#### The Impact of CEO and CFO Gender on Family Firm Performance

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This study examines the impact of CEO and CFO gender on firm performance, with a focus on family firms. Family firms focus on strategic decision-making with a tendency to pass the firm to the next generations which includes the appointment of top executives. Since family firms are more likely to appoint a family member as CEO or CFO, common gender-based discriminatory practices play a lesser role in these decisions. Our results indicate that non-family firms with female CEOs or CFOs outperform those with male CEOs or CFOs. However, in contrast to non-family firms, the performance of family firms does not vary based on the gender of the CEO or CFO. This underscores the various discriminatory practices women face throughout the entirety of their careers, as female executives must demonstrate superior abilities to "shatter the glass ceiling" and attain top executive positions. Our study highlights the importance of addressing gender-based discriminatory practices at various stages of women's careers, rather than focusing solely on their tenure as top executives.

Keywords: family firms, CEO gender, CFO gender, firm performance

#### INTRODUCTION AND LITERATURE REVIEW

Recently, there has been growing interest in the impact of a Chief Executive Officer's and Chief Financial Officer's gender on firm performance. In particular, many studies have found that firms with female leaders perform better than those led by male leaders. For example, Faccio, Marchica, and Mura (2016) find differences in risk-taking and efficiency in capital allocation between male and female CEOs. Welbourne (1999, p.2) shows that women in top management positions increase shareholders' wealth and earnings. Huang and Kisgen (2013) suggest that male CEOs tend to exhibit greater overconfidence compared to female CEOs when it comes to corporate decision-making. In the context of the United States, Krishnan and Parsons (2008) find that companies with women in senior management roles, including CEO, have superior performance. Erhardt, Werbel, and Shrader (2003) use a sample of Fortune 500 firms to study board diversity and find that better performance is correlated with CEO gender. Khan and Vieito (2013) find that firms managed by female CEOs show better performance while taking a lower level of risk. Smith, Smith, and Verner (2006) also show that the presence of women in top management positions improves firm performance concerning accounting measures.

However, these studies predominantly focus on top executives' tenure as their respective companies' leaders, often disregarding their career history. This oversight neglects the potential obstacles female

executives face throughout their careers, commonly called the "glass ceiling" phenomenon. The "glass ceiling" phenomenon (Davies-Netzley, 1998) refers to the unseen obstacles that hinder women and marginalized groups from attaining higher positions. The potential discriminatory practices that female leaders face on their way to top executive positions often become more pronounced as individuals get closer to the highest levels of leadership. As Wright, Baxter, and Birkelund (1995) put it, "the glass ceiling hypothesis is not simply a claim about the existence of discrimination within hierarchies; it claims that such discrimination increases as one moves up the hierarchy." As a result, female leaders who have reached top positions within their firms must have navigated various obstacles and discriminatory practices throughout their careers to 'shatter the glass ceiling.' Consequently, female top executives, on average, are likely to possess superior abilities compared to their male counterparts, enabling them to overcome these barriers. This could contribute to the superior performance of firms led by female top executives.

Our study aims to shed light on the issue of gender discrimination in the corporate world by examining the impact of at least partially eliminating the discriminatory practices that women face throughout their careers.

For this purpose, we have chosen the context of family firms. Family-owned businesses represent a common ownership structure worldwide, as noted by La Porta, Lopez-De-Silanes, and Shleifer (1999), Claessens, Djankov, and Lang (2000), and Faccio and Lang (2002). In the United States, roughly half of publicly traded companies and nearly a third of S&P 500 firms are family-owned, as documented by Villalonga and Amit (2010) and Anderson and Reeb (2003). Family firms contribute substantially to economic output, job creation, and wealth generation. Family members typically constitute the largest group of block holders and often exhibit limited diversification, leading them to maintain significant ownership and control over the company across generations, as observed by Bertrand and Schoar (2006) and Burkart, Panunzi, and Shleifer (2003).

The ownership structure of family firms can potentially give rise to agency costs resulting from conflicts between managers and shareholders, as outlined by Fama and Jensen (1983) and further explored by Villalonga and Amit (2006). Moreover, the concentrated control exerted by family owners can create agency costs for minority shareholders, as discussed by Villalonga and Amit (2006, 2009) and Ali, Chen, and Radhakrishnan (2007).

