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Female CEO and firm performance in Vietnamese family business

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ABSTRACT

This study examines the relationship between female CEOs and the performance of firms in the family business. The study uses 137 Vietnamese-listed family businesses on the Ho Chi Minh Stock Exchange from 2010 to 2022. The study indicates that the external female CEO is less likely to impact the financial performance of a business family because of their control over family members. On the other hand, the financial performance of the family business is significantly influenced by the relationship between the female CEO heir and the female CEO founder. The result of the study is consistent with the upper echelon theory and double standards of competence theory. Furthermore, the study employs the 2SLS model to strengthen the findings in situations involving endogenous factors. The result of 2SLS reconfirms the role of the internal female CEO in the family business, which indicates that there is a positive relation between the internal CEO and financial performance in the family business. Otherwise, there is no relationship between the external CEO and financial performance in the family business. The study illuminates the significance of gender diversity in the top-tier positions within family businesses. The result of the study contributes to the practical implications for the government, firms, and investors.

Contribution/ Originality: The sample we investigate is not studied in the previous research in the Vietnamese market, representing the emerging countries. Besides, the difference in the influence between the internal CEO and the external CEO is not considered in the family firms' previous studies. Therefore, this paper will overcome the limitation.

1. INTRODUCTION

Recent years have seen an appreciation for the role of women in business. When women participate and hold top positions in the corporation, they promote gender parity. In 2022, women rose to 40% in management, 36% in senior management and director positions, and 26% in C-suite levels in US firms (McKinsey & Company, 2022). Experts predict a 24% increase in the proportion of female top executives globally in 2023 (Taylor et al., 2023). Besides, there has been a noticeable surge in research exploration regarding the correlation between female participation at top levels and its impact on business performance (Joecks, Pull, & Vetter, 2013; Liu, Wei, & Xie, 2014; Perryman, Fernando, & Tripathy, 2016; Rose, 2007). A meta-analysis's findings imply that women may approach leadership roles with distinct perspectives and methodologies compared to men (Gipson, Pfaff, Mendelsohn, Catenacci, & Burke, 2017; Kirsch, 2018) leading to unique advantages (Terjesen, Sealy, & Singh, 2009). For example, compared to male leaders, female leaders could be more risk-averse (Graham, Stendardi Jr, Myers, & Graham, 2002) and detail-oriented (Stendardi, Graham, & O'Reilly, 2006). Furthermore, women support participative decision-making and are generally cooperative (Mano-Negrin & Sheaffer, 2004). These traits reduce conflict between boards and interests (Nielsen & Huse, 2010). Additionally, women are less power-oriented than males but are universally concerned, more security-oriented, and cognizant of their social obligations (Bear, Rahman, & Post, 2010). These attributes enhance both the effectiveness of board meetings and the ethicality of the decision-making process. However, some studies have found no association between female top executives and firm performance (Jadiyappa, Jyothi, Sireesha, & Hickman, 2019; Lam, McGuinness, & Vieito, 2013; Liu et al., 2014). Others claim a negative relationship (Singhathep & Pholphirul, 2015). One possible explanation for the mixed results could be the lack of consideration for firm characteristics, specifically family and non-family businesses, in these studies (Kubo & Nguyen, 2021). The attributes of family-owned companies are divergent from those of non-family businesses. In contrast to nonfamily organizations, family companies are less inclined to appoint women to senior positions to safeguard the family's control and interests (Cole, 1997). Another reason may be the different powers of external female CEOs and family-member female CEOs in the family business, which has been ignored in previous research (Martinez Jimenez, 2009). Lacking distinguishing firm traits and female CEO traits results in the obscured role of female CEOs in the firm. This study bridges the gap by providing a unique perspective on the roles of various female CEO types in family businesses.

In Vietnam, private businesses make up 98% of the total. Among the private companies, more than 70% of the family businesses possess the characteristics of family businesses, such as family members taking top executives to control enterprises or holding a majority of shares (PwC, 2023). However, there is a significant gap in the percentage of women top executives in the family and non-family businesses. In Vietnam, women hold 23% of top executive positions in family businesses, while they hold 71% in non-family businesses. The Vietnamese women's top executives in family businesses are strongly underrepresented since Vietnamese society believes that the role of women is not suitable for business activities but for household and childcare (Pham & Hoang, 2019). Empirically, a few research studies focus on the role of women leaders in Vietnamese business, such as sustainable performance (Tran & Nguyen, 2022), financial report quality (Nguyen, 2024) financial performance (Tran, Ngo, & Tran, 2023) and corruption (Tran et al., 2022).

