



Leveraging Green Finance to Improve SME Sustainability in Nigeria


Nijerya'da KOBİ Sürdürülebilirliğini Geliştirmek İçin Yeşil Finansman Kullanımı

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ABSTRACT

In recent years, SMEs in African nations, particularly Nigeria, have faced significant challenges related to green financing, sustainability, and environmental compliance. This research examines the influence of various green finance dimensions on the environmental performance of SMEs, focusing on selected manufacturing SMEs in Lagos, Nigeria. A total of 250 surveys were distributed to participants, with 235 completed questionnaires successfully collected. Data analysis was conducted using Pearson Product Moment Correlation Coefficient (PPMCC) and Path Analysis-Structural Equation Modeling (PA-SEM). The results reveal a positive, though not statistically significant, relationship between green investment and green training with SMEs' environmental performance. This suggests that while green investment and training have potential as tools for improving SMEs' environmental outcomes, further research is necessary to confirm their effectiveness. However, the study finds a significant positive relationship between green loans, green technology, and environmental performance, highlighting the effectiveness of these measures in fostering environmental responsibility among SMEs. Based on these findings, the study recommends that government bodies, financial institutions, and other stakeholders provide financial incentives and support to encourage SMEs to adopt green technology and utilize green loans. Additionally, collaborative efforts to promote green training programs for SME employees are encouraged. This unified approach aims to foster a sustainable, environmentally conscious business environment, contributing to broader goals of environmental sustainability.

Keywords: Green Finance, Green Investment, Green Training, Green Loan, SMEs

ÖZ

Son yıllarda, özellikle Nijerya olmak üzere Afrika ülkelerindeki KOBİ'ler yeşil finansman, sürdürülebilirlik ve çevresel uyumlulukla ilgili önemli zorluklarla karşı karşıya kalmaktadır. Bu araştırma, Nijerya, Lagos'ta seçilmiş üretim KOBİ'lerine odaklanarak çeşitli yeşil finans boyutlarının KOBİ'lerin çevresel performansı üzerindeki etkisini incelemektedir. Katılımcılara toplam 250 anket dağıtılmış ve 235 tamamlanmış anket başarıyla toplanmıştır. Veri analizi Pearson Momentler Çarpımı Korelasyon Katsayısı (PMÇKK) ve Yol Analizi-Yapısal Eşitlik Modellemesi (YA-YEM) kullanılarak gerçekleştirilmiştir. Sonuçlar, yeşil yatırım ve yeşil eğitim ile KOBİ'lerin çevresel performansı arasında istatistiksel olarak anlamlı olmasa da pozitif bir ilişki olduğunu ortaya koymaktadır. Bu durum, yeşil yatırım ve eğitimin KOBİ'lerin çevresel sonuçlarını iyileştirme araçları olarak potansiyeli olsa da bunların etkinliğini doğrulamak için daha fazla araştırmanın gerekli olduğunu göstermektedir. Ancak çalışma, yeşil krediler, yeşil teknoloji ve çevresel performans arasında anlamlı ve pozitif bir ilişki tespit etmiş ve bu tedbirlerin KOBİ'ler arasında çevresel sorumluluğu teşvik etmedeki etkililiğini vurgulamıştır. Bu bulgulara dayanarak, bu çalışma; hükümet organlarının, finans kuruluşlarının ve diğer paydaşların KOBİ'leri yeşil teknolojiyi benimsemeye ve yeşil kredileri kullanmaya özendirme için finansal teşvikler ve destekler sağlamasını önermektedir. Ek olarak, KOBİ çalışanları için yeşil eğitim programlarını desteklemek amacıyla işbirlikçi çabalar teşvik edilmektedir. Bu birleştirilmiş yaklaşım, çevresel sürdürülebilirliğin daha geniş hedeflerine katkıda bulunarak sürdürülebilir, çevre bilincine sahip bir iş ortamı yaratmayı amaçlamaktadır.

