The Impact of Green Financing on Financial Performance: The Mediating Role of Environmental Performance in Listed Companies in Sri Lanka

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ABSTRACT

With the rise of sustainable development, green financing has become more important in supporting green businesses and promoting corporate and environment sustainability. However, the empirical evidence on the linkage between green financing, environmental performance and financial performance remains limited in Sri Lanka, particularly regarding the mediating role of environmental performance. Therefore, this study examines the relationships between green financing, environment performance and financial performance including the mediating role of environmental performance among listed companies in Sri Lanka. The use of a quantitative research method is due to the use of secondary panel data in the form of 60 listed companies with a number of 180 observations of firm years in 2022 – 2024. The data has been gathered from annual reports, sustainability reports, integrated reports, ESG disclosures, audited financial statements and corporate websites. Financial performance was measured using Return on Assets, while green financing and environmental performance were measured using respective indices based on green investment and financing initiatives, and environmental practices such as carbon reduction, energy conservation, and waste management, respectively. Stata was used to analyze the data using descriptive statistics, correlation analysis, panel regression, diagnostic tests, and Baron and Kenny mediation procedure. The results indicate that green financing has a significant positive impact on both financial performance and environmental performance. When both green financing and environmental performance were simultaneously included in the final regression model, the

effect of environmental performance on financial performance became statistically insignificant, while the direct effect of green financing remained significant. This indicates that environmental performance does not mediate the relationship between green financing and financial performance. The study represents the limited empirical study in Sri Lanka on green financing, and offers implications for companies and policymakers to strengthen the green financing practices and environmental performance monitoring.

Keywords: Environmental Performance, Financial Performance, Green Financing, Listed Companies, Sri Lanka

1. INTRODUCTION

Environmental issues like pollution, resource shortage and climate change have made sustainability a higher priority in business. Green financing is also crucial in enabling green investments, such as renewable energy projects and energy efficiency and pollution control (Wang & Zhi, 2016). According to previous studies, green financing is positively related to financial performance (Li & Lin, 2024). Likewise, Zheng and Siddik (2022) noted that it helps to improve environmental performance, and Friede et al. (2015) found a positive relationship between environmental and financial performance.

However, there is a lack of empirical studies which investigate these three variables simultaneously, especially the role of environmental performance as a mediator in the Sri Lankan context. Hence, the present study aims to explore the effect of green finance on the financial performance and to explore the mediating role of environmental performance between these variables in the listed companies of Sri Lanka.

2. AIMS/ OBJECTIVES

This study is aimed at exploring the effect of green financing on financial performance of listed companies in Sri Lanka and whether the impact of green financing on financial performance is mediated by environmental performance. In particular, the following objectives are set for the study:

1. What is the impact of green financing on financial performance in listed companies in Sri Lanka?
2. What is the impact of green financing on environmental performance?
3. What is the impact of environmental performance on financial performance?
4. Does environmental performance mediate the relationship between green financing and financial performance?

3. THEORY

Stakeholder Theory: An explanation of how green financing supports the company to satisfy stakeholder expectations and to foster trust.

Legitimacy Theory: Describes the role environmental activities play in ensuring social acceptance and corporate legitimacy.

Resource Based View (RBV): Describes how green investments build environmental capabilities, enhance efficiency and create competitive advantages.

Signaling Theory: The theory that describes the way in which green financing and environmental disclosures send a message to investors and other stakeholders about the sustainability commitment by the company.

Institutional Theory: Discusses how regulations, industry standards and social pressures influence companies to take sustainable measures.

These theories provide explanations for company's decision to invest in environmentally responsible financing and sustainability practice, from the perspective of stakeholder expectations, organizational legitimacy, competitive advantages, corporate reputation and institutional pressures.

The conceptual framework considers the relationship between three major variables: green financing, environmental performance and financial performance. Green financing is considered the independent variable, financial performance is the dependent variable, and environmental performance is the mediating variable.

