Green Practices on Bank's Environmental Performance

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Abstract

The study examines the adoption of green banking practices among commercial banks in Chitwan and its impact on environmental performance. The researcher aims to assess the green banking practices employed by commercial banks, examining the relationship between these practices and bank performance, and analyse the impact of green banking on the perceived performanceof commercial banks. The study employs an analytical research design to analyze the variables associated with green banking practices. The population comprises bankers from financial institutions across Chitwan, with a sample of 189 respondents selected through purposive sampling. Statistical tools were used to analyze the relationships between independent variables (employee-related practices, daily operation practices, customer-related practices, and bank policy-related practices) and the dependent variable (bank's environmental performance). The results showed that commercial banks in Chitwan generally have a positive view of their sustainability practices, with bank policy-relatedpractices showing the highest positive perception among employees. The study also found a positive correlation between green banking practices and environmental performance, with bank policy-related practices having the strongest relationship and customer-related practices the weakest. The study underscores the importance ofstrategic policy implementation and employee involvement in promoting sustainability within the banking sector.

Keywords

Bank's environmental performance, employee related practices, daily operation practices, customer related practices and bank's policy related practice.

Introduction

Green banking is a relatively new concept in Nepal, many banks and bankers are not fully aware of its importance. Despite major provisions, many financial institutions have less consideration for green banking policies, leading to lower execution and implementation. This may be due to unawareness or costly services. Green banks are often new and face challenges during recessions. They require experienced staff to provide proper services to customers, including loan officers with additional experience in dealing with green businesses. Banks involved in projects that damage the environment may lose their reputations. While some environmental management systems can reduce costs or raise bond values, lending to clients impacted by pollution,environmental regulations, and increased emission standards creates credit risks. Customers may not pay due to unexpected capital investments, market share decline, and third-party claims. Green banking requires expensive technology, renewable, and recycling methods, and employee training. Green banking surveys are an effective tool to

identify financial performance in Nepal. However, many banks are unaware or pretend to be unaware of green banking practices and sustainability. Research question of the study are as follows:

- What is the relationship between green banking and performance of commercialbanks in Chitwan?
- How does green banking impact on perceived performance of commercialbanks in Chitwan?

Literature Review

Green banking is an additional method by which financial institutions can demonstrate their dedication to addressing environmental concerns and demonstrating their commitment to corporate social responsibility. The purpose of this essay is to investigate the overall structure of bankers as well as the factors that determine how they assess the success of green banking. Sustainable banking has become a central focus as financial institutions increasingly adopt green practices to reduce their environmental impact. According to Fatemi and Kaiser (2015), green banking practices, such as financing renewable energy projects, reducing paper use, and optimizing energy efficiency in bank branches, are vital for improving banks' environmental performance. Measuring the success of these practices often involves evaluating reductions in carbon emissions, energy consumption, and waste generation, which are considered key indicators of environmental performance in banking. Additionally, integrating green strategies into the business model can create long-term financial benefits, as banks position themselves as socially responsible entities.

Environmental Management Systems (EMS) are widely adopted in banks to formalize their commitment to sustainability. According to Mollah and Lipy (2018), EMS frameworks such as ISO 14001 help banks manage and mitigate their environmental impacts. The effectiveness of these systems can be assessed through environmental audits, which monitor factors such as resource usage (energy, water) and emissions. Furthermore, banks with strong EMS tend to report better environmental performance and demonstrate transparency in their environmental initiatives, which enhances their public image and customer trust. The relationship between green banking practices and financial performance has been widely debated. A study by Orlitzky et al. (2003) suggested that banks that implement green practices, such as eco-friendly financing and reducing carbon footprints, tend to experience improved financial performance. The measurement of these practices on banks' environmental performance involves tracking key indicators like carbon emission reductions, energy consumption, and eco-friendly investments. The study also emphasized that banks need to integrate green initiatives within their corporate strategy to enhance both environmental and financial outcomes.

Carbon disclosure is a growing trend in the financial sector as banks adopt transparent measures to report their environmental impact. According to Hassan and Leung (2019), the assessment of green practices in banking institutions often relies on carbon disclosure metrics that measure a bank's carbon footprint. This involves reporting on direct emissions from operations as well as emissions from financed activities, such as loans to carbon-intensive industries. Banks that actively measure and disclose their carbon emissions demonstrate leadership in environmental performance, which is often linked to better market performance and stakeholder confidence. Green finance, including the financing of renewable energy and environmentally sustainable projects, has been identified as a key driver of environmental performance in banks. A study by Weber (2010) explored how green finance initiatives, such as green bonds and sustainability-linked loans, contribute to reducing environmental impacts by supporting eco-friendly projects. The measurement of these initiatives' impact on a bank's environmental performance includes assessing the scale of financed green projects, the

environmental outcomes (e.g., emissions reductions), and the alignment with international environmental standards.

