

A Research on the Effects of Nonfamily Manager Involvement on ESG Performance

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Abstract: Amid growing environmental concerns and the pivotal role of family firms in the global economy, scholars have increasingly focused on the factors that drive their sustainable performance. Family firms, which balance both economic and non-economic goals, often prioritize long-term sustainability over short-term profits. However, the interplay between family governance and professional management introduces challenges in achieving sustainable outcomes. Drawing on socio-emotional wealth theory, this paper analyzes panel data from Chinese listed family firms between 2013 and 2022 to reveal an inverted U-shaped relationship between nonfamily manager involvement and corporate Environmental, Social, and Governance (ESG) performance. Furthermore, the study examines how Chinese traditional cultural values, particularly "familism", moderate this nonlinear relationship. Multiple robustness checks validate the findings. This research advances academic literature by deepening the understanding of non-financial consequences related to nonfamily manager involvement in family firms, while providing practical insights for businesses pursuing sustainability.

Keywords: Family firms; Nonfamily managers; ESG performance; Agency theory; Familism.

1. Introduction

Over the past decades, the Environmental, Social and Governance (ESG) performance of listed companies has captured increasing attention from both practitioners and scholars, particularly in Europe and Asia [32]. ESG criteria are closely related to ethical and socially responsible investing and thus have become an important indicator of corporate sustainability and non-financial performance [30]. As emerging economies begin to pursue high-quality development, countries such as China are placing greater emphasis on ESG criteria [64].

Family enterprises, a key component of the private sector [38], play an indispensable role in this process. These firms, generally characterized by the heavy involvement of founding or controlling families [16], highlight Social Emotional Wealth (SEW) in their strategic decisions [49]. SEW, as proposed by Gomez-Mejia [33], propels family firms to prioritize the continuation of family control and reputation. Therefore, their focus on non-economic goals naturally makes family firms more motivated than non-family firms to invest in sustainable and socially responsible ESG initiatives [3].

However, as family firms expand, they inevitably introduce hired managers to modernize their managerial practices [9]. While these nonfamily managers often possess professional experience and distinctive social capital [11], which potentially enhance ESG performance, they lack the intrinsic motivation to preserve the family's SEW [34]. Furthermore, the involvement of hired managers may also lead to agency costs owing to the incongruent goals between families and nonfamily members [14], and information asymmetry [15]. Therefore, understanding the relationship between family firm professionalization and ESG performance remains imperative. Here, I raise my first research question: To what extent does nonfamily manager involvement influence ESG performance? And how does this impact change during managers' tenure in family firms?

Additionally, current research suggests that cultural values lay the foundation for individual behaviors and cognitions.

Under the influence of Confucianism, China has developed a familism cultural system that prioritizes family ties over other social relationships [29]. This unique cultural setting may influence the non-financial outcomes of professionalization in family businesses. Moreover, based on the World Value Survey (WVS), the degrees to which Chinese people are affected by familism vary significantly across provinces [47]. Taken together, I propose my second research question: To what extent does familism culture across China moderate the relationship between nonfamily manager involvement and ESG performance?

Based on a sample of the publicly listed family firms in China from 2013 to 2022, this study makes two contributions to the existing literature. First, it enriches the literature on the heterogeneous impact of nonfamily managers on non-financial objectives. Existing research mainly focuses on the impact of family members' SEW on sustainability [33], and thus has neglected the role of nonfamily managers in family firms' sustainable development. By adopting the agency theory, SEW theory and stewardship theory, this study discovers an inverted U-shape relationship between professionalization and ESG performance. This finding challenges the "either/or" assumptions between professional management and family management, which may weaken the competitive advantage of family firms' ESG output.

Second, this paper explores the mechanisms through which traditional culture influences family firms' achievement of non-economic goals. Family firms, as typical relational organizations [55], are influenced by informal interactions and relationships. However, most existing literature only focuses on formal arenas [17]. Thus, this paper reveals how familism culture moderates the relationship between non-family managers' involvement and ESG performance, thereby giving a new understanding of nonfinancial objectives of family firms.