However, there is an alternative perspective based on stewardship theory (Davis, Schoorman, and Donaldson, 1997) and shareholder interest theory (Yeh, 2014), suggesting that continued family ownership and management might benefit companies. Based on these theories, managers who are left unchallenged will act in the best interest of shareholders, including their family. Bertrand and Schoar (2006) found that family-owned firms often retain control and ownership over the long term, potentially benefiting the firm by virtue of the family's focus on legacy building and a more extended management horizon. The company is not merely an investment for these families but a vehicle for creating a lasting legacy (Jaskiewicz, Combs, and Rau, 2015). Given that families typically hold a significant stake in the firm and view it as a crucial part of their undiversified portfolio, which will likely be passed down to the next generation, their decisions prioritize the firm's long-term performance. Our attention is drawn to family-owned businesses due to their distinctive ownership structure and management outlook.

Gender-based discrimination can be attributed to the presence of stereotypes that favor men over women (as discussed in Heilman & Okimoto, 2007), which are particularly pronounced in the context of leadership roles (Eagly & Carli, 2003; Stuhlmacher & Poitras, 2010). In a more traditional context, role congruity theory (Eagly and Karau, 2002) posits that there is a misalignment between the traditional female gender role and the expectations of leadership qualities. Women are often perceived as nurturing and caring, and these traits are not typically associated with qualities desirable for managerial positions (Koenig, Eagly, Mitchell, & Ristikari, 2011). Schein (1973), using survey evidence, found a strong association between being a manager and being a man, often referred to as the "think manager–think male" stereotype (Schein, Mueller, Lituchy, & Liu, 1996). Meanwhile, Powell and Butterfield (1979, 1989) and Powell, Butterfield, and Parent (2002), in a three-wave study among students concerning managerial stereotypes and valuable traits, consistently found that female traits were considered irrelevant for effective leadership, often referred to as the "think manager–think manager–think masculine" stereotype.

This study aims to shed more light on this important issue by focusing on the context of family firms. Family firms primarily focus on strategic decision-making with the tendency to pass the firm to the next generations, maintaining a longer-term vision (Chua, Chrisman, and Sharma, 1999; Corbetta and Salvato, 2004; Miller and Le Breton-Miller, 2005; Bertrand and Schoar, 2006; Moradi Dezfouli and Ravi, 2022). Choosing a CEO who shares the same strategic goals and is unconditionally committed to the firm's success, and by extension, the family's wealth, is perhaps the most crucial decision a family firm faces. Consequently, family firms tend to prioritize appointing a family member as the CEO to ensure prosperity for the next generation.

We hypothesize that since a family member is appointed as the CEO, there is no conscious decision regarding the candidate's gender. Rather, family firms simply appoint a CEO regardless of gender. Consequently, within the context of family firms, female CEOs must have experienced fewer discriminatory practices because of family ties and are less likely to have gone through 'shattering the glass ceiling' to reach top management. Therefore, we propose the following hypothesis:

#### H1: Family firms led by female CEOs have comparable performance to those led by male CEOs.

While there is extensive research on the impact of CEO gender on firm performance, the impact of Chief Financial Officer (CFO) gender on firm performance remains relatively unexplored. However, researchers have recently recognized the importance of this issue. Female and male executives may possess different traits that can significantly impact the firm. For example, Huang and Kisgen (2013), Francis, Hasan, Park, and Wu (2015), and Liu, Wei, and Xie (2016) show how female CFOs exhibit different financial decision-making tendencies that can ultimately affect the performance of the firm. These differences in characteristics can result in superior operating performance but may not necessarily result in positive investor reactions (Doan and Iskandar-Datta, 2021).

Reaching the position of Chief Financial Officer is likely to be as challenging for female candidates as it is to reach the Chief Executive Officer position. Female CFOs are likely to have also 'shattered the glass ceiling' due to their superior skills and capabilities and are thus likely to perform better than their male counterparts.

We hypothesize that in the context of family firms, the Chief Financial Officer also plays a major role in the firm's success, so this position may also be filled by appointing a family member regardless of gender. Consequently, a female CFO in a family firm may have reached that position facing less gender discrimination, and their performance may be comparable to that of their male counterparts. Hence, we propose the following hypothesis:

#### H2: Family firms with female CFOs have comparable performance to family firms with male CFOs.

This paper is organized as follows: In the next section, we present the data used in our study. Following that, we provide a summary of our methodology. Finally, we present our results, followed by our conclusion.

