



DRIVING ESG PERFORMANCE THROUGH GREEN FINANCE AND DIGITAL TRANSFORMATION: THE STRATEGIC ROLE OF CEO FOREIGN EXPERIENCE

TABAH RIZKI^{1*}
RAFLES GINTING²
WINDY JATMIKA³
ANDI AMRI⁴

¹Universitas Sriwijaya

²Universitas Tanjungpura

³Universitas Muhammadiyah Papua

⁴Department of Business Administration, Asia University

¹Jalan Palembang-Prabumulih, KM 32 Inderalaya, Ogan Ilir, South Sumatera, Indonesia

²Jalan Prof. Dr. H. Hadari Nawawi, Pontianak, West Kalimantan, Indonesia

³Jalan Abepantai No. 25, Jayapura, Papua, Indonesia

⁴500 Liufeng Road, Wufeng, Taichung 41354, Taiwan

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Corresponding author:

tabahrizki@unsri.ac.id

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Abstract: *Globalization requires companies to integrate sustainability principles into their strategies to fulfil their environmental, social, and governance (ESG) commitments. This study examines green finance and digital transformation as complementary drivers of ESG performance in the ASEAN manufacturing sector, with CEO foreign experience as the moderating variable. Data were obtained from recent post-pandemic empirical evidence in emerging Southeast Asian markets from 2019 to 2023 and analyzed using the PLS technique. The results show that ESG performance is positively and significantly influenced by green finance and digital transformation, with CEO foreign experience strengthening these relationships. This study contributes theoretically by extending the ESG and strategic leadership literature through a leadership contingency perspective, highlighting how global exposure of the management enhances sustainability outcomes. The findings have a practical implication that ASEAN manufacturing companies should incorporate sustainable finance strategies, accelerate digital transformation, and prioritize globally experienced leadership to improve their long-term corporate sustainability performance.*

Keywords: Green Finance, Digital Transformation, ESG Performance, CEO Foreign Experience, ASEAN

INTRODUCTION

As the global economy develops, companies are encouraged to adopt sustainable business practices by applying the Environmental, Social, and Governance (ESG) principles. Due to the growing demands for sustainability from regulators, investors, and society, ESG performance becomes a key indicator of corporate competitiveness, particularly in the manufacturing sector that greatly contributes to emissions and environmental damage (Wang et al., 2024). In Southeast Asian countries (ASEAN), manufacturing companies face a serious challenge of balancing economic growth and profitability with environmental and social sustainability.

Green finance has been regarded as an important instrument to improve ESG performance. This instrument promotes environmentally friendly financing that prioritizes sustainable investment and green innovation (Meo & Abd Karim, 2022; Xiong & Dai, 2023). Furthermore, it can help companies achieve their sustainability goals and reduce their carbon emissions (Huang et al., 2025). The adoption of green finance, however, is influenced by regulatory factors, market risks, and industry readiness to implement green practices, making its relationship with ESG performance not necessarily linear (Caldecott, 2022; Wang et al., 2022). While green finance has been shown to boost companies' technological innovation and environmental performance, especially during difficult circumstances like the COVID-19 pandemic (Awawdeh et al., 2021; Li et al., 2022), its implementation in ASEAN is still faced with several major barriers, including a lack of green finance infrastructure, policy gaps, and low sustainability literacy at the corporate level (Huang & Zhang, 2021).

In addition to green finance, digital transformation also plays a crucial role in enhancing ESG performance. Digital technologies promote energy efficiency, supply chain transparency, and green product innovation that bolster competitive advantage (Haijun et al., 2023; Huang et al., 2023). Digital transformation through the use of big data, IoT, AI, and supply chain digitization can increase energy efficiency, reduce carbon emissions, and improve governance (Asbeetah et al., 2025; Huang et al., 2023). According to prior studies, digitalization can enhance ESG performance by facilitating the management of sustainability data, boosting operational efficiency, and developing low-carbon business models (Li et al., 2024; Liu et al., 2024). In addition, it can support green innovation and improve companies' environmental and social performance (Ren et al., 2023). Nevertheless, the impact of digital transformation on ESG performance remains inconsistent, particularly when its effectiveness is hampered by lax environmental regulations or inadequate digital infrastructure. In ASEAN manufacturing companies, the adoption of digital transformation continues to be hindered by financial constraints, a lack of technology readiness, and a shortage of human resources (Plekhanov et al., 2023).