Anahtar Kelimeler: Yeşil Finans, Yeşil Yatırım, Yeşil Eğitim, Yeşil Kredi, KOBİ'ler

Introduction

The advancement of developing countries is significantly influenced by the crucial role played by small and medium enterprises (SMEs), as highlighted by Djankov et al. in 2005 and 2006. They play a vital role in economic progress by diminishing poverty, nurturing entrepreneurship, and generating employment opportunities, as demonstrated by Maksimov et al. in 2017 and Toke and Kalpande in 2020. Additionally, SMEs exert considerable influence on the global economy, constituting a noteworthy share of economic activity and employment, as emphasized by Sajuyigbe et al. in 2021. Their advantages include lower capital requirements, agile decision-making, personalized product offerings, and a positive impact on income inequality, as observed by Toke and Kalpande in 2020. However, it is crucial to recognize that SMEs have a noteworthy environmental footprint, posing a growing concern. Challenges related to resource efficiency, sustainability, and environmental compliance are widespread among SMEs. Various studies, such as those conducted by Li et al. (2021) and Li et al. (2022), underscore the adverse environmental effects of SME operations. Furthermore, many SMEs are yet to embrace environmentally friendly practices, as noted by Gandhi et al. in 2018, and their strides toward green operations are in early stages, as discovered by Majumdar et al. (2020).

To address these environmental challenges, green finance emerges as a promising solution. Green finance provides SMEs with essential funding, training, incentives, and expertise to improve their EP. Hitchens and Sivasubramaniam (2015) affirm that green training equips SMEs with the knowledge to implement sustainable practices effectively, fostering an understanding of the benefits of environmentally friendly actions and promoting a culture of sustainability within the organization. Furthermore, according to de Felipe et al. (2017), green investment plays a crucial role in providing SMEs with the essential capital needed to adopt environmentally friendly technologies and practices. This support extends to initiatives such as integrating energy-efficient equipment, minimizing waste, and developing cleaner products. Additionally, green policies establish a regulatory framework that encourages SMEs to embrace eco-friendly practices. Incentives, such as tax credits for environmentally conscious investments or penalties for non-compliance, drive SMEs to reduce their environmental impact (Horbach, 2008). While previous studies have delved into the relationship between green finance and EP, particularly within sectors like banking, health, multinational organizations, and education

(Oyedele et al., 2022; Gao et al., 2021; Bansal & Kumar, 2021; Wang et al., 2022; Hafeez et al., 2022; Su et al., 2022; Adesola et al., 2021), there is a notable gap in research exploring the correlation between green finance dimensions and the EP of SMEs, especially in Nigeria. This study aims to address this gap in the literature by investigating how various dimensions of green finance impact the EP of SMEs in Nigeria. The research holds particular significance for the sub-manufacturing sector of SMEs, offering the potential to enhance environmental sustainability, mitigate environmental consequences, and contribute to achieving the Sustainable Development Goals (SDGs) by 2030.

Theoretical Framework

Numerous theories, including Resource-Based View (RBV), Institutional Theory, Green Innovation Theory, and Social Learning Theory, have been employed in prior studies to elucidate the connection between SMEs' EP and dimensions of GF such as GI, GT, GL, and green technology (Chien et al., 2021; Shaumya & Arulrajah, 2017; Oyedele et al., 2022; Tran et al., 2020). In the present study, the foundational theories are Resource-Based View (RBV) and Institutional Theory, serving as frameworks to empower SMEs to enhance their EP and engage with GF. RBV aids SMEs in recognizing and efficiently utilizing their green assets for a competitive edge, sustainability, and adaptability, while Institutional Theory emphasizes adherence to external regulations, providing access to financial resources, risk reduction, and new market opportunities. Both theories underscore the pivotal role of incorporating GF into SME strategies for improved EP and sustained success.

Resource-Based View (RBV)

RBV, originating in the late 20th century through contributions by scholars Birger Wernerfelt and Jay Barney, posits that a company's competitive advantage and overall performance stem primarily from its resource portfolio and its adept deployment of these resources. These resources encompass tangible assets, intangible assets, organizational capabilities, knowledge, and distinctive attributes (Li et al., 2021; Li et al., 2021). Applied to green finance facets, such as green investments, green loans, green technology, and green training, RBV can elucidate their influence on SME performance and environmental impact (Wang et al., 2022; Shaumya & Arulrajah, 2017).

