THE INFLUENCE OF GREEN FINANCE AND GREEN MARKETING ON SME PERFORMANCE: THE MODERATING ROLE OF INNOVATION CAPABILITY

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ABSTRACT

The increasing global awareness of environmental sustainability has prompted businesses, including small and medium enterprises (SMEs), to adopt green finance and green marketing practices. However, the extent to which these strategies impact SME performance remains an important research area. This study aims to examine the influence of green finance and green marketing on SME performance, while also investigating the moderating role of innovation capability. A quantitative research approach is employed, using Structural Equation Modeling (SEM) to analyze data collected from SMEs that have implemented green finance and green marketing strategies. The results are expected to provide insights into how SMEs can leverage green financial resources and sustainable marketing approaches to enhance their performance, with innovation capability acting as a key enabler. The findings will contribute to both academic literature and practical applications, offering recommendations for SMEs to optimize their sustainability-driven strategies for competitive.

Keywords: Green Finance, Green Marketing, SME Performance, Innovation Capability, Sustainability, Structural Equation Modeling (SEM), Competitive Advantage

INTRODUCTION

The growing global awareness of environmental sustainability has resulted in heightened scrutiny of how corporations contribute to meeting sustainability targets. As enterprises attempt to strike a balance between profitability and environmental responsibility, adopting environmentally friendly practices has become increasingly important, particularly for Small and Medium Enterprises (SMEs). Small and medium-sized enterprises (SMEs), which contribute significantly to economic growth and job creation, are under increasing pressure to incorporate green practices into their operations in order to fulfill changing customer demands and comply with environmental requirements(Maziriri, 2018).

Small and medium-sized enterprises (SMEs) constitute the backbone of the Indonesian economy, accounting for around 60.3% of the country's GDP and employing approximately 97% of the workforce. Jakarta, as Indonesia's economic heartland, has a thriving SME ecosystem that encompasses a variety of industries, including manufacturing, retail, and services. However, adoption of green finance and green marketing among these businesses is still limited due to financial restrictions, a lack of awareness, and insufficient support structures (Thaliya, 2023).

Green finance and green marketing have emerged as critical approaches for improving SMEs' sustainability performance. Green finance encompasses financial products and services designed to promote environmentally sustainable economic activity, such as green bonds, green loans, and equity funding for environmentally good initiatives. This financial approach not only promotes the development of green technologies, but it also fits with global efforts to battle climate change and mitigate environmental damage. In Southeast Asian nations such as Malaysia and Indonesia, green finance has shown to be an important instrument for improving financial sustainability among SMEs (Xiliang et al., 2023).

Meanwhile, green marketing refers to techniques that include environmental issues into marketing operations, such as promoting eco-friendly products, using sustainable packaging, and advertising a brand's dedication to environmental protection. Such tactics enable businesses to differentiate themselves in increasingly competitive industries while also appealing to environmentally aware customers (Sajuyigbe et al., 2024).

Despite the exciting potential of green finance and green marketing, understanding their impact on SME performance remains an important topic of research. According to studies, while green finance provides SMEs with access to resources for sustainable development, its effectiveness is frequently tempered by factors such as corporate governance, innovation capabilities, and a strategic green marketing focus. Furthermore, incorporating these practices into a cohesive strategy that improves business performance necessitates the ability to innovate and adapt to shifting market circumstances (Wang et al., 2023).
The goal of this study is to investigate the impact of green finance and green marketing on SME performance, with a focus on the moderating function of innovation capability. This study will focus on SMEs operating in Jakarta, which will be chosen from a well-established entrepreneur community to ensure relevance and accessibility. This study will use Structural Equation Modeling (SEM) to evaluate data from these SMEs in order to provide insights into how innovation might improve the effectiveness of sustainability-driven practices. The findings are expected to contribute to both academic literature and practical implementations, with recommendations for SMEs to optimize their strategy and gain a competitive edge through sustainable growth (Ullah et al., 2022).

LITERATURE REVIEW

This literature review chapter discusses the principles and theoretical frameworks behind green finance, green marketing, SME performance, and innovation capabilities. The review seeks to lay a solid framework for understanding how these variables interact and influence SMEs' performance, particularly in the context of sustainability-driven policies. Ecological Modernization Theory, Stakeholder Theory, and Agency Theory are all investigated to give theoretical justification for the suggested study paradigm (Yanti, 2024).