Shaumya and Arulrajah (2017) concluded that implementation of environmentally responsible banking practices, which include minimizing the use of paper, enhancing energy efficiency, and actively managing environmental risks, resulted in the preservation of the environment and a smaller ecological footprint. In addition, these techniques enhanced the performance of financial institutions by bringing them into alignment with environmental sustainability objectives, increasing operational efficiencies, and enhancing the reputation of the corporation.

Zheng et al. (2021) found that roughly 95% of bankers in Bangladesh consider green financing to be a vital component in thecreation of banking strategy for both the short term and the long term. As a result, this research contributes to the existing body of knowledge concerning the growth of greenfinance and the sustainability performance of banks and other financial institutions in developing economies such as Bangladesh. Consequently, significant management policy consequences are investigated and debated.

Rehman, et al. (2021) concluded that findings indicate that the adoption of environmentally responsible banking practices is significantly impacted by policy, day-to-day operations, and investments on the part of organizations. The framework that was presented for the study can be adopted by interested parties in order to gain access to and identify the factors that can support a fair level of environmentally responsible banking practices in the country.

Chen *et al.* (2022), found that the staff, daily operations, and policy-related GB practices of banks have significant beneficial effects on green financing. This is in contrast to the customer-related GB practice of banks, which did not show statistical significance. In addition, the funding of environmentally friendly projects performed by banks demonstrated a significant and favorable impact on the environmental performance of banks. In addition, it was noted that the daily operations of banks and the policies related to GB practices had substantial effects on the environmental performances of banks. This was in contrast to the practices connected to GB that were made by banks regarding their employees and customers. In light of this, the discussion focuses on thesignificant policy implications and potential avenues for future study in the relevant area.

Taneja and Özen (2023) concluded that environmental policies and initiatives had a significant impact on the environmental performance of the bank. Based on the findings of the study, it was suggested that financial institutions should make an effort to promote environmentally sustainable technology. This would be of great significance in terms of enhancing the performance of banks and enhancingtheir reputation among clients. Gulzar, et al. (2024) found the shed light on a variety of facets of green banking, including employee-related practices, operational processes, customer engagement, and policy adherence. These findings also make a significant contribution to the development of green financing, which ultimately results in substantial positive benefits. In addition to this, the research highlights the significant and favorable impact that green financing has onthe environmental performance of banks.

Khan et al. (2024) According to the findings of the study, the employees-related practices (ERPs), daily operations-related practices (DORPs), customers-related practices (CRPs), and policy-related practices (PRPs) of banks have a significant and beneficial impact on the reputation of the bank. In addition, it is also found that environmental consciousness has a strong moderating effect on the correlations between ERPs, DORPs, CRPs, and PRPs, as well as the reputation of banks. It is possible that the study may raise understanding and enlighten regulators and bank management to transition their operations to green banking practices in a sustainable manner, which contribute to the environmental sustainability in Pakistan.

There is still a lack of research on the impact that environmentally friendly practices have

on the environmental performance of a bank, particularly in certain geographicalcontexts such as Chitwan District. Although studies conducted on a global and nationalscale have brought attention to the significance of environmental sustainability in the banking industry, there is a noteworthy dearth of empirical evidence concerning the ways in which locally implemented green initiatives impact the environmental performance of banks. To be more specific, the one-of-a-kind socio-economic and environmental aspects of Chitwan may bring particular difficulties and opportunities that are not represented in studies that are more comprehensive. In order to fill this vacuum, research needs to beconducted that focuses on how the green practices that banks in Chitwan have embracedaffect their overall environmental performance. This research should take into consideration issues such as regulatory compliance, community participation, and operational efficiency.

Research Methodology

An analytical research design is used to examine and evaluate data in order to comprehend relationships among various variables. The population of the study consists of all of the bankers, or the employees who are involved in banking and financial institutions located throughout the Chitwan. This research is based on primary source of data. The primary data is collected through structured questionnaire from respondents. Among the total population 189 bankers are chosen as a sample by using purposive sampling method. Correlation analysis was used to reveal the slope of the relationship and to forecast outcomes and characterize the nature of a relationship. Multiple regression was used to examine the effects of independent factors on the dependent variable.