RBV supports SMEs in achieving a competitive edge by leveraging valuable, rare, and irreplaceable resources, as noted by Hafeez et al. (2022). This is particularly relevant in the green finance realm, where SMEs can distinguish

themselves through investments in green technology, yielding cost savings and superior environmental performance (Oyedele et al., 2022; Gao et al., 2021). RBV's focus on long-term sustainability aligns with green finance dimensions, facilitating SMEs in becoming more sustainable and adaptable to changing environmental regulations and market demands (Adesola et al., 2021; Su et al., 2022).

RBV underscores the importance of knowledge and capabilities, making green training indispensable for SMEs to cultivate necessary knowledge and skills for eco-friendly practices, stimulating innovation in processes and product offerings (Gao et al., 2021; Nasim et al., 2022). Efficient allocation of green finance resources, prioritizing areas with the most substantial environmental performance improvements, is guided by RBV, promoting industrial sustainability and contributing to the 2030 Agenda for Sustainable Development.

Institutional Theory

Institutional Theory, a sociological framework, applied in environmental and sustainability studies, explores how institutions, formal and informal rules, norms, and practices, shape human behavior within a society. Developed in the 1970s and 1980s by scholars like Paul DiMaggio and Walter Powell, Institutional Theory contends that organizations adopt certain practices and structures for legitimacy and to avoid sanctions, leading to the diffusion of these practices across organizations (Chen, 2018; Ma, & Wang, 2020).

In the context of GF, Wang and Sarkis (2016) position Institutional Theory as a conceptual framework for understanding and advocating environmentally responsible financial practices. SMEs are inclined to adopt eco-friendly financial practices when perceived as legitimate and under external pressures from stakeholders (Goldstone, 2020). Institutional Theory guides SMEs in advancing eco-friendly investments, governments in incentivizing GLs, and encouraging GT for sustainability (Farrell, 2018; Alvesson & Spicer, 2019). Azari and Smith (2012) assert that SMEs can utilize Institutional Theory to champion green technology adoption through incentives and standards set by governments. This underscores the crucial role Institutional Theory plays in promoting environmentally responsible practices across institutions and organizations.

In conclusion, both the Resource-Based View (RBV) and Institutional Theory offer valuable insights into comprehending the influence of internal resources and formal/informal institutions on environmental and

sustainability endeavours across diverse domains, including GF, GT, GTech, and the EP of SMEs.

Empirical Review and Hypotheses Development

Prior research examining the relationship between GF and EP is outlined below. For instance, Oyedele et al. (2022) investigated the impact of GF on the EP of Nigerian banks, finding that dimensions of GF like GL, GT, GI, and GTech significantly influence EP. Similarly, Bahmani-Oskooee et al. (2020) determined that GF dimensions serve as significant predictors of EP, particularly in areas such as industrial pollution control, waste management, and hygiene. In a similar vein, Nulkar (2014) argues that the sustainability of organizations' EP is closely tied to GF dimensions, and Risal, nad Joshi (2018) also confirmed that GF plays a pivotal role in determining EP.

Additionally, Shaumya and Arulrajah (2017) posited that GF dimensions, including GI, GL, GT, and GTech predict environmental sustainability and organizational performance. Another study by Kala and Vidyakala (2020) reaffirmed that GF dimensions, such as GI, GL, GT, and GTech, act as foundational elements for the EP of business organizations. A study conducted by Ren, Shao and Zhong (2020) highlights the significance of green strategies as valuable tools for SMEs in reducing waste and enhancing their business outcomes. Nasim et al (2022) also emphasize the role of GF dimensions as a foundation for addressing a broad spectrum of environmental challenges, including industrial pollution control, waste management, and hygiene. According to Abbas (2020), GT equips employees with the knowledge and skills necessary to minimize their environmental footprint and support their organization's sustainability objectives.