This research also provides clear ethical implications for family firms pursuing better ESG performance. As many family firms seek to enhance their legitimacy in the eyes of stake holders [20], achieving higher ESG ratings can be

workable strategy. A suggestion for these family firms is to adopt a proper level of professionalization, engage with nonfamily members through daily informal interactions, and ultimately foster a sense of cultural identification within the organization.

The remainder of the paper proceeds as follows. I review the literature and develop the hypotheses in the second section. It is followed by descriptions of methodology. I then report and discuss the empirical results, followed by discussions and conclusions of the paper.

2. Literature Review and Hypothesis

Unlike other organizational forms, kinship and familial relationships are the most integral ties in family firms [13]. Due to these unique bonds, family members have a greater propensity to pursue family-centered, noneconomic goals aimed at building socio emotional wealth (SEW) [14, 34]. Prior research indicates that SEW mainly includes dimensions such as maintaining family control, preserving family legacies and enhancing reputation [36]. As such, family firms are more likely to prioritize initiatives that ensure the long-term interests in strategic planning [12], which closely align with the sustainable principles of ESG.

Despite the competitive advantages in ESG activities, with the expansion of firms, many family businesses suffer from their limitations in family-management capacity [8]. To address this dilemma, a possible solution is to hire nonfamily managers [23], thereby accelerating the professionalization of family firms [51]. Nevertheless, from the perspective of agency theory, these “defamilization” reforms inevitably impact family firms’ performance.

On the one hand, nonfamily manager involvement brings considerable agency advantages to family firms. First, existing research has suggested that nonfamily managers tend to possess diverse knowledge and experience [5]. As family members often share similar upbringing and life experience, their knowledge and skills exhibit a high level of homogeneity [11], making it challenging for the firm to access heterogeneous resources. Conversely, hired managers usually come from highly competitive and diverse labor markets. Thus, they can introduce more advanced managerial and international visions to the firms’ daily operation [26]. For example, these executives can enhance ESG performance by promoting green innovation using cutting-edge technologies [48]. Second, hired managers also provide firms with a broader network of external resources. Particularly in a market where informal relationships are crucial, the distinctive social capital possessed by non-family members is valuable to firms [62]. Furthermore, in a nepotistic society like China, family firms often face inefficiencies in corporate governance because of excessive altruism [50]. The introduction of non-family executives can help mitigate these inherent preferences by implementing professional management practices [42], reducing inappropriate resource expropriation [7], optimizing the firm’s governance structure and ultimately improve ESG performance. Therefore, I posit that nonfamily manager involvement brings agency advantages to family firms, and there exists a positive linear relationship between these two (*Figure 1*).

On the other hand, the introduction of nonfamily manager also brings several agency costs to family firms. First, as mentioned earlier, family and nonfamily managers often pursue incongruent goals. Unlike families that prioritize long-term success, hired managers are more motivated by financial

goals [14]. As a result, these managers might sacrifice sustainable practices such as ESG for immediate profitability. Thus, to mitigate the conflicts between family and nonfamily members, the controlling family has to be at a higher supervision costs. Second, information asymmetry is also a key contributor to agency costs in family firms. Family members, due to their long-term experience in the firm, tend to possess tacit knowledge and a thorough understanding of the internal management mechanisms [52]. However, when nonfamily members are involved, they have yet to establish strong connections with family members, and thus don’t have access to the internal information [25]. This gap may result in managers’ decision-making that does not fully consider the long-term impact on sustainability. What’s more, according to the stewardship theory [22], family members naturally exhibit strong stewardship behaviors. Thus, as they view their business as an extension of their family [63], they are more inclined to pursue long-term ESG goals in their decision-making. Nevertheless, non-family managers lack this sense of family belonging [20]. Consequently, the controlling family needs to implement incentive schemes to encourage nonfamily managers to adopt socially responsible practices [20], increasing the agency costs. Notably, when the nonfamily manager involvement is relatively low, family members still have sufficient authority and willingness to monitor the actions of non-family managers [17]. However, as the involvement of non-family executives increases, family firms are compelled to introduce more formal governance systems. This, in turn, adds up agency costs between non-family members and the controlling family [40]. Therefore, based on prior literature [46], I posit that non family manager involvement brings agency costs to family firms, with a marginally increasing effect (*Figure 2*).