#### DATA

Our sample consists of firms listed in the S&P 500 Index from 1994 to 2020. Family firms are identified using Ron Anderson's website data, as utilized in Anderson, Duru, and Reeb (2009) and Anderson, Reeb, and Zhao (2012). We use Bloomberg to update our data. A family firm is defined as a firm where family members own at least a 5% stake in the company. All other financial data is extracted from Compustat. CEO and CFO gender data is extracted from ExecuComp.

#### **METHODOLOGY**

In the first part of our analysis, we run univariate tests to check if the performance of female-led versus male-led firms differs within the sample of family and non-family firms. We also run the same univariate tests to see if family firms with female versus male CFOs show a difference in performance.

The second part of our study uses the following regression model to test the joint impact of gender and family ownership on firm performance.

$$Tobin's Q_{it} = \alpha + \beta_1 * Female_{it} + \beta_2 * Female_{it} * FamilyFirm_{it} + \beta_3 * FamilyFirm_{it} + \sum_{j=4}^{8} \beta_{jt} * C_{jt} + \varepsilon_{it},$$
(1)

where the dependent variable, *Tobin's Q<sub>it</sub>*, is Tobin's Q for firm i at year t, which measures firm performance. *Female<sub>it</sub>* is the dummy variable that takes value of 1 if CEO of the firm i in year t was female and 0 otherwise. *FamilyFirm<sub>it</sub>* is a dummy variable that takes a value of 1 if firm i is a family firm in year t and 0 if firm i in year t is a non-family firm. The interaction variable *Female<sub>it</sub>* \* *FamilyFirm<sub>it</sub>* determines the impact of female CEO on family firm performance. In other words,  $\beta_1$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of non-family firms and  $\beta_2$  captures how the female CEO impacts the performance of family firms. We use several control variables in our model as well that are shown by  $C_{it}$ s.

The control variables are all sourced from Compustat and consist of return on assets (ROA), the natural logarithm of total assets, a binary variable indicating if the firm is incorporated in Delaware, the ratio of capital expenditures to total assets measuring growth, and leverage to control for firm's capital structure.

Leverage is calculated as:

$$Leverage = \frac{Long-Term \, Debt+Debt \, in \, Current \, Liabilities}{Total \, Stockholders' Equity}$$

 $ROA_{it}$  is the Return on Assets for firm i at year t measuring firm performance. We use the same methodology used in Epps and Cereola (2008) to measure the operating performance by earnings generated by the invested capital.

We later replace the dependant variable of Tobin's Q with ROA (Return on Assets) using the same model. We exclude ROA as a control variable in model (2).

$$ROA_{it} = \alpha + \beta_1 * Female_{it} + \beta_2 * Female_{it} * FamilyFirm_{it} + \beta_3 * FamilyFirm_{it} + \sum_{j=4}^7 \beta_{jt} * C_{jt} + \varepsilon_{it},$$
(2)

In the second part of our analysis, we use models (1) and (2) and change the variable  $Female_{it}$  to a dummy variable that takes 1 if CFO of the firm i in year t was female. Moreover, the interaction variable  $Female_{it} * FamilyFirm_{it}$  captures the impact of female CFO on family firm performance.

#### RESULTS

Table 1 presents the results of the univariate analysis of differences in firms' performance based on the CEO's or CFO's gender. In this table, we use Tobin's Q as the measure of performance. Our results in Panel A of Table 1 show that non-family firms led by female CEOs have superior performance as measured by Tobin's Q. However, we do not observe the same pattern for family firms led by female CEOs. This finding is in line with our first hypothesis that family firms led by female CEOs have comparable performance to family firms led by male CEOs.

We observe similar results for Chief Financial Officers in Table 1 – Panel B. Non-family firms with female CFOs seem to perform better than non-family firms with male CFOs. However, these results do not

extend to family firms, which aligns with our second hypothesis that family firms with female CFOs perform similarly to family firms with male CFOs.