Green Finance

Green finance refers to financial goods and services that encourage long-term economic growth while protecting the environment. It includes a wide range of financial products such as green bonds, loans, and equity investments designed to fund environmentally beneficial enterprises. Green financing enables SMEs to access money for sustainable growth, leading to improved financial sustainability. According to studies in Indonesia and Malaysia, integrating green finance with green activities improves financial sustainability performance
Furthermore, (Wang et al., 2023) emphasize the importance of green finance in fostering corporate social responsibility (CSR) and boosting overall sustainability performance in Chinese SMEs. However, significant barriers to green finance adoption exist, including a lack of awareness, poor policy formation, and inconsistent reporting standards.

Green Marketing

Green marketing refers to the use of marketing tactics that stress environmental conservation and sustainability. It involves actions such as marketing green products, using eco-friendly packaging, and showcasing the company's dedication to environmental protection. According to (Wang et al., 2023) study, green marketing strategies improve the competitiveness of SMEs in Ethiopia by attracting environmentally conscious consumers. However, the success of green marketing is frequently influenced by factors such as customer knowledge and company commitment to sustainability (Firdiansyah, 2021).

Green Entrepreneurial and Strategic Green Marketing Orientation

Investigated the notion of Green Entrepreneurial Orientation (GEO), which describes a company's proactive, inventive, and risk-taking attitude to sustainability. GEO is critical for businesses looking to incorporate green innovation into their strategic plans. The study underlines that GEO favorably improves business performance when supported by Strategic Green Marketing Orientation (SGMO), a comprehensive framework that incorporates environmental factors into marketing decisions (Nuryakin, 2022).

Innovation Capability

Innovation capability refers to an organization's ability to effectively incorporate novel processes, goods, and services in response to changing market demands. According to studies, innovation capability functions as a moderator of green finance, green marketing, and SMEs' performance. Organizations with strong innovation skills can better exploit green finance and marketing strategies to boost competitiveness (Biby, 2023).

Despite the vast literature on green finance, green marketing, and corporate governance, little study has been conducted to investigate their combined effect on SME performance, particularly when innovation potential is considered a moderating element. Furthermore, studies concentrating on Indonesia remain underexplored, particularly on how SMEs in Jakarta execute sustainability-driven initiatives (Rajadurai, 2021).

RESEARCH METHOD

This study was conducted on Jakarta, Indonesia. The author chose Jakarta as the research location because it is one of the Jakarta is one of the largest cities in Indonesia which has many MSME players with their respective sectors. The sample size was determined using Slovin's formula, based on data from BPS, which states that there are 1,100,000 MSME owners / entrepreneurs in DKI. As a result, the number of respondents was set at 400 people. Primary data and secondary data are the two types of data used. The questionnaire was distributed using Google Forms. Secondary information was gathered from the internet and other sources. Five Likert scales were used to investigate the variable questions. The question structure is complete. Meanwhile, for preliminary research, a structured observation method is used.

Based on the literature review, the following hypotheses are formulated:

H1: Green Finance positively influences SME Performance.
H2: Green Marketing positively influences SME Performance.
H3: Innovation Capability positively influences SME Performance
H4: Innovation Capability positively influences moderates the relationship between Green Finance and SME Performance.
H5: Innovation Capability positively moderates the relationship between Green Marketing and SME Performance.