Taken agency advantages and costs together, I plotted my estimations of the relationship between nonfamily manager involvement and ESG performance following Haans et al [35]. As shown in Figure 3, to the left of point A, the agency advantages exceed the agency costs, leading to an increase in ESG performance. However, to the right of point A, the agency benefits fall below the agency costs, resulting in a decline in ESG performance.

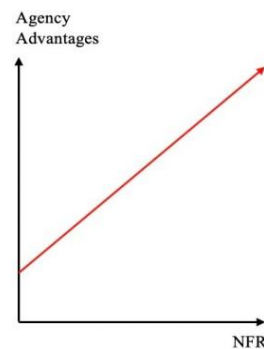


Figure 1. AgencyAdvantages

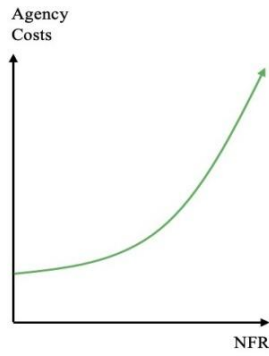


Figure 2. AgencyCosts

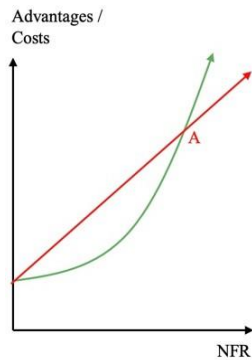


Figure 3. Advantages/Costs

Hypothesis 1. The extent to which the nonfamily managers are involved in a family firm has an inverted U-shaped relationship with ESG performance.

Confucianism, as the core of Chinese cultural system, has placed an everlasting impact on people's everyday life in China [61]. Influenced by Confucianism, Chinese society naturally develops into a distinct pattern called "the differential mode of association" (*chaxugeju*). This pattern, according to Fei [27], emphasizes that relationships among people are based on blood ties and kinship. Within this cultural context, the concept of familism flourishes and becomes an important cultural factor influencing family firms' management styles and decision-making processes [4].

Familism, which stresses family-orientation and family-centered objectives, manifests primarily in two aspects [59]. First, when the founder has a strong sense of familism, there will be a significant difference in the trust level between family members and outsiders [29]; Second, for controlling families with stronger familism values, they are more driven to ensure the continuation of their company and the establishment of a lasting family legacy [4]. Therefore, I propose that familism can affect the impact of nonfamily manager involvement on ESG performance.

Regarding the agency advantages, as mentioned above, controlling families with stronger familism values are more inclined to advocate the enhancement of family reputation, values and the sustainable development of their businesses. Driven by this culture, these firms are motivated to adopt ESG initiatives, such as enhancing green innovation and social justice [18] or building sustainable supply chain [28], to preserve SEW capital endowments. Over time, nonfamily managers in family businesses gradually learn the company's culture and resonate with the long-term objectives [31]. This familism internalization boosts managers' identification with the firm [63], and in turn drives them to utilize their professional knowledge to promote the company's long-term

development. Thus, this process considerably enhances the agency advantages.

In terms of the agency costs, founders' stronger propensity to stress family ownership and control over the business [65] leads to a trust crisis between them and professional managers. The significant disparities in the trust level among family and nonfamily members further encourages the centralization of power [1], which increases the communication costs and reduces management efficiencies, key aspects of ESG criteria. Meanwhile, as nonfamily managers fail to obtain the necessary resources and power, they may find it difficult to fulfill their original duties, let alone contribute to the firm's sustainable future. These factors, in turn, leads to considerable agency costs.