Exploring the ASEAN context may yield important findings on this topic since the region faces unique challenges: varying levels of digital adoption and ESG standards across countries, reliance on labor-intensive industries, and global pressure to cut carbon emissions (Lu & Cheng, 2023). ASEAN manufacturing companies are required to modify their business strategies in accordance with global sustainability agendas, such as the Sustainable Development Goals (SDGs) and post-COVID-19 green transition objectives (Mukanjari & Sterner, 2020; Sachs et al., 2019). Although various studies have assessed the connection between ESG practices and green innovation, corporate performance, digital transformation, and operational efficiency (Bu et al., 2020; Chouaibi et al., 2022), research on how digital transformation affects the ESG performance of ASEAN manufacturing companies remains very limited. Meanwhile, it is crucial to examine the role of digitalization as it may help businesses become more sustainable and globally competitive (Ahmad et al., 2024; Wang et al., 2024).

Corporate strategy, particularly with regard to sustainability, is profoundly shaped by top executives, according to the upper echelons theory by Hambrick and Mason (1984). In this regard, CEOs with foreign experience can improve ESG performance through green finance and digital transformation as they have access to global knowledge, networks, and standardized business processes (Bertrand et al., 2021; Qin & Lin, 2024). Previous studies have reported that CEO foreign experience encourages green innovation (Quan et al., 2023), promotes corporate sustainability (Wang et al., 2022), and reduces reputational and financial risks (Cao et al., 2019). However, little research has been done on how CEO foreign experience moderates the relationship between green finance, digital transformation, and ESG performance, especially in the ASEAN context.

Based on these gaps, the core research questions of this study are articulated as follows: 1) How do green finance and digital transformation influence ESG performance in ASEAN manufacturing companies? and 2) To what extent does CEO foreign experience moderate these relationships? By addressing these questions, this study aims to provide integrated evidence on financial and technological drivers of ESG performance in emerging markets, advance the upper echelons theory by examining CEO foreign experience as a strategic factor that moderates the achievement of sustainability outcomes, and offer practical insights for policymakers and corporate leaders seeking to design effective sustainable finance policies and digital transformation strategies tailored to ASEAN's institutional characteristics.

THEORETICAL FRAMEWORK AND HYPOTHESES

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) discusses a company's tangible and intangible resources as a value or potential to support business operations in pursuing high excellence (Barney & Arikan, 2005). This theory becomes the foundation of this study in explaining how ASEAN manufacturing companies improve their ESG performance through competitive advantage and performance. In this regard, RBV explains that green finance and digital transformation serve as intangible strategic resources that can enhance ESG performance. Green finance provides sustainable capital for environmentally oriented investments, while digital transformation increases operational efficiency, transparency, and ESG data management. Companies that effectively integrate these resources are more likely to have superior ESG performance.

Stakeholder theory

The stakeholder theory holds that corporate sustainability and ESG performance are influenced by stakeholders. This theory also identifies the groups or individuals who can either influence or be influenced by corporate actions (Phillips et al., 2019). Meeting the demands of stakeholders—particularly those who control operational resources—is, therefore, essential to fostering stakeholder relationships. Furthermore, the stakeholder theory emphasizes that green finance and digital transformation contribute to achieving ESG performance requirements (Wang, 2024). In the context of ESG principles, this theory posits that companies adopt sustainable practices to fulfil the expectations of regulators, investors, customers, and society. Thus, green finance and digital transformation function as strategic responses to stakeholder pressure, assisting companies in improving their transparency, environmental responsibility, and long-term legitimacy. Typically, a company responds to stakeholder demands based on the management's interpretation and strategic decision-making. CEOs with foreign experience tend to have global insight and greater familiarity with advanced ESG practices, enabling them to apply green finance and digital transformation more effectively.

Upper Echelons Theory

The upper echelons theory by Hambrick and Mason (1984) explains the role of senior management in strategic decision-making. According to this theory, top management is responsible for the entire organization, and their characteristics, actions, and strategies affect business decisions (Liu et al., 2025). In the context of this study, the upper echelons theory explains why the effectiveness of green finance and digital transformation in improving ESG performance may vary across companies. Despite their structural support for sustainability, the successful implementation of both instruments depends on the management's interpretation and strategic prioritization. In this regard, CEOs with foreign experience typically possess broader global perspectives, more extensive international networks, and greater familiarity with advanced sustainability practices. Such exposure increases their capability to implement green finance, accelerate digital transformation, and align corporate strategies with global ESG standards. This clarifies that leadership characteristics affect how financial and technological strategies translate into improved ESG performance, particularly in ASEAN manufacturing companies.

