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CEO Traits and Corporate Sustainable Growth: The Case of Listed Manufacturing Firms in Vietnam

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Abstract: This study aims to examine the influences of CEO attributes on corporate sustainable growth (CSG) by using listed manufacturing firms' data in Vietnam from 2016 to 2023. It employs the panel regression method, Fixed Effects Model (FEM), and Generalized Least Squares (GLS) regression techniques in order to investigate the relationship between CEO characteristics (ownership, gender, experience, education, and duality) and corporate sustainable growth. The research also uses key control variables, including debt-to-equity ratio, fixed asset ratio, sales-to-asset ratio, and firm size, to reduce omitted variable bias. The significant negative result of the gender variable reveals that firms with male CEOs' leadership experience lower CSG than those with female CEOs. Additionally, CEO education negatively affects CSG under GLS estimation due to its statistical significance, while CEO ownership and experience demonstrate no significant impact. These findings imply that female CEOs may contribute more effectively to sustainable growth, highlighting the importance of gender diversity in corporate leadership.

Keywords: CEO traits, corporate sustainable growth, gender diversity, GLS, FEM

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A. INTRODUCTION

Corporate sustainable growth (CSG) is considered as a key financial metric used to assess a firm's ability to expand operations while maintaining financial stability. A firm's sustainable growth rate represents its capacity to grow without relying excessively on external financing; therefore, it is a crucial consideration for corporate financial management and strategic planning. Many factors affect CSG. Executive leadership plays a fundamental role in shaping corporate strategies and financial performance. CEO attributes, including ownership, gender, experience, education, and leadership structure or duality, influence decision-making processes, capital allocation, and long-term business expansion (Hambrick & Mason, 1984). In recent years, there has been an increase in recognition of executive influence on corporate performance. However, several studies on the direct relationship between CEO attributes and sustainable growth remain limited, particularly in emerging economies such as Vietnam.

The manufacturing sector is crucial for the Vietnamese economy as it plays a critical role in employment generation and contributes substantially to GDP as well as exports. It contributed more than 20% to Vietnam's GDP. It maintained a positive GDP growth rate of 2.6 percent in 2021, even amid the COVID-19 pandemic, and sustained an 8 percent growth rate in 2022 (Mathieu et al., 2023). However, the sustainability of this growth is a critical concern

due to firm's challenges related to capital structure, profitability, reinvestment strategies, and leadership effectiveness. The increase of the competitive nature of the global market. Firms need to achieve sustainable growth while balancing financial stability and strategic expansion.

Although many previous studies have considered the relationship between corporate governance and firm performance, limited research has specifically examined how CEO characteristics shape corporate sustainable growth in Vietnam. Understanding the role of CEO characteristics in determining sustainable growth is essential for the company to improve governance frameworks, enhance performance, and inform policy decisions. This gap in the literature leads to an examination of the role of executive leadership in fostering financial sustainability in the Vietnamese manufacturing sector.

B. METHOD

1. Data Collection and Research Design

This study chooses listed manufacturing firms in Vietnam's Ho Chi Minh Stock Exchange (HOSE) in order to determine the research objectives. The unit of analysis consists of 65 firms with publicly available data on leadership and financial information spanned from 2016 to 2023. There are 76 firms initially selected. However, some demonstrate insufficient information, and these firms have been eliminated. These listed manufacturing firms were selected based on their availability of annual reports, ensuring a robust analysis dataset. These are extracted from the Vietstock database, ensuring consistency and accuracy. This research employs a quantitative approach using panel data analysis to evaluate the relationship between CEO traits and CSG. The design incorporates twelve models to measure the influence of separate and aggregate ESG scores on the cost of debt (CD), cost of equity (CE), and weighted average cost of capital (WAC).