Consequently, the role of the female CEO is not strongly determined in Vietnamese businesses, especially family businesses. It is necessary to explore the role of female CEOs in the performance of family businesses in Vietnam. This study will overcome the previous limitation by focusing on the role of distinct traits of female CEOs in Vietnamese family businesses. To reach the aim, the study uses the Eikon DataStream to collect the related figures of 137 Vietnamese-listed family businesses from 2010 to 2022. The study contributes to the existing literature about the role of female leaders in family business. Besides, the paper also contributes insight into the influence of the different types of female leaders, including external female CEOs, female CEO founders, and female CEO heirs, to the literature about the role of female leaders. The paper also contributes to implications for the firms, investors, and Government in constructing the policies to diversify the genders in the business.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical Background

Family members' involvement shapes the development and implementation of strategies, setting family businesses apart from other types of organizations (Anderson & Reeb, 2003). The most distinguishing feature of a family business compared to a nonfamily enterprise is the existence of family influence. This principle also applies to large, publicly traded family businesses where ownership spreads among multiple shareholders, and the CEO may typically not be a member of the family. When the family corporate hires the external CEO, a variety of mechanisms are applied, such as dual-class shares with different voting rights, corporate structures involving pyramids and crossholdings, voting agreements among shareholders, or having a board of directors with unequal representation to give the family members the right to be involved in the management and decision making of corporate (Mehrotra, Morck, Shim, & Wiwattanakantang, 2013). The Vietnamese market also applies these criteria.

Female chief executive officers (CEOs) fall into three categories: those who established the company themselves, those who inherited the business from a family member, and those who acquired the position via promotion. A founding CEO is someone who either had a crucial role in establishing the business or held a prominent executive position at the time of its inception (Kubo & Nguyen, 2021). A CEO heir is the one who inherits the position of CEO from the founder of the company. We use the term external female CEO to describe any woman who holds the position of chief executive officer, regardless of whether she has been promoted from inside the firm or hired outside without any ownership possession (Kubo & Nguyen, 2021).

Upper echelon theory posits that a firm's performance and strategy result from the CEO's traits (Hambrick & Mason, 1984). The study by Saidu (2019) indicates that an educated and experienced CEO is more likely to improve the firm's profitability. Moreover, gender is also one of the characteristics that may impact a firm's performance. However, when there is low managerial discretion, the CEO's traits are less likely to affect the corporation's performance (Hambrick, 2007). Managerial discretion is the independent management level in making decisions and strategies. The family business context inhibits the managerial discretion of external top managers. The external female CEO implies that top executives in family organizations may have limited management autonomy since they cannot make decisions independently. Women are less aggressive, more conservative, and more ethical. Thus, the top female CEO is supposed to eliminate agency costs and be a better steward in the corporate world (Chadwick & Dawson, 2018). However, some argue that when faced with high pressure, female CEOs also adopt masculine traits. They also involve deceptive activities, which may increase agency costs (Carbonell & Castro, 2008). In the family business context, family members strictly control and monitor the external female CEO's activities to guarantee the CEO aligns with the goals and interests of the family business. Therefore, the external female CEO's impact on the family business's performance can be diminished. Chadwick and Dawson (2018) present empirical evidence that external female CEOs significantly affect firm performance in nonfamily companies.

In contrast, external female CEOs have no association with the firm's performance in a family business. Nekhili, Chakroun, and Chtioui (2018) also demonstrate that external female CEOs outperform their counterparts in nonfamily corporations. Moreno-Gómez and Calleja-Blanco (2018) prove the efficiency of women's top management on the performance of Colombia firms. However, the family business mediates this relationship.

According to the theory of double standard competence (Foschi, 1996) individuals use a variety of criteria to conclude the capabilities of others based on their social standing. Status generalization mechanisms may subject low-status individuals, like women, to a more stringent evaluation than high-status individuals. To get promoted to high positions, the female must present superior management skills and knowledge to overcome the conventional concept of gender roles in society (Paustian-Underdahl, Walker, & Woehr, 2014). The idea indicates that females are unsuitable for business activities and make critical decisions in the family and business. The role of the women is always overshadowed and tied up with the family. Women often have a sense of diminished visibility compared to their male counterparts due to their unacknowledged professional talents. This situation also occurs when selecting the CEO to be the successor and founder of the family business. Women are barely appointed to top echelon positions, such as CEOs in family businesses (Burke, 1997). Therefore, women spend extra effort demonstrating their competence as managers by working harder or gaining experience from external work. The public perceives women as competent when they break through the glass ceiling to become CEOs (Foschi, 2000).

Female heirs must also demonstrate a higher aptitude than brothers. This might explain why founders deviate from the customary practice of male succession and choose to train female heirs to become the next CEO (Ahrens, Landmann, & Woywode, 2015). Furthermore, the presence of female CEOs may get favorable recognition from the public and investors since it signifies the company's commitment to meritocracy irrespective of gender. Several CEO heirs have been influenced by the business founder's advice or picked by the current board, and the market is likely to see the selected female CEO as an exceptionally capable game changer (Hoobler, Lemmon, & Wayne, 2014). Besides, the female CEO heir or founder is one of the members of a family business; they have a formal role and a high level of independence in conducting the executive tasks (Danes & Olson, 2003). Hence, the female CEO successor and founder may determine the family business's performance.

2.2. Hypothesis Development

Research proves the crucial role of female CEOs or directors in the corporation's success in the business. Peni (2014) applies the fixed effect model to examine the firm's performance under female and male CEOs in US firms. The result of the study affirms that female CEOs outperform peers in ROA and Tobin'Q. Khan and Vieito (2013) also say that female CEOs are better than male CEOs in terms of accounting indicators (ROA) and risk management in US companies from 1992 to 2004. They use the two-stage least square method to keep the endogenous problem out of the model.