Taken together, familism increases both agency advantages and agency costs. Therefore, I posit that the inverted U-shaped line will become steeper. However, since both agency advantages and costs rise, it is hard to determine the movement of the turning point. Therefore, I propose two hypotheses.

Hypothesis 2a. In firms with stronger familism cultures, the inverted U-shaped relationship between nonfamily manager involvement and ESG performance is accentuated and the turning point shifts rightward.

Hypothesis 2b. In firms with stronger familism cultures, the inverted U-shaped relationship between nonfamily manager involvement and ESG performance is accentuated and the turning point shifts leftward.

3. Methods

3.1. Sample

The sampling frame includes all family firms listed on the Shanghai and Shenzhen Stock Exchanges from 2013 to 2022 to ensure the accuracy, stability and feasibility of the data. Following prior literature, family firms are defined as private corporations whose ultimate owner is either an individual or a family and holds the largest ownership [60]. To enhance the reliability and representativeness of the findings, the data set was processed as follows: (1) Observations with missing variables were excluded; (2) financial companies, special treatment (ST) and particular transfer (PT) companies were removed. Finally, I obtained 10363 company-year samples. To mitigate the influence of outliers, I winsorize the continuous variables at the 1% and 99% quantiles. Stata17 is used to analyze the panel data.

In this study, the Huazheng ESG rating index was retrieved from the Wind database, while data on nonfamily managers and other financial indicators was mainly derived from the China Stock Market Accounting Research (CSMAR) database. CSMAR and Wind are two of the leading financial data providers in Mainland China and are widely used in academic research [44]. Furthermore, seeking to measure familism as a moderator, I hand-coded data on familism by collecting firms' prospectus from official websites.

3.2. Measures

3.2.1. Dependent variable

There are several approaches to measure a corporate's ESG performance. Following the literature [43, 64], I chose the Huazheng ESG rating index as the dependent variable. Compared to other ESG rating systems in mainland China, such as SynTao Green Finance ESG and Hexun ESG, the Huazheng ESG rating system excels in its coverage, rating

dimensions and is widely employed in studies under the Chinese settings [64].

The Huazheng ESG Rating index is classified into nine levels from high to low, namely: AAA, AA, A, BBB, BB, B, CCC, CC, C. This paper assigned a value of 9 to 1 from high to low as a proxy for a family firm's ESG performance.

3.2.2. Independent variable

Following Fangetal [25], I used the proportion of nonfamily managers relative to all managers employed in the family firm to measure nonfamily management.

3.2.3. Moderating variable

Familism, as the crucial component of Confucian cultures, leads people to trust their close family networks significantly more than outsiders [29]. Therefore, following Bertrand and Schoar [4] and Wu et al [59], this paper measures familism by comparing residents' relative trust level in "family members" and "other social relations". Utilizing data from the 2012 World Values Survey (WVS) across various Chinese provinces, a provincial level familism indicator was constructed. Then, I matched the familism index with the birth province of the firm founder (or actual controller). The identification of the founder's birth province is determined through the first two digits of their ID card, which was disclosed in firms' prospectuses. Finally, the information was verified using the Baidu search engine. Because familism is a continuous variable, it should be centered before being included in the interaction term.

3.2.4. Control variables

Consistent with the related literature [56], I integrated two control variable groups, one on the firm level and one on the top management team (TMT) level. At the firm level, I first controlled for size (*Size*), firm age (*Fage*) and asset-liability ratio (*Lev*). Larger and maturer enterprises typically have more resources and capabilities to invest in ESG initiatives [24]. Meanwhile, companies with lower leverage levels have more financial flexibility to invest in sustainable and socially responsible projects.