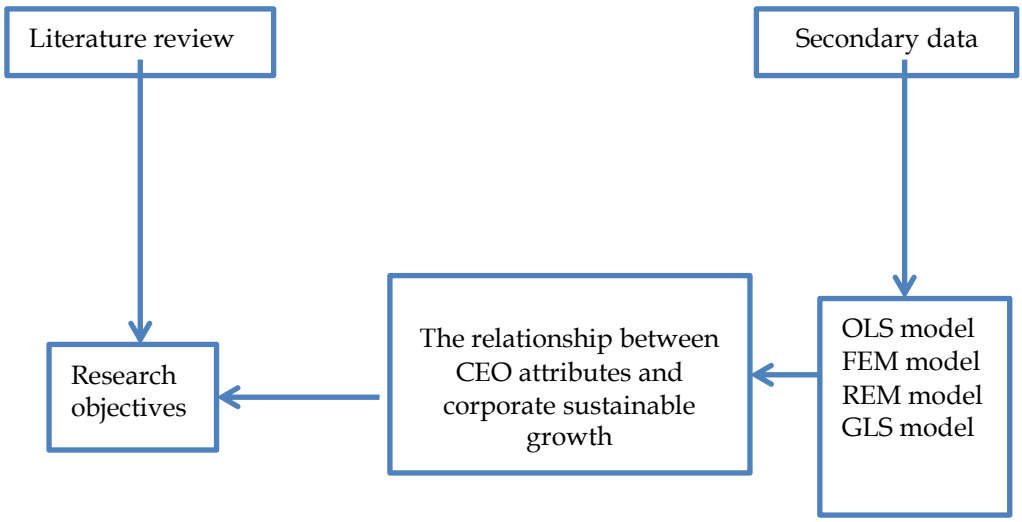

Figure 1. Research Framework

2. Modelling and Statistical Treatments

The panel regression approach is applied in this study. It includes Pooled Least Square model (OLS), Fixed Effects Model (FEM), Random Effects Model (REM), and Generalized Least Squares (GLS) regression techniques in order to investigate the relationship between CEO characteristics (ownership, gender, experience, education, and duality) and corporate sustainable growth. Table 1 shows the information on these variables.

Table 1. Variable Descriptions

Variable type	Variables	Explanation
Dependent variable	Corporate sustainable growth (CSG)	It is commonly based on the Return on Equity (ROE) and the retention rate, indicating the proportion of earnings reinvested into the business for future growth (Higgins, 1977). CSG = ROE x retention rate = ROE x (1-dividend payout ratio)
Explanatory	CEOOWN CEOGEN CEOYEAR CEOEDU CEOCON	CEOOWN: CEO ownership; CEOGEN: CEO gender, 1 denotes male and 0 for female; CEOYEAR: CEO experience; CEOEDU: CEO education; 1 denotes for CEO holding Master or Doctor degree, 0 for otherwise CEOCON: CEO duality or chair membership, 1 refers to the CEO as Chairman and 0 for otherwise
Control variable	ELEV FARTIO ARTIO LNSIZE	ELEV: Debt to equity ratio; FARTIO: Fixed asset to total asset ratio; ARTIO: Sales to asset ratio; LNSIZE: logarithm of total assets

The study employs the panel regression technique as follows:

$$CSG_{it} = \alpha_0 + \alpha_1 COEOWN_{it} + \alpha_2 CEOGEN_{it} + \alpha_3 CEOYEAR_{it} + \alpha_4 CEOEDU_{it} + \alpha_{51} CEOCON_{it} + \alpha_{52} ELEV_{it} + \alpha_6 FARTIO_{it} + \alpha_7 ARTIO_{it} + \alpha_8 LNSIZE_{it} + \varepsilon_{it} \quad (1)$$

Equation (1) indicates the model for examining the effect of CEO characteristics of firm i at time t where these variables are represented in Table 1. Penal data is imported into the Stata 17 version, and then the software helps explore the basic data description. The OLS model is the first step. If the OLS results demonstrate their heteroscedasticity or autocorrelation, the FEM and REM model are used to solve this problem. In order to determine the suitability of FEM over REM, the Hausman test is used to achieve this goal. Robust regression techniques are applied to ensure reliable results. If the FEM or REM results also maintain heteroscedasticity or autocorrelation expression. GLS is recommended to get the best-fitted model.