Research by Ameer and Khan (2022) demonstrates that GT has a positive impact on employees' motivation and commitment to environmental sustainability, particularly in terms of improving energy efficiency, reducing waste, and preventing pollution. In line with this, Hu, Wang, and Zhang (2022) assert that GT aids employees in developing the skills and competencies required to implement environmentally-friendly practices in their work, including operating energy-efficient equipment, minimizing waste, and designing and manufacturing eco-friendly products. A study conducted in Sri Lanka by Shaumya and Arulrajah (2017) corroborates the significance of GI as a key driver for enhancing organizational operational efficiency, leading to reduced energy costs, waste reduction, and cost-saving recycling programs. In their 2018 study, Risal and Joshi emphasize

that embracing GI provides organizations with a valuable platform to bolster their brand reputation and appeal to new customers. This is due to the fact that a substantial portion of consumers are willing to pay premium prices for products and services offered by environmentally responsible companies. Furthermore, a growing body of research underscores the favourable impact of green investments on the environmental performance of small and medium-sized enterprises (SMEs). For instance, a 2020 report from the World Bank revealed that SMEs that adopted green technologies achieved an average reduction in energy consumption of 20% (Su et al., 2022). Another study, conducted by Chien et al. in 2021, demonstrated that SMEs that integrated green finance principles into their operations experienced an average reduction in waste production of 15%.

In sum, GF offers SMEs a win-win opportunity by enabling them to minimize their environmental footprint, enhance operational efficiency, fortify their brand image, attract and retain talented employees, and ultimately save money in the long term. This suggests that GF has the potential to assist SMEs in lowering their energy consumption, waste generation, and emissions of harmful pollutants. Consequently, this can result in noteworthy environmental advantages, including enhanced air and water quality, decreased greenhouse gas emissions, and the preservation of precious natural resources.

Conceptual Framework for the Study

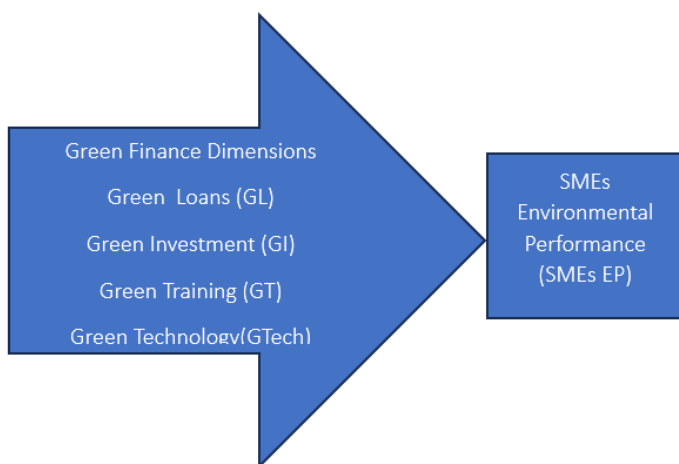


Figure 1. Conceptual Model

Building upon the aforementioned empirical insights, the following hypotheses emerge (See Figure 1):

H1: A significant correlation exists between GLs and the EP of SMEs.

H2: A significant relationship exists between GI and the EP

of SMEs.

H3: There is a significant connection between GTech and the EP of SMEs.

H4: There is a significant link between GT and the EP of SMEs.

Methodology

This study used quantitative research methods to explain the relationship between GF and the EP of SMEs. Data collection was conducted through a structured survey, consisting of a series of systematically organized questions designed to elicit respondents' opinions. The survey was administered to SME operators engaged in manufacturing in Lagos who have been in operation for the past five years and are registered with the Manufacturers Association of Nigeria. To ensure a representative sample, a multistage proportional random sampling method was used. Out of 250 questionnaires distributed, 235 were returned, yielding a high response rate of 94%. The researchers used statistical methods (PPMCC and PA-SEM) to analyze the data."

This study relied on established measurement scales for green loans, green investment, green training, green technology, and SME environmental performance, developed and validated by various researchers (Oyedele et al., 2022; Su et al., 2022; Nasim et al., 2022; Hu et al., 2022; Ameer & Khan, 2022). All scales used a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Their internal consistency, measured by Cronbach's alpha, ranged from 0.792 to 0.832, indicating good reliability. For further details on the scales' psychometric quality, refer to Table 1.

According to the data in Table 1, all indicators have a factor weight exceeding 0.5. This suggests that the questions effectively capture the variability in their respective variables, affirming the suitability of the measurement model for analysis.