In contrast, the study by Singhathep and Pholphirul (2015) employs the OLS model to determine the impact of female CEO in Thai manufacturing companies in short-term and long-term finance. The research indicates a negative relationship between female CEOs and the short-term and long–term financial indicators. Jadiyappa et al. (2019) also confirm that the performance reduces by 10% of ROA and ROE when a female is assigned as CEO in Indian firms. The negative relationship becomes robust with time series and cross-sectional analysis. Regarding the previous studies, there were mixed results about the role of female leadership in firm performance. The mixed results can be explained by the lack of firm characteristics in the previous research, namely, family and non-family businesses. Family and non-family firms distinguish organizations with different objectives, goals, and conflicts. The leadership team expects the family members to participate in management and decision-making procedures. The business family expects the management team, particularly the hired CEO, to refrain from interfering with the family business's objectives. When considering hiring an external CEO, the family business also employs a CEO who strongly relates to the family business to align with the firm's goals. Including non-family and family businesses in a particular sample may obscure the role of female CEO in firms (Nekhili et al., 2018). The research of Nekhili et al. (2018) overcomes the previous studies by observing the role of female CEO in family and non-family businesses in France from 2001-2010. To overcome the endogeneity problem, a two-step General Methods of Moment (GMM) approach is applied. The study indicates a negative relationship between external female CEO and accounting indicators (ROA) and market-based indicators (Tobin'Q) in family businesses.

Empirically, the study Kubo and Nguyen (2021) applies the Ordinary Least Squares (OLS) and fixed effect (FE) approach to monitoring the impact of internal female CEO on firm performance in Japanese family firms from 2004 to 2015. The result indicates that nepotism does not affect the firm's performance. However, the female CEO founder has a significant favorable influence on Tobin's Q in Japanese family businesses. There is also no relationship between external female CEOs and family business performance. Bjuggren, Nordström, and Palmberg (2018) examine the impact of female CEOs on Swedish family businesses using the OLS approach. The result indicates that the female CEO, one of the family business members, is more likely to impact the family business's performance than an external female CEO. Rigolini, Gabaldon, and Goldeng (2021) postulate that the female CEO successor outperforms the male CEO heir in risk management. Shaheen, Luo, and Bala (2023) also prove that female CEO successors are more likely to report the Corporate Social Responsibility report effectively, which is more prominent in non-state-owned enterprises (SOE) and high-performance firms. It indicates that an internal female CEO is empowered to independently manage and make decisions to lead the family business compared to an external female CEO.

In the line of theory and empirical research, the hypothesis is presented below:

Ho: A female CEO, one of the family business members, is more likely to impact family business performance.

3. METHODOLOGY

The information included in the data compilation for this study will be obtained from 137 listed family businesses' available corporate data sources, such as annual reports and financial statements published on the Ho Chi Minh Stock Exchange website from 2010 to 2022, because this is the developed period in the Vietnamese stock market. The research selects 130 listed organizations for analysis after subtracting firms operating in the financial field or those lacking sufficient information. Over 13 years, there were 1690 observations for the sample size. The author gets information about the female CEO heir and female CEO founder via the newspapers, the firm's websites, and the financial reports.

The study will run Ordinary Least Squares (OLS) and Fixed Effect (FE) regression with the balanced panel data to get the result. The Hausman test is conducted to choose the most suitable method. Following the outcome of the Hausman test, the FE approach is the most appropriate method because the p-value is higher than 0.05. There is an endogenous issue in the board characteristic, which may affect the robustness of the result (Kubo & Nguyen, 2021). The paper uses an instrumental variable (IV) two-stage least square (2SLS) approach to show the endogenous issues, which is in line with previous research. According to previous research, the paper uses the percentage of female directors on the board to the number of male directors on the board as an instrumental variable. We assume that board diversity has a high potential to introduce and promote the female CEO in the family business.

To overcome the endogenous problem, the 2SLS model is applied to correct this problem (Kubo & Nguyen, 2021).

The study will apply the research model in the research of Arzubiaga, Iturralde, Maseda, and Kotlar (2018) and Nekhili et al. (2018).

$$Depedentvariable_{\,it} = \beta_o + \beta_1 externalfemaleCEO + \beta_2 X_{i,t} + \varepsilon_{i,t}$$
$$Depedentvariable_{\,it} = \beta_o + \beta_1 heirfemaleCEO + \beta_2 X_{i,t} + \varepsilon_{i,t}$$
$$Depedentvariable_{\,it} = \beta_o + \beta_1 founderfemaleCEO + \beta_2 X_{i,t} + \varepsilon_{i,t}$$

Tobin's Q, Return on Assets (ROA), and Return on Equity (ROE) are the dependent variables in this investigation. ROA is measured by the company's net income divided by its total assets. The determination of Return on Equity (ROE) involves the division of a company's net income by its shareholder equity. Tobin's Q is a quantitative metric used to assess the correlation between a firm's market value (including debt and shares) and the expense of replacing its assets. The metric was initially proposed by Anderson and Reeb (2003) and subsequently elaborated upon by Villalonga and Amit (2006). Tobin's Q is computed by dividing the aggregate asset value of a company by its overall market value.