$Y = a+\beta1X1+\beta2X2+ \beta3X3+ \beta4X4$
$BEP = a+ \beta1*ERP+ \beta2*DOP+ \beta3*CRP+ \beta4*BPR$
Where,
a = Constant (Intercept) β = Coefficient
BEP = Bank's Environmental Performance ERP = Employee Related Practices
DOP = Daily Operation Practices CRP= Customer Related Practices
BPR= Bank's Policy Related Practice

Results and Findings

Correlation analysis is a statistical method that is utilized to determine the strength of the relationship between two variables as well as the direction of that relationship.

Table 1 Correlation Analysis

		Bank Environmental Performance	Employee Related Practices	Daily Operation Practices	Customer related Practices	Bank Policy Related Practices
Bank Environmental Performance	Pearson Correlation	1	.384**	.400**	.193**	.477**
	Sig. (2-tailed)		0.000	0.000	0.008	0.000
EmployeeRelated Practices	Pearson Correlation		1	.510**	.202**	.358**
	Sig. (2-tailed)			0.000	0.005	0.000

Cont.

Daily Operation Practices	Pearson Correlation			1	.228**	.406**
	Sig. (2-tailed)				0.002	0.000
Customerrelated Practices	Pearson Correlation				1	.231**
	Sig. (2-tailed)					0.001
Bank PolicyRelated Practices	Pearson Correlation					1
	Sig. (2-tailed)					0.000
**. Correlation is significant at the 0.01 level (2-tailed).						

(**Source:** SPSS Output)

This table shows the correlation coefficients and significance levels between different practices related to the bank's environmental performance and other aspects. The Pearson correlation coefficient is 0.384, which is statistically significant (p = 0.000). This indicates a moderate positive relationship, suggesting that better employee-related practices are associated with better environmental performance. The Pearson correlation coefficient is 0.400, also statistically significant (p = 0.000). This shows a moderate positive relationship, implying that improvements in daily operation practices are linked with better environmental performance. The Pearson correlation coefficient is 0.193, significant at the 0.008 level. This indicates a weak positive relationship, suggesting a less pronounced but still positive association between customer-related practices and environmental performance. The Pearson correlation coefficient is 0.477, statistically significant (p = 0.000). This reflects a moderate to strong positive relationship, indicating that stronger bank policy-related practices are associated with better environmental performance.

In summary, "Bank Environmental Performance" is positively correlated with all other variables, with the strongest relationship observed with "Bank Policy Related Practices"and the weakest with "Customer Related Practices."

Regression analysis of Independent Variable and Banks environmental performance

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549[a]	0.301	0.286	1.016939765567720
a. Predictors: (Constant), Bank Policy Related Practices, Customer related Practices, Employee Related Practices, Daily Operation Practices				

Source: SPSS Output

Table 2 shows the R value is 0.549, indicating a moderate to strong correlation. TheR^2 is 0.301, meaning that approximately 30.1% of the variance in bank environmental performance is explained by these predictors. The adjusted R^2 is 0.286, and the standarderror of the estimate is 1.017, reflecting the overall accuracy of the model's predictions.

Table 3 Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	81.999	4	20.500	19.823	.000[b]
	Residual	190.287	184	1.034		
	Total	272.286	188			
a. Dependent Variable: Bank Environmental Performance						
b. Predictors: (Constant), Bank Policy Related Practices, Customer related Practices, Employee Related Practices, Daily Operation Practices						

Source: SPSS Output

Table 3 shows the regression sum of squares is 81.999, with a mean square of 20.500, resulting in an F-value of 19.823, which is statistically significant (p = 0.000).This indicates that the combined predictors significantly explain the variance in bank environmental performance. The residual sum of squares is 190.287, showing the variance not accounted for by the model. The significant F-value demonstrates that themodel effectively captures the impact of the predictors on environmental performance.

Table 4 Coefficient for predicting Bank Environmental Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.052	0.459		0.113	0.910
	Employee Related Practices	0.174	0.076	0.169	2.303	0.022
	Daily Operation Practices	0.233	0.105	0.167	2.223	0.027
	Customer related Practices	0.049	0.075	0.042	0.655	0.513
	Bank Policy Related Practices	0.467	0.096	0.339	4.887	0.000
a. Dependent Variable: Bank Environmental Performance						

Source: SPSS Output

The table presents the regression coefficients for predicting "Bank Environmental Performance" using four predictors: "Employee Related Practices," "Daily Operation Practices," "Customer Related Practices," and "Bank Policy Related Practices."