Results and Discussion

The mean represents the average value in a dataset. For SMEP, the mean is 4.6750, indicating that SMEs, on average, score 4.6750 on the environmental performance measure. GRI has a mean of 4.4917, suggesting an average score of 4.4917 for green investments among SMEs. The mean for GRL is 4.6167, signifying an average score of 4.6167 on green loans. Additionally, GRT and GRTE have means of 4.5333 and 4.5750, respectively, implying SME scores of 4.5333 for green training and 4.5750 for green technology

Table 1: Instruments Validation

Code	Details	GRI	GRL	GRT	GRTE	SMEP
Green Investment – Cronbach Alpha – (GRI = 0.821)						
G11	In my organization, investing in green initiatives leads to cost savings.	.798				
G12	My SME conducts a thorough environmental impact assessment before making green investments.	.789				
G13	My SME receives adequate financial support for our green investment projects.	.802				
G14	My SME is committed to adopting sustainable practices through green investments.	.811				
Green Loans – Cronbach Alpha – (GRL = 0.809)						
GL1	I hold the view that embracing eco-conscious practices is crucial for my business in order to secure financing.		.795			
GL2	I'm keen on securing a sustainable loan to support environmentally responsible projects within my small to medium-sized enterprise (SME).		.802			
GL3	My SME has already put into action, or intends to put into action, green and sustainable endeavors as a direct result of our ability to access sustainable loans.		.788			
GL4	Gaining access to such financial support empowers us to realign our business operations in harmony with eco-friendly practices.		.805			
Green Training – Cronbach Alpha – (GRT = 0.819)						
GT1	Our SME has access to an adequate amount of resources and materials for implementing green training initiatives			.792		
GT2	Green training programs are relevant and beneficial for our SME in terms of sustainability and environmental responsibility.			.809		
GT3	The green training programs provided to our employees have proven to be effective in improving our environmental practices and sustainability efforts.			.810		
GT4	Green training is seamlessly integrated into our daily SME operations, and our employees actively participate in sustainability efforts.			.812		
Green Technology– Cronbach Alpha – (GRTE = 0.822)						
GTECH1	Our SME actively seeks to reduce its environmental footprint				.821	
GTECH2	Our SME has integrated green technology solutions into its operations.				.804	
GTECH3	Our SME is willing to invest in green technology, even if it involves higher initial costs.				.791	
GTECH4	Our SME provides training and incentives with moder green technology to encourage employees to embrace eco-friendly practices.				.809	
SMEs Environmental Performance – Cronbach Alpha (SMEP = 0.816)						
SMEP1	My SME consistently complies with local and national environmental regulations					.806

SMEP2	My SME implements eco-friendly practices, such as recycling, energy conservation, and reduced emissions								.787
SMEP3	My SME actively seeks to reduce waste and improve resource efficiency in its operations.								.795
SMEP4	My SME consistently complies with local and national environmental regulations.								.811
SMEP5	My SME implements eco-friendly practices, such as recycling, energy conservation, and reduced emissions.								.808
	Eigenvalue	2.8078	2.4340	3.423	3.243	2.875			
	Percentage of Variance	55.523	56.3452	58.672	58.921	55.973			
	KMO	.803	.792	.802	.787	.792			
	Bartlett's Test of Sphericity	385.87	252.12	341.65	352.21	351.87			
	Reliability Test (Cronbach Alpha)	.801	.798	.836	.796	.812			
	Significance	.000	.000	.000	.000	.000			

on average. The SD, or standard deviation, indicates the extent to which values in a dataset are dispersed. A higher SD implies greater dispersion, while a lower SD suggests more closely clustered values. In this instance, the SD for SMEP is 0.56750, indicating a relatively tight clustering of values. Similarly, GRI has a low SD of 0.50203, suggesting a similar trend of closely grouped values.

Table 2: Relationship among variables

Model	Mean	SD	1	2	3	4	5
1. SMEEP	4.6750	.56750	1				
2. GI	4.4917	.50203	.389**	1			
3. GL	4.6167	.59668	.746**	.214*	1		
4. GT	4.5333	.50098	.467**	.753**	.240**	1	
5. GTECH	4.5750	.58930	.840**	.400**	.656**	.490**	1

The findings also indicate notable positive correlations between SMEP and GRL (0.746), SMEP and GRT (0.467), and SMEP and GRTE (0.840). This implies that as SMEP scores rise, so do the scores for GRL, GRT, and GRTE. Similarly, there's a significant positive correlation between GRI and GRT (0.753) as well as GRI and GRTE (0.656), suggesting that higher GRI scores align with increased scores in GRT and GRTE. Lastly, a significant positive correlation of 0.490 exists between GRT and GRTE, indicating that higher GRT scores are associated with elevated GRTE scores.