Second, following prior literature [37], I also controlled the firms' characteristics that might affect ESG governance, including the duality (*Dual*), board size (*Board*) and the top1 (*Top1*). Moreover, it should be noted that external attention also influences ESG performance. For this reason, I controlled the attention from institutional investors (*Inst*) and Big4 auditors (*Big4*).

Additionally, I controlled for TMT-level effects on ESG performance. As existing studies have suggested that the management team plays an indispensable role in ESG decisions [57], the managers' average age (*TMTAge*) and their oversea background (*OverseaBack*) were also controlled.

To alleviate the endogeneity problem of omitted variables, I further controlled for industry fixed effects (*Industry*) and year fixed effects (*Year*).

Table 1 summarizes the variables used in the model and their measurement.

Table 1. Variable Definition

Variables		Definition
Dependent variable	ESGRating	ESG Rating provided by Huazheng ESG rating system (0-9).
Independent variable	NFR	The proportion of nonfamily managers relative to all managers employed in the firm
Moderating variable	Familism	The difference between the average trust level in "family members" and "other relations" among respondents from the actual controller's home province.
Control variables	Size	The natural logarithm of total assets.
	Fage	Calculated as the current year minus the established year, plus 1.
	Lev	The ratio of total liabilities to total assets.
	Dual	CEO-Chairman Duality, coded as 1 if the same person holds both roles, 0 otherwise.
	Top1	The ratio of shares held by the largest shareholder to total shares.
	Board	The natural logarithm of the number of board members.
	Inst	The ratio of institutional shares to total shares.
	Big4	Coded as 1 if audited by Big 4 Auditors, 0 otherwise.
	TMTAge	Average age of the managers.
	OverseaBack	Coded as 1 if any manager has overseas experience, 0 otherwise.

3.3. Research Design

To cope with the panel data, the fixed-effects regression model was used to alleviate the potential endogeneity of the independent variables. Specifically, following Correia [19], I used the reghdf procedure in Stata to estimate Equation (1) and (2). According to Li et al. [41], reghdfe can effectively

calculate multiple sets of fixed effects consisting of a large number of values. Thus, it is preferable to other estimation approaches for this model.

I used the following three regression models to test the above hypotheses. The first and second equation was used to test *Hypothesis 1*, while the third equation was used to test *Hypothesis 2*.

$$ESGRating_{it} = \beta_0 + \beta_1 NFR_{it-1} + \beta_2 NFR_{it-1}^2 + \sum YearFE + \sum IndustryFE + \varepsilon_{it} \quad (1)$$

$$ESGRating_{it} = \beta_0 + \beta_1 NFR_{it-1} + \beta_2 NFR_{it-1}^2 + \beta_3 Controls_{it-1} + \sum YearFE + \sum IndustryFE + \varepsilon_{it} \quad (2)$$

$$ESGRating_{it} = \beta_0 + \beta_1 NFR_{it-1} + \beta_2 NFR_{it-1}^2 + \beta_3 Familism_{it-1} + \beta_4 NFR_{it-1} * Familism_{it-1} + \beta_5 NFR_{it-1}^2 * Familism_{it-1} + \beta_6 Controls_{it-1} + \sum YearFE + \sum IndustryFE + \varepsilon_{it} \quad (3)$$

In these three models, ε_{it} is the error term and the subscripts i and t stand for firms and time, respectively. $Controls_{it-1}$ denotes all the control variables. Following Jaskiewicz et al. [39], all variables are lagged by 1 year to reduce the threat of reverse causality. Moreover, I included Year and Industry (9

year-dummies and 44 industry dummies) in the models to account for within-group variation over time.