### TABLE 1 CEO AND CFO GENDER IMPACT ON FIRM PERFORMANCE (TOBIN'S Q)

#### Panel A: CEO

	All firms	Family Firms	Non-Family Firms
	Tobin's Q	Tobin's Q	Tobin's Q
CEO Female	3.1569	3.3233	3.0911
CEO Male	2.5394	2.5963	2.5165
Difference (Female - Male)	0.6175**	0.7270	0.5746**
p-value	0.0252	0.1923	0.0247

#### Panel B: CFO

	All firms	Family Firms	Non-Family Firms
	Tobin's Q	Tobin's Q	Tobin's Q
CFO Female	2.4164	2.1861	2.5001
CFO Male	2.2525	2.2432	2.2558
Difference (Female - Male)	0.1639*	-0.0571	0.2443**
p-value	0.0563	0.7254	0.0318

**Note:** This table presents the results of the univariate analysis of difference in firms' Tobin's Q based on gender of the executive. Panel A shows the results based on the gender of Chief Executive Officers (CEOs) and Panel B shows the results based on the gender of Chief Financial Officers (CFOs). The sample is broken down by family firms and non-family firms. Robust *p*-values are reported and \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Our univariate analysis results remain robust when we use Return on Assets (ROA) as the performance measure. As presented in Table 2 – Panel A, ROA varies across our sub-samples. In the sample of non-family firms, as expected, female CEOs show a significantly higher ROA. In other words, firms led by female CEOs exhibit better performance measured by ROA. However, in the sample of family firms, we do not see a difference in performance between firms led by female CEOs and those led by male CEOs. This indicates that in the context of family firms, where succession is based on family ties rather than common industry practices, female and male CEOs have similar performances, which aligns with our first hypothesis.

## TABLE 2 CEO AND CFO GENDER IMPACT ON FIRM PERFORMANCE (RETURN ON ASSETS)

Panel A: C	CEO
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	All firms	Family Firms	Non-Family Firms
	ROA	ROA	ROA
CEO Female	0.1429	0.1510	0.1485
CEO Male	0.1422	0.1507	0.1397
Difference (Female - Male)	0.0007*	0.0003	0.0088*
p-value	0.0643	1.0000	0.0544

Panel B: CFO

	All firms	Family Firms	Non-Family Firms
	ROA	ROA	ROA
CFO Female	0.1531	0.1570	0.1516
CFO Male	0.1299	0.1378	0.1271
Difference (Female - Male)	0.0232***	0.0192	0.0245***
p-value	0.0000	0.3327	0.0000

**Note:** This table presents the results of the univariate analysis of difference in firms' Return on Assets (ROA) based on gender of the executive. Panel A shows the results based on the gender of Chief Executive Officers (CEOs) and Panel B shows the results based on the gender of Chief Financial Officers (CFOs). The sample is broken down by family firms and non-family firms. Robust *p*-values are reported and \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

In Panel B of Table 2, we test the robustness of our second hypothesis using Return on Assets (ROA) as a performance measure. Our results indicate that non-family firms with female CFOs perform significantly better than non-family firms with male CFOs. However, family firms with female CFOs perform similarly to family firms with male CFOs. This is once again in line with our second hypothesis. In other words, within the context of family firms, since the CFO role appointment seems to be influenced by family ties, we do not observe any difference in performance between firms with male and female CFOs.

We continue our analyses by using panel regressions to test the impact of CEO and CFO gender on firm performance.

Table 3 shows our panel regression results on how Tobin's Q, as the measure of performance, is affected by gender. In line with our previous results and as shown in model 2, in a combined sample of family and non-family firms, companies led by female CEOs show superior performance compared to firms led by male CEOs. However, as shown in model 3, only non-family firms led by female CEOs show superior performance. We do not observe a performance difference between family firms led by male and female CEOs which is again in line with our first hypothesis.

	(1)	(2)	(3)
	Tobin's Q	Tobin's Q	Tobin's Q
Family Firm	-0.0813**		-0.1047***
	(0.0126)		(0.0015)
Female CEO		0.1900*	1.0349***
		(0.0560)	(0.0000)
Family Firm * Female CEO			-0.1198
			(0.3131)
Return On Assets	4.5209***	4.5032***	4.5305***
	(0.0000)	(0.0000)	(0.0000)
Assets (Natural Log)	-0.1508***	-0.1468***	-0.1504***
	(0.0000)	(0.0000)	(0.0000)
Delaware Incorporated	0.1982***	0.2052***	0.1981***
	(0.0000)	(0.0000)	(0.0000)
Capital Expenditures to Assets	-0.7752***	-0.7701***	-0.7315***
	(0.0041)	(0.0043)	(0.0067)
Market Value of Total Leverage	0.0000	0.0000	0.0000
	(0.5995)	(0.5995)	(0.6016)
Constant	2.4479***	2.3881***	2.4435***
	(0.0000)	(0.0000)	(0.0000)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	19777	19777	19777
Adjusted <i>R</i> -squared	0.0583	0.0582	0.0594