Employee Related Practices: The standardized coefficient (Beta) is 0.169, and the t- value is 2.303, which is statistically significant (p = 0.022). This suggests that employee-related practices positively influence environmental performance, with eachunit increase in these practices associated with a 0.174 unit increase in environmental performance.

Daily Operation Practices: The standardized coefficient (Beta) is 0.167, and the t- value is 2.223, significant at p = 0.027. This indicates that daily operation practices alsopositively affect environmental performance, with each unit increase contributing 0.233units to environmental performance.

Customer Related Practices: The standardized coefficient (Beta) is 0.042, and the t- value is 0.655, which is not statistically significant (p = 0.513). This implies that customer-related practices have a negligible effect on environmental performance in this model.

Bank Policy Related Practices: The standardized coefficient (Beta) is 0.339, and the t-value is 4.887, highly significant (p = 0.000). This shows a strong positive effect, witheach unit increase in bank policy-related practices leading to a 0.467 unit increase in environmental performance.

In summary, "Bank Policy Related Practices" has the most substantial positive impact on environmental performance, followed by "Daily Operation Practices" and "Employee Related Practices," while "Customer Related Practices" does notsignificantly influence environmental performance in this model.

Bank Environmental Performance" is positively correlated with all other variables, with the strongest relationship observed with "Bank Policy Related Practices" and the weakest with "Customer Related Practices." Regression analysis shows Bank Policy Related Practices" has the most substantial positive impact on environmental performance, followed by "Daily Operation Practices" and "Employee Related Practices," while "Customer Related Practices" does not significantly influence environmental performancein this model.

Discussion and Conclusion

Zhang et al. (2022) found that green banking activities positively influence green financing and environmental performance, with green financing mediating this relationship. The findings support this, showing high mean scores for policy-related and operational practices, consistent with Zhang et al.'s conclusions about their positiveimpact. However, customer-related practices had a lower mean score and less influence,reflecting Zhang et al.'s identified challenges, such as low customer awareness, aligningwith their observations of the obstacles in green banking development.

Wang (2022) explored the connections between environmental performance, green financing, and green innovation, revealing mixed impacts. The findings, showing strong policy-related practices positively impacting environmental performance, alignwith Wang's idea of green financing's complex effects. However, the findings suggest a more straightforward positive impact of green banking practices than Wang's mixed results, indicating that while green finance influences innovation, its impact on performance varies, highlighting a nuanced relationship between these variables in thereviewed study.

Ambrose (2022) examined how environmentally responsible financing affects financial performance but identified gaps in the literature. The findings focus on sustainability practices' impacts on environmental performance rather than financial outcomes. This creates a gap, as the review does not address financial performance or the specific gapsidentified by Ambrose. The results emphasize the effectiveness of policy-related and operational practices in environmental performance, suggesting further research is needed to connect these practices with financial performance outcomes, aligning with Ambrose's call for additional exploration.

Chen et al. (2022) found that policy-related and operational green banking practices significantly impact environmental performance, consistent with the findings that showhigh mean scores for these practices. The findings align with Chen et al.'s results, reinforcing the effectiveness of strong policy frameworks in improving environmentaloutcomes. Both studies indicate that while policy and operational practices are crucial,customer-related practices have less impact, highlighting a common theme in emphasizing the importance of robust internal practices over external customer-focusedinitiatives.

Niazi et al. (2023) investigated the roles of green human resource management (GHRM) and green innovation (GI) in enhancing environmental performance, finding GCSR as a

mediator. The findings show positive perceptions of sustainability practices,especially policy-related ones, which aligns with Niazi et al.'s emphasis on effective management and innovation. However, the findings did not specifically address GHRMor GI's direct effects, indicating a need for further research into these factors to fully align with Niazi et al.'s insights on green practices and leadership.

During the course of the research, correlation analysis was utilized to ascertain the strength anddirection of the relationships that existed between the independent variables (bank policy-related practices, employee-related practices, daily operation practices, and customer-related practices) and the dependent variable (bank's environmentalperformance). All green banking practices have been found to have a positive correlation with environmental performance, with the stronger correlation being observed for practices related to bank policy. The fact that green practices are indeed linked to improved environmental performance in the banking sector.

The study concluded its next objective by examining how green banking impacts commercial banks in Chitwan. The results of the regression analysis indicatethat the practices related to bank policy have the most significant positive impact on environmental performance. This is followed by practices related to daily operations and practices related to employees. On the other hand, practices that are related to customers do not have a significant impact on environmental performance in this model. In general, the study offers empirical evidence that substantiates the positive impact that green banking practices have on the environmental performance of banks, thereby accomplishing all of the research objectives.

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