These findings indicate a robust positive connection between environmental performance and green

investments, loan, training, and technology. It suggests that SMEs engaging in green initiatives are likely to exhibit enhanced environmental performance.

From Table 3, coefficient value of .0209458 and z-value of 0.29 showcase that GI is positively associated with SMEs' EP, meaning that as the amount of GI increases, SMEs' EP also tends to increase. However, the p-value of 0.755 indicates that this relationship is not statistically significant. This means that the increase in SMEs' EP associated with GI is not strong enough to be reliably detected. This could be due to the low level of GI among SME operators in Nigeria.

The coefficient value of 0.3399895 and z-value of 6.27 connotes that GL is positively and significantly associated with SMEs' EP. Based on the results of the analysis, it can be concluded that GLs are an effective way to encourage SMEs' EP. This is because GLs provide financial incentives for SMEs to invest in environmentally friendly practices. The study further reveals that GT has a positive but insignificant relationship with SMEs' EP with coefficient value of .1110614, z-value of 1.43, and p-value of 0.153. This implies that GT is a promising tool for helping SMEs improve their EP. Therefore, SMEs should carefully consider how they implement GT. The training should be tailored to the specific needs of the SME and its employees, and it should be adequately integrated into the SME's overall environmental management system.

Table 3: Structure Equation Modelling (Direct Effect)

Path	Coef.	Std. Err.	z-value	P> z	Hypothesis
SMEP <- GRI	.0209458	.0734204	0.29	0.775	H₁ not confirmed
SMEP <- GRL	.3399895	.0542037	6.27	0.000	H₂ confirmed
SMEP <- GRT	.1110614	.0777454	1.43	0.153	H₃ not confirmed
SMEP <- GRTE	.5296363	.0611126	8.67	0.000	H₄ confirmed

Evidence showcases that GTech is positively and significantly related to SMEs' EP with coefficient value of .5296363, z-value of 8.67, and p-value of 0.000. This result has a number of implications for SMEs. First, it suggests that SMEs can achieve environmental goals without sacrificing economic performance. In fact, the study suggests that GTech can actually lead to improved economic performance. This is because GTech can help SMEs to reduce costs, improve efficiency, and gain a competitive advantage. Second, the result suggests that governments and other stakeholders can support SMEs to adopt GTech by providing financial incentives and other forms of support. This will help SMEs to achieve their environmental goals and contribute to a more sustainable economy.

The study suggests that there are a number of ways to encourage SMEs' EP. By adopting GL, GT, GI, and GTech, SMEs can improve their EP without sacrificing economic performance. Governments and other stakeholders can play a role in supporting SMEs to achieve their environmental goals.

hasize the role of GF dimensions as a foundation for addressing a broad spectrum of environmental challenges, including industrial pollution control, waste management, and hygiene. According to Abbas (2020), GT equips employees with the

Conclusion

This research, centered on manufacturing SMEs in Lagos, Nigeria, explores the influence of various dimensions of green finance (GF) on their environmental performance (EP). While the study reveals a positive relationship between green investment (GI) and EP, this association is not statistically significant, likely due to the limited adoption of GI by SME operators in Nigeria. Consistent with Oyedele et al. (2022), the research confirms that green investment is positively linked to environmental performance. Furthermore, it finds that green loans (GLs)

are positively and significantly related to SMEs' EP, indicating that green loans are an effective mechanism for promoting environmental performance in SMEs. This supports previous findings that GLs are a strong predictor of environmental performance (Bahmani-Oskooee et al., 2020; Nulkar, 2014). Similarly, Risal and Joshi (2018) found a significant relationship between GLs and EP. Additionally, the study reports a positive but insignificant link between green taxes (GT) and SMEs' EP, suggesting that while green taxes show potential, further research is needed to fully understand their impact on SMEs' environmental performance. Moreover, a strong and positive connection was observed between green technology (GTech) investments and SMEs' EP. This aligns with Shaumya and Arulrajah (2017), who identified GTech as a predictor of environmental sustainability and organizational performance. Kala and Vidyakala (2020) also reinforced the role of GTech as a fundamental factor for businesses' environmental performance. Similarly, research by Ren, Shao, and Zhong (2020) underscores the importance of green strategies as effective tools for SMEs to reduce waste and improve business outcomes. This suggests that SMEs can significantly reduce their environmental footprint and contribute to sustainability without compromising their economic performance.