Moreover, following Haans et al. [35], there are two major steps to test the moderation of an inverted U-shaped relationship: the shift of the turning point and the change in

the curve's shape. The formulas to determine the turning point are stated as follows:

The formula to calculate the turning point is: $X^* = -(\beta_1 + \beta_3 M) / (2\beta_2 + \beta_4 M)$

The formula to determine the shift of turning point is: $\delta M / \delta X^* = (\beta_1 \beta_4 - \beta_2 \beta_3) / 2(\beta_2 + \beta_4 M)^2$

4. Results

4.1. Descriptive Statistics

Table 2 presents the descriptive statistics for the variables examined in my study. The average *ESGRating* value is 4.182, the standard deviation is 1.080, the minimum is 1, and the maximum is 8. These results are in line with the Huazheng rating methodology, indicating a considerable gap between different enterprises. The average value of *NFR* is 0.819. This reveals that on average over 80% of the TMT members are non-family members. Additionally, the family firms in my sample have an average firm age of 18.35 years. The other variables are within reasonable ranges.

Table 2. Descriptive Statistics

Variables	N	Mean	Sd	Min	Max
ESGRating	10,363	4.182	1.080	1	8
NFR	10,363	0.819	0.159	0.333	1
Familism	10,363	0.921	0.146	0.694	1.306
Size	10,363	21.84	1.002	20.00	24.92
Fage	10,363	18.35	5.274	8	32
Lev	10,363	0.361	0.179	0.0524	0.821
Dual	10,363	0.415	0.493	0	1
Top1	10,363	33.54	13.40	9.310	69.99
Board	10,363	2.068	0.181	1.609	2.398
Inst	10,363	34.81	25.38	0.0402	88.79
Big4	10,363	0.027	0.161	0	1
TMTAge	10,363	48.51	3.062	41.38	56.40
OverseaBack	10,363	0.624	0.484	0	1

4.2. Correlation Analysis

Table 3. Pairwise Correlation

Variables	ESGRating	NFR	Familism	Size	Lev	Inst	Dual	Top1	Fage	Board	Big4	TMTAge	OverseaBack
ESGRating	1.000												
NFR	0.08***	1.000											
Familism	-0.010	0.042***	1.000										
Size	0.085***	0.193***	-0.03**	1.000									
Lev	-0.118***	0.155***	-0.027***	0.488***	1.000								
Inst	0.022**	0.107***	-0.018**	0.293***	0.107***	1.000							
Dual	0.001	0.378***	0.000	0.12***	0.055***	0.071***	1.000						
Top1	0.055***	0.076***	0.026***	0.076***	0.052***	0.355***	0.054***	1.000					
Fage	-0.028***	0.036***	0.008	0.132***	0.089***	0.014	-0.052***	-0.028***	1.000				
Board	0.010	0.095***	0.001	0.172***	0.048***	0.096***	-0.122***	-0.075***	0.006	1.000			
Big4	0.027***	0.031***	-0.010	0.189***	0.067***	0.150***	0.016*	0.045***	0.007	0.032**	1.000		
TMTAge	0.063***	0.004	-0.002	0.201***	0.036***	0.144***	-0.098***	-0.023***	0.232***	0.137**	0.053***	1.000	
OverseaBack	-0.031***	0.045***	-0.059***	0.074***	0.026***	0.085***	-0.047***	0.012	-0.071***	0.099**	0.053***	-0.024***	1.000

4.3. Regression Results

Table 4 presents the results of three models based on the hierarchical high-dimensional-fixed effect regressions. Model 1 is the benchmark model that includes only the independent variable (*NFR*) and its quadratic term (NFR^2). All other control variables are then added in Model 2. I then entered the moderating variable (*Familism*) and the interaction term in Model 3. The increasing value of R^2 and significant F tests together indicate the improvement of model fit.