C. RESULTS AND DISCUSSION

Table 2 presents the statistical description of the data used in the study. CSG has a mean value of 0.02475, indicating that, on average, listed manufacturing firms have modest sustainable growth. The standard deviation of 0.12926 mentions some variation among firms, while the minimum (-1.589) and maximum (0.7745) values reveal that some firms experience negative growth, whereas others achieve relatively high sustainable growth. CEO ownership (CEOWN) has a mean of 0.05915, indicating that, on average, CEOs hold around 5.9% of company shares. However, the maximum value of 0.6415 indicates that some CEOs have a significantly higher ownership rate. Regarding CEO gender**,** the dataset demonstrates that approximately 85.58% of CEOs are male, with a mean value of 0.8558. This means that the number of female CEOs is not high in listed manufacturing firms. The average CEO tenure (CEOYEAR) is 6.225 years, and some CEOs remain in their positions for up to 36 years. Additionally, the mean value of CEOEDU is about 0.348, it means that 34.8% of CEOs have a higher education degree (Master or Doctor). There is only 16.5% of CEO served as board share (mean = 0.165).

The control variables in Table 2 highlight the key financial characteristics of the firms. The mean value of debt-to-equity ratio (ELEV) is 1.61, indicating that, on average, firms have more debt than equity with a high standard deviation (6.4). The fixed asset to total asset ratio (FARTIO) has a mean of 0.273, and it shows that these firms, on average, allocate approximately 27.34% of their total assets to fixed assets, and the highest investment rate in fixed assets is about 91% for some firms. The sales to asset ratio (ARTIO) has a mean of 1.3083, with values ranging widely from 0.00057 to 17.1383, reflecting operational efficiency differences among firms. Lastly**,** firm size (LNSIZE)**,** measured as the natural logarithm of total assets, has a mean of 7.96 and values ranging from 4.50 to 15.51, suggesting that the sample includes both small and large firms.

Table 2. Statistical Description

Variable	Obs	Mean	Std. Dev.	Min	Max
CSG	520	0.0247	0.1292	-1.5819	0.7745
CEOWN	520	0.0591	0.1247	0	0.6415
CEOGEN	520	0.8557	0.3516	0	1
CEOYEAR	520	6.225	6.2732	0	36
CEOEDU	520	0.3480	0.4768	0	1
CEOCON	520	0.1653	0.3718	0	1
ELEV	520	1.1651	1.1640	0.01972	8.1742
FARTIO	520	0.2361	0.1690	0.00007	0,9111
ARTIO	520	1.0836	0.6715	0.00057	5.3
LNSIZE	520	8.0388	2.1037	4.4998	15.5143

The results in Table 3 reveal the impact of CEO characteristics and corporate sustainable growth. Among CEO traits, there are only two variables significantly impacting CSG. Gender shows a significant negative effect in both FEM and GLS models. It indicates that firms led by male CEOs tend to have slightly lower CSG than female CEOs. CEO education also demonstrates a negative impact on CSG in the GLS model only. It supports evidence that

higher education levels may not necessarily contribute to the sustainable growth of a firm. While CEO ownership, experience, and duality do not present any statistical significance. This implies that these factors might not play a crucial role in determining sustainable corporate growth.

In terms of firm-level control variables, the fixed asset to total asset ratio (FARTIO) has a strong negative influence (in both FEM and GLS model) on CSG. This reveals that firms with a higher proportion of fixed assets experience lower sustainable growth. In contrast, the sales to assets ratio (ARTIO) positively affects CSG (in both FEM and GLS model). This implies that firms with higher asset efficiency tend to achieve better corporate sustainable growth. Firm size (LNSIZE) negatively influences (-0.0359) CSG in the FEM model; however, it is insignificant in GLS. This refers to a suggestion that larger firms may face more challenges in sustaining growth than smaller firms. Interestingly, the coefficient of leverage (ELEV) is insignificant in both models, implying that debt levels may not directly have an impact on sustainable corporate growth.

Table 3. Regression results

Variable	FEM	GLS
CEOOWN	0.103	0.0298
	(1.09)	(0.91)
CEOGEN	-0.0515*	-0.0146**
	(-1.84)	(-2.07)
CEOYEAR	0.000819	0.00045
	(0.38)	(0.88)
CEOEDU	-0.0136	-0.0122***
	(-0.60)	(-2.20)
CEOCON	0.0106	-0.0052
	(0.38)	(-0.64)
ELEV	-0.00125	-0.00020
	(-1.31)	(-0.50)
FARTIO	-0.269***	-0.0338***
	(-3.86)	(-2.9)
ARTIO	0.0302***	0.00626**
	(3.34)	(2.56)
LNSIZE	-0.0539***	0.00103
	(-2.37)	(0.70)
CONS	0.525***	0.0210
	(2.75)	(1.38)