Hypotheses

The Effect of Green Finance on ESG Performance

Green finance helps companies achieve their sustainable development goals. It supports environmental solutions and sustainable development (Sachs et al., 2019) and improves both environmental and national performance (Taghizadeh-Hesary & Yoshino, 2020). According to the Resource-Based View (RBV) theory, green finance is a strategic organizational resource that improves long-term competitiveness. It claims that green finance in a country improves (Nohong et al., 2024)

The stakeholder theory, on the other hand, holds that companies can meet stakeholders' environmental expectations and improve organizational efficiency in adapting to external changes, thereby enhancing financial performance. This is consistent with the findings of a study by Jha and Bakhshi (2019), which indicate that green finance can promote sustainable economic growth. The impact of green finance on the green economy and sustainable development has been investigated by Lee (2020), who explored the context of China. Mukanjari and Sterner (2020) have also reported in their study that green finance can boost economic growth by launching secure financial companies. Thus, the first hypothesis of this study is constructed as follows:

H1: Green finance has a positive effect on ESG performance.

The Effect of Digital Transformation on ESG Performance

Apart from green finance, digital transformation also has a crucial impact on sustainable development. It is an activity in the digital economy that can be used to meet the data access needs of both the government and the public (Sun et al., 2024). Previous studies have shown that digital transformation can improve a company's ESG performance (Su et al., 2023; Sun et al., 2024; Yang et al., 2024). Companies undergoing digital transformation can provide governments, investors, and other businesses with access to ESG-aligned information. Such transparency raises awareness of the importance of ESG performance, encouraging companies to improve their performance (Agbakwuru et al., 2024). This can facilitate responsible and sustainable growth in the digital era. Therefore, the second hypothesis of this study is formulated as follows:

H2: Digital transformation has a positive effect on ESG performance.

The Role of CEO Foreign Experience on the Effect of Green Finance on ESG Performance

Green innovation is more likely to occur among CEOs from industrialized countries. A CEO's personality and foreign experience influence the company's CSR initiatives (Wang et al., 2022) and facilitate strategic decision-making (Ashraf et al., 2025). According to the upper echelons theory, CEOs with foreign experience have the ability to align strategic objectives with sustainability laws and institutions. To maintain their profitability, companies must aim for sustainability, address social challenges, comply with international law, and follow international strategies (e.g., the Sustainable Development Goals), all of which are considered determining factors by shareholders (Berrone et al., 2023)

Experienced CEO are expected to improve their performance and generate more revenue for the company (Li et al., 2024). The upper echelons theory holds that CEO's experience influences corporate strategy. Most CEOs around the world believe that sustainability issues are critical to their organizations, and that their characteristics can affect strategic decision-making, particularly with regard to green finance. A CEO with foreign experience is capable of adopting green finance more effectively, which ultimately improves the company's ESG performance. Furthermore, publicizing ESG performance can indicate a CEO's competitive understanding and future forecasting. Therefore, the third hypothesis of this study is proposed as follows:

H3: CEO foreign experience can enhance the impact of green finance on ESG performance.

The Role of CEO Foreign Experience on the Effect of Digital Transformation on ESG Performance

The upper echelons theory holds that CEOs' professional background can reflect their psychological characteristics, including their knowledge, cognition, and values, which influence corporate strategic decision-making and performance. Influential executives tend to prioritize their personal image and reputation, as well as the company's overall image, over ESG performance, digital transformation goals, and innovative behaviors such as digital strategy changes, while taking risks in the process (Powers, 2024). According to Li et al. (2024), a CEO has the ability to improve both the input and the output of corporate transformation. Professional executives are more ready to take transformation risks, handle failure, and encourage people to try new ideas than non-professional ones (Liu et al., 2025)

CEOs with foreign experience are typically more capable of utilizing digital transformation technologies to develop and adopt sustainable practices (Qin & Lin, 2024). Thus, CEOs with foreign experience can professionally focus more on future industry growth, usually by increasing employee investment, conducting research and development, and undergoing digital transformation, all of which will improve operational efficiency. CEO foreign experience, particularly in environmental activities, can direct green corporate actions, strengthen social responsibility policies, and manage digital transformation resources (Sun et al., 2024). Meanwhile, digital transformation can accelerate business development through improved corporate governance. Thus, the fourth hypothesis of this study is as follows:

H4: CEO foreign experience can enhance the impact of digital transformation on ESG performance.