This research strengthens the theoretical foundation of environmental sustainability management, specifically by advancing our understanding of green finance. The study examines existing theories used to explain the relationship between GF and EP. It uniquely integrates two of these theories - the Resource-Based View and Institutional Theory - to provide practical insights into their influence on the environmental performance of manufacturing SMEs. Both theories offer valuable insights into understanding the influence of internal resources and formal/informal institutions on environmental and sustainability initiatives, spanning areas such as green finance, training, technology, and the EP of SMEs.

Specifically, the Resource-Based View Theory guides SMEs in optimizing the allocation of their green finance resources by prioritizing areas like green technology or training that can yield the most significant improvements in environmental performance. Moreover, this theory provides a framework for Small and Medium-sized Enterprises (SMEs) to access green financial instruments such as loans, training, investments, and technology. This holistic approach seeks to promote environmentally friendly practices within the manufacturing sector, addressing specific environmental concerns like pollution or resource depletion. Additionally, it aims to fortify the economic landscape through sustainable practices and contribute to the attainment of the United Nations' Sustainable Development Goals by 2030.

Similarly, Institutional Theory provides a foundation for governments to incentivize banks to offer green loans, potentially through mechanisms like tax breaks or subsidies, to support environmentally friendly financing for SMEs. Moreover, this theory encourages the promotion of green training by prompting SMEs to invest in educating their workforce on sustainable practices. Governments, for example, can allocate funds for green training initiatives or mandate SMEs to provide sustainability training to their employees.

Environmental sustainability has garnered increasing attention from entrepreneurs, scholars, researchers, and policymakers in recent times. This study adds to the current body of literature on green finance dimensions, offering practical implications for SME operators/managers, scholars, researchers, and policymakers. Consequently, the study makes significant practical contributions to the sub-manufacturing sector of SMEs in Nigeria, a sector crucial for the country's economy in terms of financial contributions and employment. This significance arises from the sector's status as the largest contributor to employment generation and poverty reduction in Nigeria and Africa (Sajuyigbe et al., 2021). The research findings reveal that green investment and green training exhibit a positive but insignificant association with SME environmental performance. On the other hand, green loans and green technology show a positive and significant association with SME environmental performance. This suggests that SMEs should contemplate embracing green loans to finance environmentally friendly initiatives. Moreover, they should carefully strategize the implementation of green training, ensuring it aligns with their specific needs and integrates seamlessly into their overall environmental management system. Additionally, SMEs are encouraged to persist in investing in green technology to enhance their

environmental performance.

Furthermore, it is recommended that government bodies, financial institutions, and other stakeholders offer financial incentives and support to SMEs for the adoption of green technology and green loans. Moreover, there should be a concerted effort to promote green training initiatives for SME employees. This collaborative approach aims to foster a sustainable and environmentally conscious business environment, contributing to the broader goals of environmental sustainability.

Etik Onay: Çalışmanın davranış bilimleri etik standartlarına uygunluğu 03.10.2023 tarih ve PSCS/012/0912 sayılı kararla onaylanmıştır.

Katılımcı Onamı: Yazılı onam bu çalışmaya katılan tüm katılımcılardan alınmıştır.

Hakem Değerlendirmesi: Dış bağımsız.

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Çıkar Çatışması: Yazarlar, çıkar çatışması olmadığını beyan etmiştir.

Finansal Destek: Yazarlar, bu çalışma için finansal destek almadığını beyan etmiştir.

Ethics Committee Approval: The study adheres to the ethical standards of behavioral science. (Ethical clearance number: PSCS/012/0912, dated November 3, 2023).

Informed Consent: Written informed consent was obtained from all participants who participated in this study

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