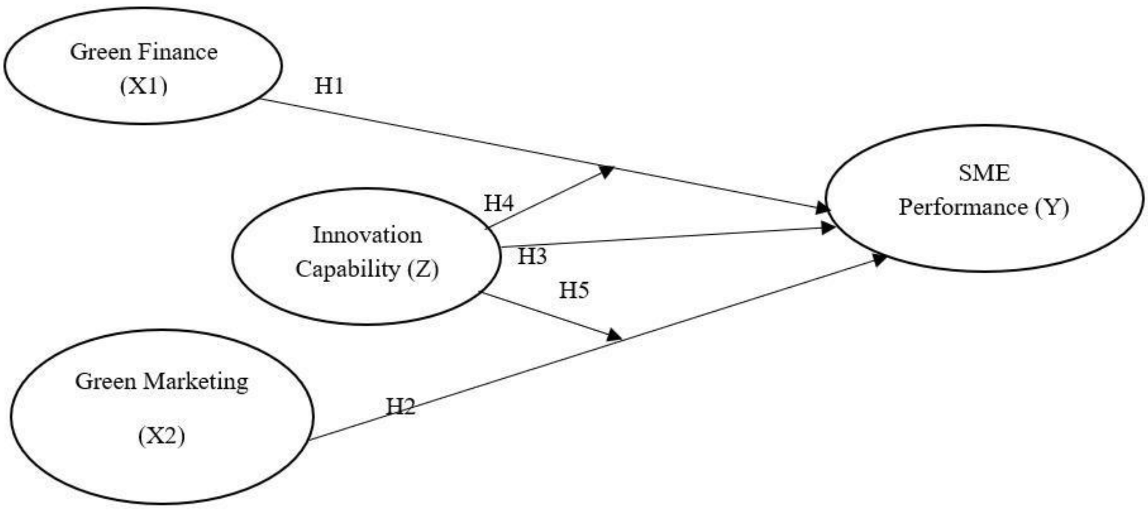

Figure 1. Research Model

Model Result Evaluation
Relationship models that affect SME performance are analyzed using SMART PLS version 3.0. There are 4 latent variables in the model them are Green Finance (X1), Green Marketing (X2), and with Innovation Capability (Z) as moderator variable, and SME Performance, as dependent variable. The reliability of the instrument in SMART-PLS is seen from the consistency of internal reliability assessed by Cronbach's Alpha and Composite Reliability (Hair et al., 2017). The reliability test of indicators in PLS on reflective constructs is assessed based on the loading factor value (correlation between item scores or component scores with construct scores) of the indicators that measure the construct.

Table 1
Composite Reliability Results

Variable	***Composite Reliability***	**Keterangan**
Green Finance	0.972	Reliabel
Green Marketing	0.960	Reliabel
Innovation Capability	0.971	Reliabel
SME Performance	0.973	Reliabel

All four constructs achieved a high level of internal reliability consistency, with Composite Reliability values All Composite Reliability values are greater than 0.70, indicating that all of the scales used in this study are reliable.

Table 2
Cronbach's Alpha and AVE Results

Variabel	***Cronbach's Alpha***	**Keterangan**	***Average Variance Extracted* (*AVE*)**
Green Finance	0.965	Valid	0.853
Green Marketing	0.950	Valid	0.801
Innovation Capability	0.960	Valid	0.892
SME Performance	0.966	Valid	0.879

All four constructs achieved a high level of internal reliability consistency, with Cronbach's Alpha and AVE Results values all values are greater than 0.70, indicating that all of the scales used in this study are valid.

Hypothesis Test Results

Table 3. Bootstraps Result

Hypothesis	***Path Coefficients***	**β**	***t statistic***	***p values***	**Accepted / Rejected**
H1	Green Finance -> SME Performance	0.106	4.366	0.000	Accepted
H2	Green Marketing-> SME Performance	0.124	0.332	0.740	Rejected
H3	Innovation Capability -> SME Performance	0.055	9.050	0.000	Accepted
H4	X1*Z -> SME Performance (Y)	0.058	3.368	0.001	Acceepted
H5	X2*Z -> SME Performance (Y)	0.042	4.070	0.000	Accepted

The insignificancy of green finance to SME Performance, innovation capability to SME Performance and Innovation capability able to moderate green finance and green marketing on SME performance.