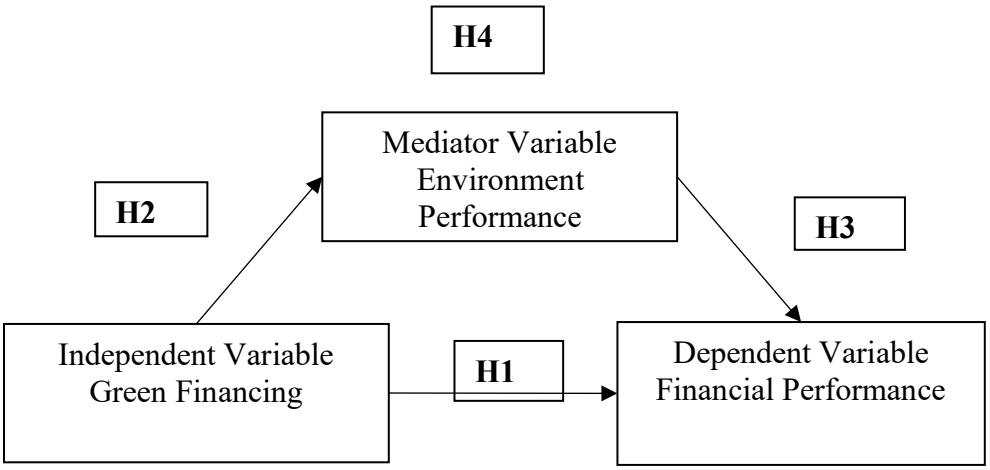

Figure 1. Conceptual Framework

3. METHODS

This study adopted quantitative research method, secondary data analysis, to explore the relationship between green financing, environmental performance and financial performance.

This study has been conducted using the panel data of the 60 listed companies in Sri Lanka for the period of 2022 to 2024, which constituted 180 company-years of data. Secondary data were gathered from the company annual reports, sustainability reports, integrated reports and financial statements.

The Green Financing Index (GFINDEX) was used to measure green financing, and the Environmental Performance Index (EPINDEX) was used to measure environmental performance. The evaluation of financial performance was based on Return on Assets (ROA).

This study used a positivist research philosophy, deductive approach and explanatory research design. The 60 companies were selected in the study using purposive sampling method.

Stata was used for data analysis. The descriptive statistics were used to summarize the variables and to check their relationships by correlation analysis. Using four regression models, four relationships were tested using panel regression analysis. The Hausman test was used to determine the type of panel estimation model to use. Assessment of the regression assumptions was done by conducting diagnostic tests such as normality, multicollinearity (VIF), heteroskedasticity and autocorrelation tests. For the hypothesis test, the Random Effects model with robust standard errors was used. Lastly, Baron and Kenny (1986) mediation method were adopted to explore the mediation effect of environmental performance between green financing and financial performance. The evaluation of hypotheses was done at 5% significance level.

4. RESULTS

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	180	0.074	0.121	-0.161	0.815
GFINDEX	180	0.538	0.183	0.2	0.9
EPINDEX	180	0.536	0.174	0.2	0.9

Note: This table presents descriptive statistics for the main variables. ROA= Return on Asset, GFINDEX= Green Financing Index, EPINDEX= Environmental Performance Index
Source: STATA output

The descriptive statistics show that Return on Assets (ROA) had a mean of 0.074 (SD = 0.121). The mean value of the Mean Green Financing Index

(GFINDEX) was 0.538 (SD = 0.183) and the mean value of the Mean Environmental Performance Index (EPINDEX) was 0.536 (SD = 0.174).

Table 2. Correlation Analysis

Variables	(1)	(2)	(3)
(1) ROA	1.000		
(2) GFINDEX	0.188*	1.000	
	(0.012)		
(3) EPINDEX	0.192*	0.748*	1.000
	(0.010)	(0.000)	

Source: STATA output

Positive and statistically significant correlation between the study variables were found. The financial performance and environmental performance were positively associated with green financing ($r = 0.188$, $p = 0.012$) and ($r = 0.748$, $p < 0.001$), respectively. There is also a positive correlation between environmental performance and financial performance ($r = 0.192$, $p = 0.010$).

Table 3. Panel Regression and Diagnostic Analysis

Variables	Model 1	Model 2	Model 3	Model 4
GFINDEX	0.156	0.713	-	0.137
EPINDEX	-	-	0.138	0.026
Constant	-0.010	0.152	0.000	-0.013
Observations	180	180	180	180
Overall R^2	0.035	0.560	0.037	0.038
Model χ^2	19.164	237.789	11.157	19.373
Model p-value	<0.001	<0.001	0.001	<0.001

Source: Compiled by the author based on the study results.

The results of the panel regression confirmed that green financing is positively associated with financial performance ($\beta = 0.156$, $p < 0.001$), thus supporting the H1. Support for H2 was also obtained with a positive and statistically significant correlation between green financing and environmental performance, $\beta = 0.713$ and $p < 0.001$. When considered separately, environmental performance showed positive and significant association with financial performance ($\beta = 0.138$, $p = 0.001$), thus justifying H3.

The regression analysis results indicated that green financing was still positive and statistically significant ($\beta = 0.137$, $p = 0.004$) when the green financing and environmental performance were included simultaneously in the final regression model, but environmental performance was not statistically significant ($\beta = 0.026$, $p = 0.641$). So, the results did not lend support to the

proposed mediating role of environmental performance and H4 was not supported.