When a publicly traded family company employs an external female CEO, the fictitious variable "External female CEO" assumes the value 1. If a female heir holds the chief executive officer (CEO) position at a family-owned business, we set the binary indicator variable "Heir female CEO" to 1. The binary indicator variable "Founder Female CEO" is assigned the value 1 if the family firm's originator is a woman and serves as its CEO (Kubo & Nguyen, 2021).

X is the collection of the controlling variables. The natural logarithm of the aggregate value of all assets is utilized to calculate the size of a company. Huang and Kisgen (2013) defined firm leverage as the ratio of the aggregate value of loans to the sum of total assets. The natural logarithm of the number of board members measures board size. According to Gibb Dyer (2006) the tenure period is measured by the period an individual takes a role as CEO.

Table 1. Descriptive analysis.

Variables	Obs.	Mean	Std. dev.	Min.	Max.
ROA	1690	0.070	0.086	-0.407	0.520
ROE	1690	0.121	0.188	-3.294	1.607
Tobin's Q	1690	0.908	0.874	0.062	6.475
External female CEO	650	0.101	0.301	0	1
Heir female CEO	650	0.053	0.433	0	1
Founder female CEO	390	0.367	0.324	0	1
Firm size	1690	28.288	1.406	25.455	32.814
Firm leverage	1690	0.282	0.154	0.002	0.733
Board size	1690	7.706	2.354	3	26
CEO tenure	1690	5.021	1.265	2	30

4. FINDINGS

4.1. Descriptive Analysis

Table 1 presents the mean ROA of the observations as 0.0703, suggesting that the observations have an average ROA of 0.0703. Moreover, the standard deviation of 0.0858 indicates substantial fluctuation in the return on assets (ROA). The significant disparity in ROA (Return on Assets) is evident from the considerable difference between the smallest and the largest figures. The observations' mean return on equity (ROE) is 0.12, suggesting that the average ROE of the observations is 0.12. Furthermore, a standard deviation of 0.1881 indicates a substantial volatility in the return on equity (ROE). The considerable disparity between the lowest and highest Return on Equity (ROE) values shows a significant variation. The mean Tobin's Q value of the observations is 0.9, suggesting that the average Tobin’s Q of the observations is 0.9.

Furthermore, the presence of a standard deviation is 0.87, which indicates a notable degree of volatility in Tobin's Q. The substantial difference between the lowest and greatest values of Tobin's Q reveals the enormous disparity. The average percentage of family enterprises that choose an external female CEO is 0.1, implying that around 10% of these businesses select a female CEO from outside the family. The mean ratio of family firms that want to have a female Chief Executive Officer (CEO) as a successor is 0.053. The mean value of founder female CEO is 0.367, suggesting that around 36.7% of family firms have female CEO founders.

Table 2. Correlation matrix.

Variables	ROA	ROE	Tobin's Q	External female CEO	Heir female CEO	Founder female CEO	Firm size	Firm leverage	Board size	Board diversity	CEO tenure
ROA	1										
ROE	0.728*	1									
Tobin's Q	0.599*	0.333*	1								
External female CEO	0.061	0.025	0.014	1							
Heir female CEO	0.765*	0.035*	0.045	0.004	1						
Founder female CEO	0.986*	0.043*	0.544	0.065	0.005	1					
Firm size	-0.098	-0.019	-0.321	0.065	0.044	0.043	1				
Firm leverage	-0.255	-0.253	-0.254	0.054	0.012	0.012	0.453	1			
Board size	0.498	0.352	0.423	0.032	0.034	0.037	0.437	0.035	1		
Board diversity	0.296	0.216	0.231	0.023	0.028	0.254	0.684	0.253	0.352	1	
CEO tenure	0.177	0.352	0.376	0.032	0.065	0.658	0.631	0.035	0.254	0.354	1

Note: * Statistic significant at 10%.

There is a favorable association between the success of the company and having a female CEO, according to the results of the correlation matrix in Table 2. Specifically, there is a strong relationship between the company's performance metrics (ROA, ROE, and Tobin's Q) and the gender of the CEO's successor and the female CEO founders.

4.2. Discussion

Table 3 displays the influence of a female CEO from outside the family on the success of a family company. The regression analysis reveals no statistically significant correlation between the presence of an external female CEO and the performance of the family-owned corporation.

Table 3. FE result of external female CEO and family-owned firm's financial performance.

Variables	ROA	ROE	Tobin's Q
External female CEO	0.0342	0.0352	0.0125
Firm size	0.0732***	0.0143***	0.146***
Firm leverage	-0.065	0.0654	-0.143
Board size	0.0875**	0.043**	0.0123**
Board diversity	0.065*	0.032*	0.053*
CEO tenure	0.543***	0.764***	0.324***
Cons	0.065	0.435	0.213
Prob > F	0	0	0
rho	0.857	0.8954	0.9024

Note: Statistic significant at 1% level ***, 5%** and 10% *.

The effects of having a female CEO who is the founder and an heir on a family business's financial performance are seen in Tables 4 and 5. The results of the regression model show that the performance of the family business is significantly impacted by having a female CEO founder and a female CEO heir. Additionally, compared to female CEO heirs, female CEO founders have a greater influence on return on equity (ROE) and return on assets (ROA). The results of the investigation support the hypothesis in a consistent manner.