#### TABLE 3 PANEL REGRESSION OF THE IMPACT OF CEO GENDER AND FAMILY FIRM ON TOBIN'S Q

**Note:** This table reports the summary results of the fixed effect panel regression for the impact of CEO Gender and family firm on Tobin's Q. Model (1) includes only the family firm dummy among the independent variables. Model (2) includes only the CEO gender dummy among the independent variables. Model (3) includes the interaction term between the family firm and the gender dummy. All other variables are as previously defined. Robust *p*-values are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Our results remain robust when we use Return on Assets (ROA) as the measure of performance. As shown in Table 4, using a combined sample of family and non- family firms, companies led by female CEOs have superior performance (model 2). However, model 3 in Table 4 shows that while non-family firms led by female CEOs have higher ROA, this is not the case for family firms led by female CEOs.

	(1)	(2)	(3)
	ROA	ROA	ROA
Family Firm	0.0093***		0.0098***
	(0.0000)		(0.0000)
Female CEO		0.0230**	0.0121**
		(0.0249)	(0.0276)
Family Firm * Female CEO			0.0055
			(0.2350)
Assets (Natural Log)	0.0039***	0.0035***	0.0039***
	(0.0000)	(0.0000)	(0.0000)
Delaware Incorporated	-0.0088***	-0.0094***	-0.0087***
	(0.0000)	(0.0000)	(0.0000)
Capital Expenditures to Assets	0.4347***	0.4376***	0.4346***
	(0.0000)	(0.0000)	(0.0000)
Market Value of Total Leverage	-0.0001*	-0.0001*	-0.0001*
	(0.0968)	(0.0984)	(0.0974)
Constant	0.0921***	0.0979***	0.0918***
	(0.0000)	(0.0000)	(0.0000)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	19777	19777	19777
Industry Fixed Effects	0.0571	0.0556	0.0573

# TABLE 4PANEL REGRESSION OF THE IMPACT OF CEO GENDER AND FAMILY FIRM ON<br/>RETURN ON ASSETS (ROA)

**Note:** This table reports the summary results of the fixed effect panel regression for the impact of CEO Gender and family firm on firm Return on Assets (ROA). Model (1) includes only the family firm dummy among the independent variables. Model (2) includes only the CEO gender dummy among the independent variables. Model (3) includes the interaction term between the family firm and the gender dummy. All other variables are as previously defined. Robust *p*-values are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Our results support our first hypothesis that within the context of family firms, firms led by male and female CEOs do not vary in performance since CEO appointments in family firms are mainly driven by family ties rather than common gender biases in appointing the CEO.

Tables 5 and 6 focus on the CFO's gender and family firm performance, testing our second hypothesis. Table 5 shows the results of a panel regression on how firm performance, measured by Tobin's Q, is affected by the CFO's gender. As expected, and shown in model (2), firms (combined sample of family and non-family) with a female CFO have superior performance compared to firms (combined sample of family and non-family) with a male CFO. However, model (3) shows that this superior performance of firms with

female CFOs is only evident in non-family firms. Our results indicate that family firms with female CFOs perform comparably to family firms with male CFOs. This aligns with our second hypothesis that family ties also drive CFO appointments in family firms, thus gender may play a lesser role in the appointment.