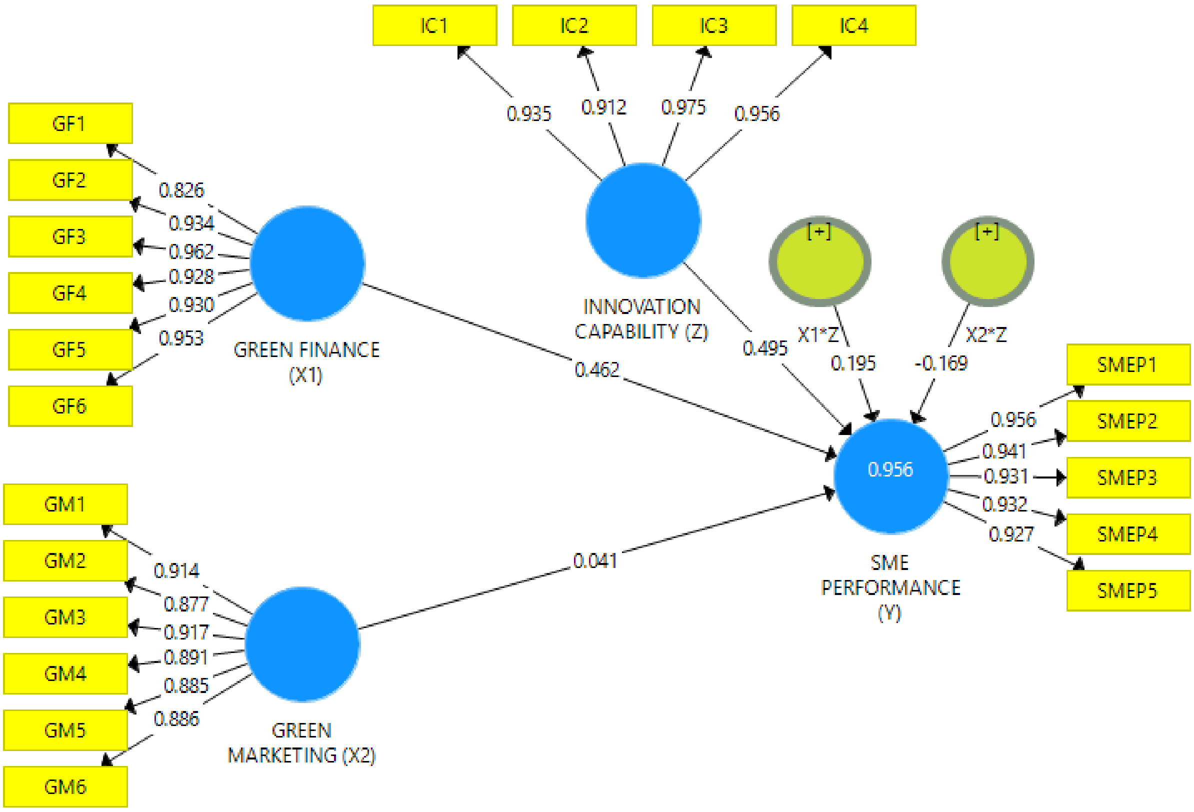

Figure 2. Hypothesis Test Results

RESULT AND DISCUSSION

Green Finance (X1) has a positive and significant impact on SME Performance (Y) (p-value = 0.000), indicating that employing green financial practices improves firm performance. SMEs that use Green Finance, which includes environmentally friendly investments, effective financial management, and sustainable funding, tend to do better. This research supports the idea that green financial practices increase operational efficiency and attract consumers and investors who favor environmentally responsible enterprises. Green financing may help SMEs establish more sustainable business operations, improve resource efficiency, and increase financial stability.

The non-significant association between Green Marketing (X2) and SME Performance (Y) (p-value = 0.740) suggests that Green Marketing may not directly boost business performance. This finding suggests that promoting eco-friendly products, green advertising, and sustainable packaging without accompanying innovation may be insufficient to attract consumers. The lack of relevance could be attributed to green marketing activities' inability to stand out in a highly competitive industry, as well as a lack of consumer awareness and understanding of green marketing initiatives.

Innovation Capability (Z) has a substantial positive and significant effect on SME Performance (Y) (p-value = 0.000). This research emphasizes the critical significance of innovation in improving business success, especially when green practices are employed. SMEs with stronger innovation capabilities are better able to convert green finance investments into novel products, services, or processes that appeal to environmentally concerned consumers. Furthermore, strong innovation capabilities enable organizations to stand out in the market by offering distinctive value offerings.

The interaction effects highlight the importance of Innovation Capability as a moderator. The significant interaction between Green Finance and Innovation Capability (X1*Z) on SME Performance (Y) (p-value = 0.001) indicates that innovation improves the effectiveness of green finance strategies. SMEs with strong innovation capabilities can use green financial resources to produce unique solutions that improve efficiency and performance.