Table 4. FE result of female CEO heir and family-owned firm's financial performance.

Variables	ROA	ROE	Tobin's Q
Heir female CEO	0.023**	0.043**	0.05448***
Firm size	0.0546***	0.0643***	0.231***
Firm leverage	-0.035	-0.543	-0.324
Board size	0.045***	0.064***	0.046***
Board diversity	0.054***	0.575***	0.734***
CEO tenure	0.453***	0.453***	0.342***
Cons	0.453	0.324	0.323
Prob > F	0.467	0.532	0.675
rho	0.98	0.97	0.9743

Note: Statistic significant at 1% level *** and 5%**.

Table 5. FE result of female CEO founder and family-owned firm's financial performance.

Variables	ROA	ROE	Q
Founder female CEO	0.354***	0.232***	0.176***
Firm size	0.543***	0.143***	0.176***
Firm leverage	-0.453	-0.0765	-0.065
Board size	0.0544**	0.075**	0.043***
Board diversity	0.143***	0.176***	0.0896***
CEO tenure	0.076***	0.0965***	0.068***
Cons	0.547	0.487	0.681
Prob > F	0.467	0.532	0.675
rho	0.87	0.832	0.743

Note: Statistic significant at 1% level *** and 5%**.

Females are known to exhibit lower levels of aggression and a stronger ethical orientation. This reduces their likelihood of engaging in unethical acts that might pose a danger to the long-term aims of the organization (Krishnan & Parsons, 2008).

The external female CEO serves as a steward to ensure alignment with long-term goals. Therefore, there is a hypothesis that the presence of a female CEO lowers agency costs. For some reason, though, some people say that women in business sometimes take on masculine traits and are more likely to do bad things to get what they want, especially when they are under a lot of pressure (Carbonell & Castro, 2008). As a result, external female business leaders also experience agency costs.

To safeguard the family's authority and status, the family members assume control over the company's operations and oversee the CEO's implementation of strategies to ensure the achievement of the company's objectives (Bertrand & Schoar, 2006; Schwartz & Barnes, 1991). Family members lack faith in the hired agents responsible for achieving the aims and objectives. Therefore, a female CEO outside the family is unlikely to influence the firm's success significantly. The narrative takes on a distinct character when the female CEO is a member of the family company. When female CEO successors or founders manage the organization, they are less likely to deviate from the firm's aims, which are also their ambitions.

Because of this, women are seen as trustworthy and given the freedom to make their own choices. This explains the link between female CEO successors and the big impact that female CEO founders have on the profits of family businesses. In addition, CEO succession refers to transferring leadership roles to individuals from a family firm's second or third generation who are succeeding the previous generation or founders. Compared to the founders, their experiences and business acumen are inferior to those of the founders. The directors still guide the CEO succession (Abebe, Li, Acharya, & Daspit, 2020).

Hence, the impact of female CEO succession on firm performance metrics such as ROA and ROE is comparatively lower than that of female CEO founders. The result of the study is consistent with the results of Kubo and Nguyen (2021); Nekhili et al. (2018) and Bjuggren et al. (2018), which are supportive of upper echelon theory, which indicates that gender is one of the traits to determine the performance of the firm (Hambrick & Mason, 1984).

Moreover, the result also aligns with the double standard competence theory, which states that the assigned internal female CEO is superior to the male CEO in leading the firm to reach the target. Therefore, their performance is supposed to favor performance indicators (Foschi, 1996).

4.3. 2SLS Model

To enhance the reliability of the findings, the research uses a 2SLS model to identify and address the endogeneity issue. The presence of board composition, defined by the number of female boards on a total number of boards, may influence a female CEO assigning (Nyeadi, Kamasa, & Kpinpuo, 2021; Xing, Gonzalez, & Sila, 2021). Therefore, the model regards board diversity as an instrumental variable. The results indicate that board gender diversity substantially influences the appointment of female CEOs. Board diversity is a reliable indicator for adequately predicting the appointment of female CEOs. The F test Prob> $\chi 2$ value of 0.000 in the first stage result suggests that the instrumental variables are robust and that the 2SLS model is appropriate.

The results from the FE regression model are in line with the findings from Table 6, Table 7, and Table 8 in the second stage, which show that a female CEO has an impact on the success of a family business. The success of a family-owned business is not significantly impacted by the presence of a female CEO who is not related. Alternatively, the female CEO founder and the female CEO heir significantly influence the way the family business operates.

Table 6. 2SLS result of external female CEO and family-owned firm's financial performance.

1 stage result	External female CEO	External female CEO	External female CEO
Gender diversity	0.035***	0.076***	0.0465***
2 stage result	ROA	ROE	Q
External female CEO	0.0128	0.0365	0.0097
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
F test prob> χ2	0.000	0.000	0.000
Wald χ2 test prob> χ2	0.000	0.000	0.000
R squared	0.563	0.635	0.637

Note: Statistic significant at 1% level ***

Table 7. 2SLS result of female CEO heir and family-owned firm's financial performance.