RESEARCH METHODS

This study employed a quantitative approach with descriptive statistical analyses to examine how CEO foreign experience moderates the positive effects of green finance and digital transformation on ESG performance. The ASEAN public companies were selected as the study population, with companies within the manufacturing sector as the samples. It is essential to examine the ESG compliance and performance of manufacturing companies since this industry is frequently scrutinized by governments and the public due to its social responsibility and the pollution it causes.

The analysis covered the critical period of 2019–2023, when several ASEAN countries were enforcing and tightening ESG regulations. In 2019, more companies—especially those listed on stock exchanges—started to publish their sustainability reports regularly and in accordance with global standards. Most public companies have provided their complete financial and ESG statistics for this year. In this study, green finance was measured using the logarithm of amortized debt securities, while the digital transformation variable was determined by calculating the digital technology term in annual reports. Meanwhile, the measurement of ESG performance used Thomson Reuters' Eikon ESG score. The moderating variable—namely, CEO foreign experience—is a dummy variable, which has a value of 1 if the CEO studied or worked abroad, and 0 if otherwise.

In addition to these three key variables, this study involved SIZE, AGE, INF, GDP, and WGI to control the test results. The analysis of the effect of these control variables on ESG performance formed the basis for its implementation. Descriptive data analysis included the mean, standard deviation, variance, maximum, and minimum values. The simplest panel data strategy, i.e., Pooled Least Squares (PLS), was used to test the hypotheses.

Model 1: Main Effect Model

Hypotheses 1 and 2 are constructed to assess how green finance and digital transformation affect ESG performance, with the formula as follows:

$$ESGP_{it} = \beta_0 + \beta_1GF_{it} + \beta_2DT_{it} + \beta_3FSIZE_{it} + \beta_4FAGE_{it} + \beta_5INF_{it} + \beta_6GDP_{it} + \beta_7WGI_{it} + \epsilon_{it}$$

Model 2: Moderation Model

Hypotheses 3 and 4 are constructed to observe the moderating role of CEO foreign experience on the effects of green finance and digital transformation on ESG performance, with the formula as follows:

$$ESGP_{it} = \beta_0 + \beta_1GF_{it} + \beta_2DT_{it} + \beta_3GF*CEO_{it} + \beta_4DT*CEO_{it} + \beta_5SIZE_{it} + \beta_6FAGE_{it} + \beta_7INF_{it} + \beta_8GDP_{it} + \beta_9WGI_{it} + \epsilon_{it}$$

Notes:

- ESGP : ESG Performance
- DT : Digital Transformation
- CEO : CEO Foreign Experience
- SIZE : Company Size
- AGE : Company Age
- INF : Inflation
- GDP : Gross Domestic Product
- WGI : Worldwide Governance Indicators (WGI)

RESULTS AND DISCUSSION

Descriptive Statistics

The results of the descriptive statistical analyses of the variables are displayed in Table 1, while the STATA output is presented in the appendix.

Table 1. Descriptive Statistics of the Variables

Variable	Obs.	Mean	Std. Dev.	Min	Max
ESG Performance	450	62.45	12.30	30.10	89.20
Green Finance	450	0.215	0.085	0.05	0.45
Digital Transformation	450	0.478	0.142	0.10	0.82
CEO Foreign Experience	450	0.38	0.48	0	1
SIZE	450	15.84	1.45	13.10	18.75
AGE	450	28.6	12.3	5	85
INF	450	3.45	1.25	0.80	6.50
GDP	450	4.10	1.85	-2.00	7.50
WGI	450	0.35	0.52	-0.85	1.25

As shown in Table 1, the ESG performance of manufacturing companies in ASEAN during the 2019-2023 period has an average value of 62.45 with a standard deviation of 12.30, which illustrates significant variations between companies. The minimum value of 30.10 implies that some companies still exhibit poor ESG performance, while the maximum value of 89.20 indicates that several companies are highly committed to sustainability. This discrepancy may be influenced by internal factors—e.g., sustainability strategy and digitalization—as well as external factors, such as regulation and stakeholder pressure.