Similarly, the substantial interaction between Green Marketing and Innovation Capability (X2*Z) on SME Performance (Y) (p-value = 0.000) suggests that combining green marketing efforts with strong innovation capabilities increases their effectiveness. Businesses with strong innovation capabilities can effectively translate green marketing strategies into meaningful consumer value, increasing market competitiveness and overall performance. This finding emphasizes the importance of integrating innovation to provide true value and appeal to consumers, rather than simply advertising green products or services.

Managerial Implications

This result can be attributed to the increasing awareness of sustainability practices among Indonesian SMEs. In Jakarta, where business competitiveness is high, SMEs that implement green financial practices—such as eco-friendly investments, energy-efficient projects, and environmentally responsible budgeting—often gain better access to green financing schemes offered by banks and governmental incentives aimed at promoting sustainable development.

Jakarta, being a metropolitan city with severe environmental challenges like air pollution and flooding, motivates SMEs to adopt green practices as part of their risk management and operational efficiency improvements. Additionally, the government's push towards sustainable economic growth, as outlined in Indonesia's Green Economy Framework, encourages businesses to integrate sustainability into their financial strategies (Sun et al., 2020). The significance of Green Finance on SME performance in this context demonstrates that financial resources allocated toward green initiatives can enhance business resilience, operational efficiency, and brand reputation in environmentally conscious markets (Khan et al., 2024).

The non-significant association between Green Marketing and SME Performance implies that simply advertising eco-friendly items may not directly improve the performance of Jakarta-based SMEs. This could be caused by a variety of factors:

- Consumer Awareness and Behavior: According to studies, while Jakarta's customers are increasingly concerned about the environment, this does not always transfer into green shopping behavior. For example, research on Generation Z in Jakarta demonstrates that, despite environmental knowledge, price and convenience sometimes take precedence over sustainability in purchase decisions.
- Perceived Greenwashing: Consumers may be dubious of green marketing promises due to perceived greenwashing, which occurs when businesses exaggerate or fraudulently claim environmental benefits. This distrust can undermine the efficacy of green marketing initiatives.

The significant role of Innovation Capability in enhancing the effectiveness of both Green Finance and Green Marketing on SME Performance highlights the need for SMEs in Jakarta to innovate continually. Innovation enables SMEs to develop unique value propositions that resonate with environmentally conscious consumers and differentiate themselves in a competitive market. For example, SMEs that have successfully integrated sustainable practices into their business models, such as using renewable materials or implementing energy-efficient processes, have seen improved brand image and customer loyalty (Semlali et al., 2024).

Conclusions And Recommendations

The Green Marketing measurement used in this study may not adequately capture the complexities of green marketing implementation, particularly in terms of consumer perceptions and responses. While the instrument concentrates on the implementation process, it lacks indicators of customer attitudes and responses to green marketing initiatives. This gap could explain why Green Marketing had no significant effect on SME Performance in this study, as customers may have perceived the activities as insufficient or merely greenwashing rather than true sustainable practices.

The study's geographical limitations make it difficult to generalize the findings. Because the study focuses primarily on SMEs in Jakarta, Indonesia's economic capital, the findings may not accurately reflect SMEs in other regions. Differences in consumer awareness, local legislation, and market features between cities and rural areas may result in varied outcomes. As a result, identical studies undertaken in different major cities or rural settings may reveal differences in how green practices affect performance (Li et al., 2024).

The study relies solely on quantitative approaches (SEM) and does not incorporate qualitative findings. Although SEM is effective at assessing connections between factors, it does not explain why Green Marketing has had such a small impact. Incorporating qualitative methodologies, such as interviews or focus groups, would improve our understanding of why some SMEs fail to capitalize on green marketing initiatives.

Another critical aspect is the assumption of homogeneity among SMEs. The study treats SMEs as a single category, overlooking potential industry-specific differences. In reality, SMEs from different sectors may adopt green practices differently, and their performance outcomes might vary significantly. This lack of differentiation could result in skewed conclusions, as some industries may naturally align better with green initiatives than others (Zhang & Berhe, 2022).

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