1 stage result	Heir female CEO	Heir female CEO	Heir female CEO
Gender diversity	0.152***	0.423***	0.524***
2 stage result	ROA	ROE	Q
Heir female CEO	0.023**	0.043**	0.05448***
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year_FE	Yes	Yes	Yes
F test prob> χ2	0.000	0.000	0.000
Wald χ2 test prob> χ2	0.000	0.000	0.000
R squared	0.685	0.695	0.795

Note: Statistic significant at 1% level *** and 5%**.

Table 8. 2SLS result of female CEO founder and family-owned firm's financial performance.

1 stage result	Founder female CEO	Founder female CEO	Founder female CEO
Gender diversity	0.0043***	0.051***	0.361***
2 stage result	ROA	ROE	Q
Founder female CEO	0.354***	0.232***	0.176***
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year_FE	Yes	Yes	Yes
F test prob> χ2	0.000	0.000	0.000
Wald χ2 test prob> χ2	0.000	0.000	0.000
R squared	0.764	0.698	0.753

Note: Statistic significant at 1% level ***.

5. CONCLUSION

The research investigates a female CEO's impact on a family-owned company's financial performance. The research categorizes female CEOs in family businesses as external female CEOs, female CEO heirs, and female CEO founders. The study examines a sample of 130 Vietnamese family enterprises listed between 2010 and 2022. The findings suggest that the presence of a female CEO from outside the family does not have a notable influence on the financial success of a family firm. Nevertheless, there is a significant correlation between having a female CEO heir or a female CEO founder and the economic success of the family firm. Female CEOs who are also founders have a more significant influence on the return on equity (ROE), return on assets (ROA), and Tobin's Q than female CEOs who have succeeded someone else. The study's findings align with the top-echelon hypothesis and the twofold standard competency theory.

This research adds to the existing body of knowledge about the significance of female CEOs in family businesses. It is suggested that the impact of female CEOs on firm performance should be considered in terms of different firm characteristics (family or non-family) and CEO traits (nepotism, founder, or hired CEO). Within the family business, the authority of the female CEO from outside the family is limited, resulting in less influence on decision-making and a reduced effect on the company's overall success. However, it is undeniable that a female CEO holds a position within the family firm. Furthermore, the report provides insights into the ramifications for family company owners, lawmakers, and investors. Family-owned businesses may carefully consider the outcome when choosing the most suitable successor as the next CEO, ensuring the preservation of family influence and status. In addition, the government has the authority to enact regulations and policies to promote gender diversity within family corporations as a response to research findings. Investors may use the findings of the study to make investment decisions. The female founders and heirs received positive reactions from the markets and accounting indicators. Therefore, considering the CEO's traits is also crucial to rationalizing decisions.

Nevertheless, the research has some limitations. Because the study takes place in a developing nation, its findings are only applicable to poor countries. Developed nations cannot implement outcomes with distinct governance systems and features. Hence, it is recommended that future studies should broaden the sample size to include not just developing nations but also developed ones.

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REFERENCES

Abebe, M. A., Li, P., Acharya, K., & Daspit, J. J. (2020). The founder chief executive officer: A review of current insights and directions for future research. *Corporate Governance: An International Review, 28*(6), 406-436. https://doi.org/10.1111/corg.12348

Ahrens, J.-P., Landmann, A., & Woywode, M. (2015). Gender preferences in the CEO successions of family firms: Family characteristics and human capital of the successor. *Journal of Family Business Strategy, 6*(2), 86-103. https://doi.org/https://doi.org/10.1016/j.jfbs.2015.02.002

Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance, 58*(3), 1301-1328. https://doi.org/10.1111/1540-6261.00567

Arzubiaga, U., Iturralde, T., Maseda, A., & Kotlar, J. (2018). Entrepreneurial orientation and firm performance in family SMEs: The moderating effects of family, women, and strategic involvement in the board of directors. *International Entrepreneurship and Management Journal, 14*, 217-244. https://doi.org/10.1007/s11365-017-0473-4

Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics, 97*, 207-221. https://doi.org/10.1007/s10551-010-0505-2

Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *Journal of Economic Perspectives, 20*(2), 73-96.

Bjuggren, P.-O., Nordström, L., & Palmberg, J. (2018). Are female leaders more efficient in family firms than in non-family firms? *Corporate Governance: The International Journal of Business in Society, 18*(2), 185-205. https://doi.org/10.1108/cg-01-2017-0017

Burke, R. J. (1997). Women directors: Selection, acceptance and benefits of board membership. *Corporate Governance: An International Review, 5*(3), 118-125. https://doi.org/10.1111/1467-8683.00052

Carbonell, J. L., & Castro, Y. (2008). The impact of a leader model on high dominant women's self-selection for leadership. *Sex Roles, 58*, 776-783. https://doi.org/10.1007/s11199-008-9411-9

Chadwick, I. C., & Dawson, A. (2018). Women leaders and firm performance in family businesses: An examination of financial and nonfinancial outcomes. *Journal of Family Business Strategy, 9*(4), 238-249. https://doi.org/10.1016/j.jfbs.2018.10.002

Cole, P. M. (1997). Women in family business. *Family Business Review, 10*(4), 353–371. https://doi.org/10.1111/j.1741-6248.1990.00139.x