Note: (1) t value in parentheses.
(2) *** P < 0.01, ** P< 0.05, * P< 0.1
(Source: Author's Analysis)

Overall, the findings in Table 3 highlight the impact of CEO characteristics, particularly gender and education, aligning with asset efficiency and capital structure on CSG. These findings provide interesting evidence to confirm the role of female CEOs in corporate development. It also indicates that higher diplomas may not outperform practices. The findings of this study demonstrate a significant negative relationship between CEO gender and CSG. It leads to exhibiting lower sustainable growth by male leadership in comparison with those by female leaders. This may suggest that female leaders can adopt more sustainable and long-term growth strategies. The potential reasons are their risk-averse decision-making style and focus on corporate social responsibility (Adams & Ferreira, 2009). This finding aligns with and supports prior research indicating the fostering of leadership gender diversity in responsible financial and environmental practices (Terjesen et al., 2016). In other words, firms aiming for long-term growth should consider policies to promote gender inclusion at the highest levels of leadership because it aligns with global trends advocating for increased female representation in corporate governance to enhance financial stability and strategic sustainability.

The findings also show a negative impact of CEO education on CSG under the GLS estimation. This implies that higher educational attainment may not necessarily translate into better corporate growth outcomes. It can be explained that highly educated CEOs may focus excessively on theoretical or complex strategies. At the same time, these strategies may not always align with the practical needs of sustainable corporate expansion (Bertrand & Schoar, 2003). In practice, theoretical and practical knowledge always exists a big gap. Especially in Vietnam, the conventional belief that higher education leads to more effective executives may not be true. The reason is that they may only be trying to provide their additional qualifications to increase their salary, so their qualifications are merely for show rather than reflecting actual learning. Moreover, most graduate degrees seem to be unrelated to the fields they are working in because few cases require a specific major. This situation leads to a balance of practical industry knowledge and strategic decision-making capabilities in leadership selection.

The present study generally underscores the need for improved corporate governance frameworks that emphasize leadership diversity, financial prudence, and long-term strategic planning. Policymakers and corporate stakeholders should consider refining executive selection criteria and include them in leadership qualities that align with sustainability goals (Hambrick & Mason, 1984). These findings contribute to the literature on corporate governance and sustainable growth, offering valuable insights for business leaders, investors, and policymakers aiming to enhance corporate resilience in emerging markets like Vietnam.

D. CONCLUSIONS AND SUGGESTIONS

This study examines the influence of CEO attributes on corporate sustainable growth in listed manufacturing firms in Vietnam from 2016 to 2023. By employing panel regression methods, the Fixed Effects Model (FEM) is selected between FEM and REM estimation, and the Generalized Least Squares model (GLS) is fitted to solve the model defects problem. The study provides empirical evidence on the relationships between CEO characteristics and CSG in these firms. First, the findings reveal a significant negative relationship between CEO gender and CSG. This means that firms led by male CEOs experience lower sustainable growth

than those led by female CEOs. These results underscore the importance of gender diversity in corporate leadership and its role in fostering long-term corporate sustainability. Second, CEO education negatively impacts CSG under GLS estimation, referring to the fact that higher educational attainment does not necessarily translate into better corporate growth outcomes. The remaining traits, CEO ownership, and experience, do not significantly impact CSG, challenging conventional assumptions about executive tenure and equity stakes. Third, some financial variables significantly impact CSG, while others are insignificant. This means that financial factors play a vital role in corporate sustainability growth and alignment with its corporate governance.

These results highlight the need for consideration of a more strategic approach to corporate governance that prioritizes leadership diversity, practical experience, and financial prudence. By addressing these factors, firms can improve their sustainable growth and therefore enhance long-term value creation in Vietnam's manufacturing sector. The findings of this study also provide some highlight recommendations. First, with the significant positive impact of female CEOs on CSG, businesses should actively promote gender diversity in executive positions. They can implement policies such as leadership development programs for women, inclusive hiring practices, and gender diversity quotas in boardrooms. This implementation can help create a more balanced and effective company leadership structure. Second, Since higher education levels do not present a necessary correlation with improved sustainable growth, firms should consider a more optimal approach to executive selection. These criteria should emphasize industry experience, strategic vision, and leadership competencies over academic credentials, which may lead to more effective decision-making and long-term corporate success.

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