	(1)	(2)	(3)
	Tobin's Q	Tobin's Q	Tobin's Q
Family Firm	-0.0710***		-0.0659***
	(0.0020)		(0.0062)
Female CFO		0.0210**	0.0367*
		(0.0490)	(0.0709)
Family Firm * Female CFO			-0.0555
			(0.4787)
Return On Assets	3.4860***	3.4668***	3.4817***
	(0.0000)	(0.0000)	(0.0000)
Assets (Natural Log)	-0.0506***	-0.0478***	-0.0506***
	(0.0000)	(0.0000)	(0.0000)
Delaware Incorporated	0.0739***	0.0788***	0.0746***
	(0.0004)	(0.0001)	(0.0003)
Capital Expenditures to Assets	-1.4544***	-1.4730***	-1.4459***
	(0.0000)	(0.0000)	(0.0000)
Market Value of Total Leverage	0.0000	0.0000	0.0000
	(0.2073)	(0.1976)	(0.1967)
Constant	1.7405***	1.6978***	1.7368***
	(0.0000)	(0.0000)	(0.0000)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	8372	8372	8372
Adjusted <i>R</i> -squared	0.1442	0.1432	0.1440

# TABLE 5PANEL REGRESSION OF THE IMPACT OF CFO GENDER AND FAMILYFIRM ON TOBIN'S Q

**Note:** This table reports the summary results of the fixed effect panel regression for the impact of CFO Gender and family firm on Tobin's Q. Model (1) includes only the family firm dummy among the independent variables. Model (2) includes only the CFO gender dummy among the independent variables. Model (3) includes the interaction term between the family firm and the gender dummy. All other variables are as previously defined. Robust *p*-values are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Our results remain robust when return on assets is used as a measure of performance. As shown in table 6, we observe that non-family firms with a female CFO perform better. However, family firms with female CFOs show comparable performance to those with male CFOs, which aligns with our second hypothesis.

	(1)	(2)	(3)
	ROA	ROA	ROA
Family Firm	0.0125***		0.0128***
	(0.0000)		(0.0000)
Female CFO		0.0258***	0.0270***
		(0.0000)	(0.0000)
Family Firm * Female CFO			0.0047
			(0.1911)
Assets (Natural Log)	0.0108***	0.0104***	0.0108***
	(0.0000)	(0.0000)	(0.0000)
Delaware Incorporated	-0.0074***	-0.0084***	-0.0075***
	(0.0013)	(0.0003)	(0.0011)
Capital Expenditures to Assets	0.3462***	0.3586***	0.3532***
	(0.0000)	(0.0000)	(0.0000)
Market Value of Total Leverage	-0.0000	-0.0000*	-0.0000*
	(0.1187)	(0.0868)	(0.0823)
Constant	0.0325***	0.0369***	0.0298***
	(0.0000)	(0.0000)	(0.0000)
Year Fixed Effects	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes
Observations	8372	8372	8372
Adjusted <i>R</i> -squared	0.0513	0.0535	0.0557

# TABLE 6 PANEL REGRESSION OF THE IMPACT OF CFO GENDER AND FAMILY FIRM ON RETURN ON ASSETS (ROA)

**Note:** This table reports the summary results of the fixed effect panel regression for the impact of CFO Gender and family firm on Return on Assets (ROA). Model (1) includes only the family firm dummy among the independent variables. Model (2) includes only the CFO gender dummy among the independent variables. Model (3) includes the interaction term between the family firm and the gender dummy. All other variables are as previously defined. Robust *p*-values are reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

#### CONCLUSIONS

Our study focuses on the performance of firms led by females in CEO and CFO roles within the context of family firms. Specifically, we examine how the performance of family firms differs from the

performance of non-family firms when female CEOs or CFOs lead the firm. Our results indicate that nonfamily firms led by a female CEO show superior performance compared to non-family firms led by male CEOs. However, the performance of family-owned firms led by female CEOs remains comparable to that of family-owned firms with male CEOs. Our findings suggest that since family-owned firms are more likely to appoint a CEO based on family ties, the influence of common gender discrimination practices in appointment of the CEO is diminished. Hence, family firms led by female and male CEOs show similar performances. We also test how the appointment of female CFOs affects firm performance and find similar results. While non-family firms with female CFOs show superior performance, family firms with female CFOs have comparable performances to family firms led by male CFOs. Our results remain robust when using different measures of firm performance, namely return on assets and Tobin's Q.

Our results underscore the existence of discriminatory practices against women throughout their entire careers. Female CEOs and CFOs must overcome many obstacles based on gender to reach top positions in corporations and "shatter the glass ceiling." The fact that firms with female CEOs or CFOs generally show superior performance, but comparable performance in the context of family firms, highlights the importance of addressing this issue throughout women's entire professional journeys, rather than solely concentrating on their tenure as senior executives.

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