Danes, S. M., & Olson, P. D. (2003). Women's role involvement in family businesses, business tensions, and business success. *Family Business Review, 16*(1), 53-68. https://doi.org/10.1111/j.1741-6248.2003.00053.x

Foschi, M. (1996). Double standards in the evaluation of men and women. *Social Psychology Quarterly, 59*(3), 237–254. https://doi.org/10.2307/2787021

Foschi, M. (2000). Double standards for competence: Theory and research. *Annual Review of Sociology, 26*(1), 21-42. https://doi.org/10.1146/annurev.soc.26.1.21

Gibb Dyer, W. (2006). Examining the "family effect" on firm performance. *Family Business Review, 19*(4), 253–273. https://doi.org/10.1111/j.1741-6248.2006.00074.x

Gipson, A. N., Pfaff, D. L., Mendelsohn, D. B., Catenacci, L. T., & Burke, W. W. (2017). Women and leadership: Selection, development, leadership style, and performance. *The Journal of Applied Behavioral Science, 53*(1), 32-65. https://doi.org/10.1177/0021886316687247

Graham, J. F., Stendardi Jr, E. J., Myers, J. K., & Graham, M. J. (2002). Gender differences in investment strategies: An information processing perspective. *International Journal of Bank Marketing, 20*(1), 17-26. https://doi.org/10.1108/02652320210415953

Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32*(2), 334-343. https://doi.org/10.5465/amr.2007.24345254

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9*(2), 193-206. https://doi.org/10.5465/amr.1984.4277628

Hoobler, J. M., Lemmon, G., & Wayne, S. J. (2014). Women's managerial aspirations: An organizational development perspective. *Journal of Management, 40*(3), 703-730. https://doi.org/10.1177/0149206311426911

Huang, J., & Kisgen, D. J. (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? *Journal of Financial Economics, 108*(3), 822–839. https://doi.org/10.1016/J.JFINECO.2012.12.005

Jadiyappa, N., Jyothi, P., Sireesha, B., & Hickman, L. E. (2019). CEO gender, firm performance and agency costs: Evidence from India. *Journal of Economic Studies, 46*(2), 482-495. https://doi.org/10.1108/jes-08-2017-0238

Joecks, J., Pull, K., & Vetter, K. (2013). Gender diversity in the boardroom and firm performance: What exactly constitutes a "critical mass?". *Journal of Business Ethics, 118*, 61-72. https://doi.org/10.1007/s10551-012-1553-6

Khan, W. A., & Vieito, J. P. (2013). CEO gender and firm performance. *Journal of Economics and Business, 67*, 55-66.

Kirsch, A. (2018). The gender composition of corporate boards: A review and research agenda. *The Leadership Quarterly, 29*(2), 346-364. https://doi.org/10.1016/j.leaqua.2017.06.001

Krishnan, G. V., & Parsons, L. M. (2008). Getting to the bottom line: An exploration of gender and earnings quality. *Journal of Business Ethics, 78*, 65-76. https://doi.org/10.1007/s10551-006-9314-z

Kubo, K., & Nguyen, T. T. P. (2021). Female CEOs on Japanese corporate boards and firm performance. *Journal of the Japanese and International Economies, 62*, 101163. https://doi.org/https://doi.org/10.1016/j.jjie.2021.101163

Lam, K. C., McGuinness, P. B., & Vieito, J. P. (2013). CEO gender, executive compensation and firm performance in Chinese-listed enterprises. *Pacific-Basin Finance Journal, 21*(1), 1136-1159. https://doi.org/10.1016/j.pacfin.2012.08.006

Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China? *Journal of Corporate Finance, 28*, 169-184. https://doi.org/10.1016/j.jcorpfin.2013.11.016

Mano-Negrin, R., & Sheaffer, Z. (2004). Are women "cooler" than men during crises? Exploring gender differences in perceiving organisational crisis preparedness proneness. *Women in Management Review, 19*(2), 109-122. https://doi.org/10.1108/09649420410525315

Martinez Jimenez, R. (2009). Research on women in family firms: Current status and future directions. *Family Business Review, 22*(1), 53-64. https://doi.org/10.1177/0894486508328813

McKinsey, & Company. (2022). *Women in the worldplace 2022*. Retrieved from https://www.mckinsey.com/~/media/mckinsey/featured%20insights/diversity%20and%20inclusion/women%20in%20the%20workplace%202022/women-in-the-workplace-2022.pdf

Mehrotra, V., Morck, R., Shim, J., & Wiwattanakantang, Y. (2013). Adoptive expectations: Rising sons in Japanese family firms. *Journal of Financial Economics, 108*(3), 840-854. https://doi.org/10.1016/j.jfineco.2013.01.011

Moreno-Gómez, J., & Calleja-Blanco, J. (2018). The relationship between women's presence in corporate positions and firm performance: The case of Colombia. *International Journal of Gender and Entrepreneurship, 10*(1), 83-100. https://doi.org/10.1108/ijge-10-2017-0071

Nekhili, M., Chakroun, H., & Chtioui, T. (2018). Women's leadership and firm performance: Family versus nonfamily firms. *Journal of Business Ethics, 153*(2), 291-316. https://doi.org/10.1111/j.1467-8683.2010.00784.x