The results for the green finance variable indicate that, on average, companies only use green financial instruments for 21.5% of their total funding. This demonstrates the limited adoption of green finance, despite the fact that it has been employed for up to 45% of the total funding in some companies. The low utilization of green finance by most companies is possibly due to the lack of access to green financial instruments or the absence of strong regulatory pressure in some ASEAN countries. Digital transformation, on the other hand, shows mixed progress, with an average value of 0.478 and a standard deviation of 0.142. This means that some companies remain at a low level of digital adoption (0.10), while the most advanced companies have adopted digitalization as a key corporate strategy, with an index of 0.82. Digital transformation is regarded as a crucial factor in improving efficiency, transparency, and sustainability reporting, thus potentially driving ESG performance. In this study, the role of the managerial characteristics is also highlighted through the variable of CEO foreign experience, which accounts for 38% of the total sample. This proportion suggests that, although most companies are still led by CEOs with domestic experience, the presence of CEOs with foreign experience is significant enough to be tested as a moderating factor.

Control variables, i.e., company size (SIZE), company age (AGE), inflation (INF), economic growth (GDP), and governance index (WGI), also provide important context to the findings of this study. Companies in the sample have an average asset size of 15.84 (log total assets) and an average age of 28.6 years. These companies operate in countries with an average inflation of 3.45%, economic growth of 4.10%, and a governance index of 0.35. The results imply that these factors may have an impact on a company's ability to invest in green finance and digital transformation. In addition, these variables can be used to determine the extent to which companies can improve their ESG performance under diverse macroeconomic and regulatory conditions.

Hypothesis Testing

Model 1 – Main Effect Model: Green Finance and Digital Transformation Influence ESG Performance

Table 2 displays the regression results for hypotheses 1 and 2, revealing the positive impact of green finance on ESG performance (below 5%). Therefore, hypothesis 1 is **accepted**. Similarly, digital transformation also has a positive and significant effect on ESG performance (below 5%). Thus, hypothesis 2 is **accepted**.

Table 2. Regression Results of Hypotheses 1 and 2

Variable	Expectation	Coefficient	P-Value
Green Finance	+	0.274891	0.013 **
Digital Transformation	+	0.121568	0.036 **
SIZE	+	0.020983	0.015 **
AGE	+	0.156901	0.044 **
INF	+	0.030117	0.077 *
GDP	+	0.2571202	0.007 ***
WGI	-	2.7054912	0.000 ***
Constants		1.974213	0.000 ***
N		450	
Adj.R ²		0.4871 (48.71%)	
Prob > F		0.0000	

Effect of Green Finance on ESG Performance

As shown in Table 2, green finance has a strong positive impact on ESG performance in manufacturing companies in ASEAN countries ($p < 0.05$, regression coefficient = 0.274891). This confirms the fundamental hypothesis that implementing green finance improves ESG performance. Green finance facilitates the enhancement of companies' ESG performance by supporting environmentally friendly initiatives and sustainable business practices. This finding is consistent with a study by Awawdeh et al. (2021), which found that green finance drives technical innovation and environmental performance, particularly during emergencies such as the COVID-

19 pandemic. By adopting green finance, companies can overcome investment barriers in sustainable projects, which in turn strengthens the environmental aspects of the ESG performance (Hidayat-ur-Rehman & Hossain, 2024; Nasir & Ahmed, 2024). This finding supports the stakeholder theory, which holds that companies strategically respond to external pressures and stakeholder expectations through improved ESG performance (Sachs et al., 2019). Furthermore, this finding confirms the Resource-Based View (RBV) theory, which emphasizes that a company's competitive advantage is rooted in the possession of strategic resources (Wang et al., 2022). In this context, green finance is not merely a financial tool; it represents a strategic resource that enables companies to build capabilities in sustainability, environmental innovation, and responsible governance (Khababa & Jalingo, 2023). In addition, the green finance approach is closely associated with improving operational efficiency and reducing financial risks. According to Broadstock et al. (2021), companies with strong ESG performance exhibit greater resilience during financial crises, suggesting that investing in green projects can be a long-term risk mitigation strategy.

