology acceptance and stakeholders ' effects on green practices (Cao & Chen, 2019a). The managerial implications are as follows. Management should actively foster environmental awareness and engagement among employees. By encouraging environmentally responsible behaviors and providing green banking training, banks can enhance the impact of their sustainability efforts on their reputations. Managers could introduce incentive programs that reward green behaviors, such as energy savings, waste reduction, or support for sustainable products and services (Galletta et al., 2021). This aligns with findings that environmentally engaged employees significantly contribute to a reputation and operational sustainability. Creating structured green policies that include employee guidelines, customer-oriented initiatives, and operational adjustments would further institutionalize green practices in banks. The study highlights the positive influence of bank policies on reputation, implying that transparent, well-communicated policies could enhance credibility among stakeholders. Policymakers within Islamic banks should align their policies with both Shariah principles and sustainability objectives, which would position Islamic banks as ethical and environmentally responsible institutions, potentially increasing customer trust and loyalty (Cao & Chen, 2019a).

Banks are encouraged to invest in digital technologies that support sustainability. The research also implies that green banking measures are correlated with technological advancement, particularly in the use of less physical resources, such as the lack of paper in banking, mobile banking, and e-statements. It is in this respect that banks could concentrate on these digital solutions to develop more sound day-to-day operations. Firstly, digital transformation contributes to a decrease in the company's impact on the external environment as well as increases the efficiency of services

provision and their accessibility to customers, thus increasing their satisfaction (Sun et al., 2020). Technology adoption within a green environment also supports the ethical positioning of Islamic banks in terms of sustainable development goals and the Islamic context of ''Amanah''. Banking organizations should strive to build green relationships with customers since customer-related practices have revealed a positive relationship with reputation. This could include encouraging green loans and offering attractive rates for ecological projects to customers, for instance, the purchase of renewable energy or the development of environmentally friendly businesses (Zheng et al., 2021). However, banks could provide better prices or advice to customers who are involved in sustainable activities, which would also put forward the banks' roles as active promoters of community-based environmental activities. The following is a benefit of the approach as it can help build a socially responsible brand image. Due to a relatively competitive position in the market, Islamic banks might gain from partnerships in this field with conventional banks, environmental organizations, and legislative authorities. Such partnerships could help in the development of an industry benchmark for green banking as all the partners learn from each other. Rustam et al. (2020) also stress the role of knowledge sharing as a mechanism that would improve green practices, stating that partnerships can also contribute to the creation of best practices that would be beneficial for all partners.

Limitations and future research direction

The present research contributes to the understanding of the extent to which Islamic banks have incorporated green banking practices into their operations; however, it recognizes some limitations that are inherent within the study and implies further research directions. First, the cross-sectional study design allows for collecting the data from only one-time point, which means that the changes in green banking practices and the effects of such practices on the bank's reputation cannot be analyzed adequately. The findings of future research might be more informative if collected using a longitudinal or time-series research design that would afford a sequential view of the changes and evolution of green banking practices over time and their impact on the bank's reputation due to environmental concerns (Sharma & Choubey, 2022). The data of this study was obtained from only one province, and therefore, the results cannot be generalized to other regions or cultural settings. Cohen et al. (2003) have pointed out that a more extensive, multi-regional sample would not only enhance external validity but also enable researchers to determine how regional economic situation, as well as the sociocultural perceptions of sustainability, affect green banking practices. Such comparative analysis could reveal differences in the extent of green banking adoption between regions within a country or between countries with similar economic environments within the region (Rehman et al., 2021).

One of them is the sample selection, which includes only the employees of Islamic banks and does not compare the results obtained with the answers of the employees of conventional banks. Since the operational strategies of Islamic and conventional banks differ in the customer base, future research could assess and contrast the green banking practices of the two. The integration of conventional banks would help in comparing the green banking practices of the sector and the practices that would be useful for both Islamic and conventional banks (Rustam et al., 2020). It would also allow to include conventional banks and the understanding of how the concept of green banking is affected by particular ethical theories and organizational practices that can be extended to the development of sustainable banking standards (Ali et al., 2020). The current study mainly assesses the employees' perception of sustainability without considering the variables such as age, educational background in sustainability, or leadership positions. The following demographic variables may affect the employees' perception towards green banking and the level of participation in sustainability (Gadenne et al., 2009). Future research could involve using demographic variables or a sample of the employees to compare responses to green banking based on some factors such as sustainable education or age. It could be beneficial to determine how Generation Y's attitude toward sustainability affects the banking industry's attempts to enhance its environmental standing.

Future studies could also extend this study to include the use of both perceived reputation and formal sustainability rating of the banks. It would also be helpful to compare the results of employee surveys of a bank's reputation with quantitative, objective measures of performance, including ESG scores or the prevalence of environmental certifications (Cao & Chen, 2019a). Such comparisons may also uncover a misalignment between the perceptions of employees and the company's sustainable performance levels, information that could be used to close such gaps through better communication of green practices or the development of specific training programs for employees. More research about how other macro variables, namely government policies, market forces, and regulations, affect green banking adoption would be helpful in expanding the understanding of other key drivers of sustainability. Comparative cross-sectional studies, especially in the emerging economy, would offer a comparison of how the adoption of green banking conforms or deviates from the global trend and hence would make a valuable contribution to the green banking literature. It would also assist banks in achieving the UN's Sustainable Development Goals through a guide to compliance with international sustainability standards and policies (Park & Kim, 2020; Gadenne et al., 2009). Future research should take into account the technological developments and the general process of digitalization of banking. Knowing how these solutions affect green banking since banks have embraced digital banking solutions would be helpful in understanding how innovations affect the reduction of physical resource use and the overall environmental impact (Sun et al., 2020). It is possible to consider a crossroad between green banking and digital transformation as a potential avenue for identifying how technology-facilitated green efforts can lead to sustainable and competitive banking.

AUTHOR CONTRIBUTIONS

Ines Belgacem contributed to the methodology and formatting of the research paper. Sarmad Ejaz was responsible for the primary conceptualization of the research idea, drafting the manuscript, and performing the data analysis. Both authors reviewed and approved the final manuscript.

ACKNOWLEDGMENT

Sarmad Ejaz would like to express their heartfelt gratitude to Ines Belgacem for generously providing funding support which was instrumental in the successful completion of this research.

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