Nguyen, Q. K. (2024). Women in top executive positions, external audit quality and financial reporting quality: Evidence from Vietnam. *Journal of Accounting in Emerging Economies, 14*(5), 993-1019. https://doi.org/10.1108/JAEE-03-2023-0059

Nielsen, S., & Huse, M. (2010). The contribution of women on boards of directors: Going beyond the surface. *Corporate Governance: An International Review, 18*(2), 136–148. https://doi.org/10.1111/j.1467-8683.2010.00784.x

Nyeadi, J. D., Kamasa, K., & Kpinpuo, S. (2021). Female in top management and firm performance nexus: Empirical evidence from Ghana. *Cogent Economics & Finance, 9*(1), 1921323. https://doi.org/10.1080/23322039.2021.1921323

Paustian-Underdahl, S. C., Walker, L. S., & Woehr, D. J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *Journal of Applied Psychology, 99*(6), 1129. https://doi.org/10.1037/a0036751

Peni, E. (2014). CEO and Chairperson characteristics and firm performance. *Journal of Management & Governance, 18*, 185-205. https://doi.org/10.1007/s10997-012-9224-7

Perryman, A. A., Fernando, G. D., & Tripathy, A. (2016). Do gender differences persist? An examination of gender diversity on firm performance, risk, and executive compensation. *Journal of Business Research, 69*(2), 579–586. https://doi.org/10.1016/j.jbusres.2015.05.013

Pham, A. D., & Hoang, A. T. P. (2019). Does female representation on board improve firm performance? A case study of non-financial corporations in Vietnam. *Beyond Traditional Probabilistic Methods in Economics, 2*, 497–509. https://doi.org/10.1007/978-3-030-04200-4_36

PwC. (2023). *Family business survey 2023 - Vietnam report*. Retrieved from http:// https://www.pwc.com/vn/en/publications/vietnam-publications/family-business-survey-2023.html

Rigolini, A., Gabaldon, P., & Goldeng, E. L. B. (2021). CEO succession with gender change in troubled companies: The effect of a new woman CEO on firm risk and firm risk perceived. *Scandinavian Journal of Management, 37*(1), 101138. https://doi.org/https://doi.org/10.1016/j.scaman.2020.101138

Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review, 15*(2), 404–413. https://doi.org/10.1111/j.1467-8683.2007.00570.x

Saidu, S. (2019). CEO characteristics and firm performance: Focus on origin, education and ownership. *Journal of Global Entrepreneurship Research, 9*(1), 29. https://doi.org/10.1186/s40497-019-0153-7

Schwartz, M. A., & Barnes, L. B. (1991). Outside boards and family businesses: Another look. *Family Business Review, 4*(3), 269-285. https://doi.org/10.1111/j.1741-6248.1991.00269.x

Shaheen, R., Luo, Q., & Bala, H. (2023). Female CEO succession and corporate social disclosure in China: Unveiling the significance of ownership status and firm performance. *Environmental Science and Pollution Research, 30*(6), 14223-14239. https://doi.org/10.1007/s11356-022-23079-5

Singhathep, T., & Pholphirul, P. (2015). Female CEOs, firm performance, and firm development: Evidence from thai manufacturers. *Gender, Technology and Development, 19*(3), 320-345. https://doi.org/10.1177/0971852415596865

Stendardi, E. J., Graham, J. F., & O'Reilly, M. (2006). The impact of gender on the personal financial planning process: Should financial advisors tailor their process to the gender of the client? *Humanomics, 22*(4), 223-238. https://doi.org/10.1108/08288660610710746

Taylor, H., Meisel, C., Moyer, J., Azcona, G., Bhatt, A., & Valero, S. D. (2023). Forecasting women in leadership positions. *UN Women*, 2023-2011.

Terjesen, S., Sealy, R., & Singh, V. (2009). Women directors on corporate boards: A review and research agenda. *Corporate Governance: An International Review*, *17*(3), 320–337. https://doi.org/10.1111/j.1467-8683.2009.00742.x

Tran, N. M., Ngo, Q. G., & Tran, Q. T. (2023). Top management team gender diversity and the financial performance of Vietnamese SMEs: Family and non-family owned firms. *Gender in Management: An International Journal*, *38*(3), 394-411. https://doi.org/10.1108/GM-11-2021-0345

Tran, N. M., & Nguyen, T. H. (2022). Women's leadership and SMEs' CSR performance: Family versus nonfamily firms. *Cogent Business & Management*, *9*(1), 2157973. https://doi.org/10.1080/23311975.2022.2157973

Tran, N. M., Nguyen, T. T., Nguyen, T. P. L., Vu, A. T., Phan, T. T. H., Nguyen, T. H. T., . . . Phan, A. T. (2022). Female managers and corruption in SMEs: A comparison between family and nonfamily SMEs in Vietnam. *SAGE Open*, *12*(1), 21582440221082131. https://doi.org/10.1177/21582440221082131

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics*, *80*(2), 385-417.

Xing, L., Gonzalez, A., & Sila, V. (2021). Does cooperation among women enhance or impede firm performance? *The British Accounting Review*, *53*(4), 100936.