Effect of Digital Transformation on ESG Performance

Digital transformation also has a positive impact on the ESG performance of manufacturing companies in ASEAN, with a significance level of $p < 0.05$ and a regression coefficient of 0.121568 (Table 2). The more digital a company's business procedures are, the better its ESG performance. Digital transformation can help companies optimize resource use, minimize emissions and waste, and improve real-time tracking and measurement of environmental impacts (Asbeetah et al., 2025). It plays a vital role in enhancing corporate ESG performance by opening up opportunities for more efficient and sustainable innovations. These findings are consistent with a previous study by Liu et al. (2024), which found that companies that integrate digital technology into their sustainability strategies tend to have higher ESG scores. Digitalization makes it possible for companies to increase the efficiency of their business processes, strengthen their social engagement with stakeholders, and produce accurate and transparent ESG reporting. It has been shown to facilitate real-time and more accurate monitoring, reporting, and management of environmental and social impacts, thereby strengthening transparency and accountability to stakeholders (Haijun et al., 2023; Li et al., 2024). Furthermore, the adoption of digital transformation and green finance synergistically supports technological innovations that improve environmental performance, particularly in times of crisis such as the COVID-19 pandemic (Awawdeh et al., 2021).

Model 2 – Moderation Model: CEO Foreign Experience Moderates the Impact of Green Finance and Digital Transformation on ESG Performance

Table 3 shows the regression results for hypotheses 3 and 4, demonstrating that CEO foreign experience moderates the impact of green finance and digital transformation on ESG performance. In this regard, CEOs with international experience can enhance the effects of green finance and digital transformation on ESG performance (by more than 5%), according to the statistics. Thus, hypotheses 3 and 4 are **accepted**.

Table 3. Regression Results of Hypotheses 3 and 4

Variable	Expectation	Coefficient	P-Value
Green Finance	+	0.215	0.007 **
Digital Transformation	+	0.198	0.008 **
CEO Foreign Experience	+	0.133	0.047 **
Green Finance *CEO Foreign Experience	+	0.097	0.026 **
Digital Transformation *CEO Foreign Experience	+	0.085	0.041 **
SIZE	+	0.020	0.015 **
AGE	+	-0.156	0.050 **
INF	+	-0.301	0.036 **
GDP	+	-0.257	0.007 ***
WGI	-	2.705	0.000 ***
Constants		3.615	0.000 ***
N		450	
Adj. R ²		0.501 (50.1%)	
Prob > F			0.0000

Moderating Role of CEO Foreign Experience on the Effect of Green Finance on ESG Performance

The regression results displayed in Table 3 suggest that the interaction between green finance and CEO foreign experience is significant at the 5% level, with a positive coefficient of 0.097 and a significance value of 0.026. This means that CEOs with foreign experience are possibly more open to sustainable financing policies and have greater awareness of global environmental, social, and governance challenges. These findings confirm the upper echelons theory, which holds that the characteristics of senior managers, including their educational background, international experience, and personal values, strongly influence the strategic direction of the organization (Hambrick & Mason, 1984).

CEOs with foreign experience are usually exposed to global sustainability standards and more advanced green business practices (Li et al., 2024). From the perspective of the Resource-Based View (RBV), which posits that companies with adequate resources have sustainable competitive advantages, CEO foreign experience can also be regarded as an intangible strategic asset that contributes to organizational capability. CEOs with foreign experience tend to support green finance initiatives to promote energy efficiency, better waste management, and ESG transparency. This is in line with the findings of previous studies (Quan et al., 2023; Wang et al., 2022), which state that CEO foreign experience is positively correlated with improved corporate ESG performance. Furthermore, according to the stakeholder theory, companies are required not only to maximize returns but also to meet the expectations of various stakeholders, including regulators, environmentally conscious investors, and society. CEO foreign experience strengthens sensitivity to such issues and helps the company design a more responsive, sustainable finance strategy (Qing et al., 2024).

Moderating Role of CEO Foreign Experience on the Effect of Digital Transformation on ESG Performance

Regression results in Table 3 also indicate a significant correlation between digital transformation and CEO foreign experience at the 5% level, with a positive coefficient of 0.085 and a significance value of 0.041. This can be explained through the upper echelons theory, which states that top management characteristics, including foreign experience, play an important role in shaping corporate strategic decisions and organizational direction (Liu et al., 2025). CEOs with foreign experience are typically exposed to global business practices that are more adaptive to digital technologies and sustainability standards. This is in line with the findings of prior studies by Bertrand et al. (2021) and Quan et al. (2023), which reported that CEO foreign experience improves the organization's ability to integrate technology with ESG principles.