Table 4. Mediation Analysis

Step	Model	Result	Condition
1	Green Financing → Financial Performance	β = 0.156, p = 0.000	Satisfied
2	Green Financing → Environment Performance	β = 0.713, p = 0.000	Satisfied
3	Environmental Performance → Financial Performance	β = 0.138, p = 0.001	Satisfied
4	Green Financing and Environmental Performance → Financial Performance	GFINDEX: p = 0.004 (significant); EPINDEX: p = 0.641 (not significant)	Not Satisfied

Source: Compiled by Author

5. DISCUSSION

Based on the results, it can be seen that there is a positive relationship between green financing and financial performance, which is statistically proved, thus supporting H1. This is in line with the positive correlation that was reported in Nizar (2025) and Li and Lin (2024). Variation between studies may be attributed to differences in companies characteristics, green financing definition, and the time frame examined. In the Sri Lankan context that is explored in this study, the positive coefficient indicates that companies having higher scores in green financing index also exhibited higher ROA scores in the range of 2022-2024.

The findings of a positive and significant relationship between the two variables of green financing and environmental performance support the hypothesis H2. This aligns with the link between green financing and environmental enhancements as mentioned in (Zheng & Siddik, 2022). A possible solution is to provide financing for environmental programs to help the adoption of cleaner technologies, energy efficiency and environmental management. However, the present study has employed an index-based measure so that the outcome should be interpreted as indicative of a relationship between the measured scores rather than of specific environmental improvements resulting from financing.

Examine the individual relationships between environmental and financial performance showed positive and significant relationships, thus confirming H3. This is in line with the broader connection between environmental and economic performance as put forth by (Friede et al., 2015). The combined

regression model, however, did not show environmental performance to be statistically significant, with green financing being significant instead. This is significant as it contrasts the separate model with the combined model: The positive individual association is not an indication of the independent effect of environmental performance in this model.

H4 was not supported by the mediation analysis. Green financing had a significant relationship with environmental performance, both variables had significant association with ROA in the separate models, however, environmental performance was not significant in the final model ($\beta = 0.026$, $p = 0.641$). Hence, the results are not considered as proof that green financing relates to environmental performance as the mechanism. This is not the mediation option mentioned in (Ma et al., 2022). The difference could be due to the different context, variables, measurement methods, or study periods.

Table 5. Hypotheses Testing

Hypotheses	Decision
H1: Green financing has a significant impact on financial performance.	Accepted
H2: Green financing has a significant impact on environmental performance.	Accepted
H3: Environmental performance has a significant impact on financial performance.	Accepted
H4: Environmental performance mediates the relationship between green financing and financial performance.	Rejected

Source: Compiled by Author

The results should be interpreted also taking into consideration the methodological simplifications of the study. First, the analysis is only applied to 60 companies listed on the stock exchange and restricted to 3 years (2022-2024). This gives 180 firm-year observations, however, the short observation period might not reflect future financial gains from environmental investments. Secondly, the study is secondary and uses index based measures. These measures provide a basis for comparing among companies, but may be indicative of the availability and extent of disclosure and of actual practices. Third, the models do not include control variables. The estimated relationships are not limited by the factors such as company size, leverage, industry, and general economic conditions. Lastly, regression results do not necessarily equate to causal relationships. It is therefore important to not read the mediation finding as an indication of a lack of statistical evidence in the tested model, but rather as a finding that environmental performance cannot be considered a mediator in that tested model.

The study in general concludes that there are positive relationships among the listed companies selected in Sri Lanka between green financing, environmental performance and financial performance. But the predictive role of environmental performance was not confirmed by the final regression model. The results provide context specific evidence and raise the need for more extensive samples, extended periods of observation, and models incorporating company characteristics.

6. IMPLICATIONS AND LIMITATIONS

This study is an empirical study on the relationship between green financing and environmental and financial performance for the Sri Lankan situation, which assists the literature. The results confirm the positive association between green financing and financial performance as well as green performance. The presence of the mediating effect of environmental performance was, however, not confirmed, which remains a topic for further research on other possible pathways on how green financing can be found to affect financial performance.

The results of this research provide some useful information for company management, investors, and policy makers. A company may resort to green financing when deciding where to invest, and should assess its financial and environmental impact. Environmental performance disclosures should be included among the financial metrics used to evaluate companies. Policymakers can stimulate green financing by fostering business practices that are environmentally friendly.

The time period for this study was 2022–2024, and the listed companies that were studied were 60. It additionally used disclosure-based indices and secondary data for the measurement of green financing and environmental performance. In addition, only ROA was used to determine financial performance without including control variables. Larger sample size, longer time, direct environmental factors and more financial factors like ROE and ROCE can be considered in future studies. The relationships could also be deeper and more informative if there were inclusion of control variables and also if there were a consideration of other potential mediators.

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