From the perspective of the stakeholder theory, digital transformation led by a CEO with global backgrounds reflects the company's commitment to meeting stakeholder expectations for efficiency, information disclosure, and social responsibility (Kong et al., 2023). This supports the finding of a study by Haijun et al. (2023), which reported that improving ESG performance affects not only corporate reputation but also the long-term competitiveness of the company in international markets. Therefore, the moderating role of CEO foreign experience in the relationship between digital transformation and ESG performance demonstrates the importance of the leadership dimension in driving technology-based sustainability (Wang, 2025).

Control Variables

As a control variable, company size (SIZE) shows a significant positive effect on ESG performance. This indicates that larger companies have higher capacity, better resources, and greater external pressure to adopt sustainability practices (Hidayat-ur-Rehman & Hossain, 2024). Conversely, company age (AGE) has a significant negative relationship with ESG performance. This can be explained through the imprinting theory (Plekhanov et al., 2023), which holds that older companies tend to stick to old patterns and, therefore, are less adaptive to environmental changes and innovations. Similarly, inflation (INF) also exerts a significant negative influence on ESG performance, as the resulting cost pressures reduce companies' capacity to allocate funds for social and environmental programs (Chouaibi et al., 2022). Economic growth (GDP) also negatively impacts ESG performance, indicating that increasing economic output may not necessarily align with sustainability principles (Sachs et al., 2019). Finally, the World Governance Indicators (WGI) variable shows a highly significant positive influence on ESG. This finding is in line with studies by Bertrand et al. (2021) and Wang (2024), which revealed that strong leadership and effective regulation strengthen the implementation of corporate sustainability practices.

CONCLUSIONS

This study shows that green finance and digital transformation improve the ESG performance of ASEAN manufacturing companies, with CEO foreign experience enhancing the impacts of both variables. These findings imply that international leadership influences the sustainability goals of businesses that adopt green finance and digital transformation. This supports the stakeholder theory and the upper echelons theory, which hold that

companies are accountable to shareholders and other stakeholders through sustainable and transparent business practices. In this regard, companies should incorporate sustainability standards into their business strategies, particularly through green finance and digital transformation as strategic resources. Furthermore, intangible strategic assets, such as CEO foreign experience, help companies adapt, innovate, and compete globally. Therefore, to establish long-term sustainable value and enhance corporate legitimacy with investors, consumers, and regulators worldwide, the management should prioritize globally oriented leadership in its strategic decision-making, while integrating sustainability principles into corporate strategy through green finance and environmentally friendly digital technologies.

Research Implications

This study carries strategic implications for manufacturing companies in the ASEAN region seeking to develop sustainability approaches. The findings reveal that green finance and digital transformation positively contribute to improving ESG performance, suggesting that companies need to actively allocate resources for green investments and the digitalization of business processes. This not only supports the achievement of ESG targets but also enhances the company's competitiveness in a global market that is increasingly concerned with environmental and social issues.

Furthermore, the role of CEO foreign experience as a moderating factor that enhances the effects of green finance and digital transformation on ESG performance indicates the importance of leaders who have a global perspective. Apart from its strategic implications, this study also has several theoretical implications. The findings elaborate on the stakeholder theory and the resource-based view (RBV) by demonstrating how green finance and digital transformation serve as strategic resources that enhance ESG performance. In addition, the findings extend the upper echelons theory to an ESG-driven strategic context in emerging markets. Specifically, executives with international exposure are better equipped to interpret global sustainability standards, adopt innovative environmental practices, and integrate ESG parameters into companies' strategic decision-making.

Limitations and Recommendations for Future Research

Despite its crucial implications, this study has several limitations that need to be recognized. First, this study only includes green finance and digital transformation as the independent variables and does not take into account other factors—such as internal governance, stakeholder pressure, or organizational culture—that may also affect ESG performance. Second, this study only focuses on manufacturing companies in the ASEAN region, which may make the results less generalizable to the context of other countries or industry sectors. Third, the Partial Least Squares (PLS) regression employed in this study to explain the relationship between variables cannot fully control for endogeneity bias that may be present in secondary data. Fourth, this study measures CEO foreign experience quantitatively based on education or foreign employment history, without considering qualitative dimensions that may also influence sustainability decisions, e.g., effective leadership or personal values. To overcome these limitations, future research is suggested to expand the analysis model by involving other variables, such as regulatory pressure, governance practices, and corporate environmental orientation. Longitudinal data can also be used to examine long-term trends and the dynamics of causal relationships between variables. In addition, to delve deeper into CEO perceptions of ESG practices, the use of a qualitative or mixed methods approach is highly recommended.

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