Hypothesis 1 predicts that nonfamily management has an inverted U-shape relationship with ESG performance. As Model 1 shows, the linear term of nonfamily manager

involvement is positive and significant ($\beta=1.96$; $p<0.01$), and its quadratic term is significant and negative ($\beta=-1.49$; $p<0.01$). After adding all control variables, the linear term is still positive ($\beta=2.43$; $p<0.01$), while the quadratic term is still negative ($\beta=-1.90$; $p<0.01$). The coefficients of the linear and quadratic terms taken together are consistent with an inverted U-shape effect of nonfamily manager involvement on ESG rating. To further validate the results, u-test procedures in Stata were conducted, as shown in Table 5. The U-test results show that the turning point for Model 2 is at 0.6414, which falls within the *NFR* range (0.33, 1). Additionally, the slopes on both sides of the curve align with expectations ($Slope_{left}=1.17$, $p<0.01$; $Slope_{right}=-1.36$, $p<0.01$). Thus, Hypothesis 1 is supported.

I then used the twoway and margins commands in Stata to plot the estimated ESG performance at the increasing level of nonfamily manager involvement (Model 2) and obtained adjusted predictions at representative values as described by Williams (2012). Figure 4 demonstrates a nonlinear relationship between the proportion of nonfamily managers and ESG ratings. The curve reaches its maximum at a nonfamily manager involvement value at 64% and then begins to decline.

Hypothesis 2 proposes that the inverted U-shaped relationship between nonfamily manager involvement and ESG performance is strengthened by familism culture. To evaluate the evidence for Hypothesis 2, following Haans et al. (2016), I added the moderating variable (*Familism*) and two interaction terms (*Familism*NFR*; *Familism*NFR²*) in Model3. As shown in Model3, both interaction terms are significantly related to ESG ratings. For “*Familism*NFR*”, the coefficient was positive and significant ($\beta=8.79$; $p<0.05$) while for “*Familism*NFR²*”, the coefficient was negative and significant ($\beta=-5.57$; $p<0.05$). Therefore, both Hypothesis 2a and 2b are supported.

Following the procedures in the main effect, Figure 5 demonstrates the adjusted predictions of the moderating variable “*Familism*”. It shows that for family firms with stronger emphasis on the familism culture, the inverted U-shaped relationship is steeper, and the turning point shifts to the right (0.6538). This is consistent with Hypothesis 2a. Thus, I reject Hypothesis 2B.

Table 4. Fixed-effects Regression Results

	Model 1	Model 2	Model 3
NFR	1.961***	2.432***	2.639***
NFR ²	(3.90) -1.488***	(4.88) -1.896***	(5.18) -2.018***
Familism			-0.059 (-0.84)
Familism*NFR			8.691** (2.34)
Familism*NFR ²			-5.574** (-2.32)
Size		0.246*** (18.37)	0.246*** (18.35)
Lev		-1.271*** (-18.36)	-1.271*** (-18.35)
Inst		-0.001 (-1.19)	-0.001 (-1.15)
Dual		-0.085*** (-3.75)	-0.085*** (-3.71)
Top1		0.003*** (3.10)	0.003*** (3.21)
Fage		-0.008*** (-3.83)	-0.008*** (-3.91)
Board		-0.037 (-0.64)	-0.037 (-0.64)
Big4		-0.037 (-0.58)	-0.036 (-0.57)
TMTAge		0.018*** (5.29)	0.018*** (5.25)
OverseaBack		-0.041** (-1.96)	-0.041** (-1.96)
_cons	3.558*** (18.93)	-2.127*** (-5.82)	-2.151*** (-5.84)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
N	10363	10363	10363
R ²	0.058	0.111	0.111
F-statistics	20.33***	53.41***	43.19***

***p<0.01, **p<0.05, *p<0.1

Table 5. U-test Results

ESGRating	Model 1		Model 2		Model 3	
	Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound	Upper Bound
Bound Point	0.3333	1	0.3333	1	0.3333	1
Slope	0.9692	-1.0147	1.1682	-1.3595	1.2937	-1.3971
T-value	3.3778	-5.9086	4.1329	-7.5550	4.4669	-7.7154
P> t	0	0	0	0	0	0
Turning Point	0.6590		0.6414		0.6538	
Year FE	Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes	
Observations	10,363		10,363		10,363	

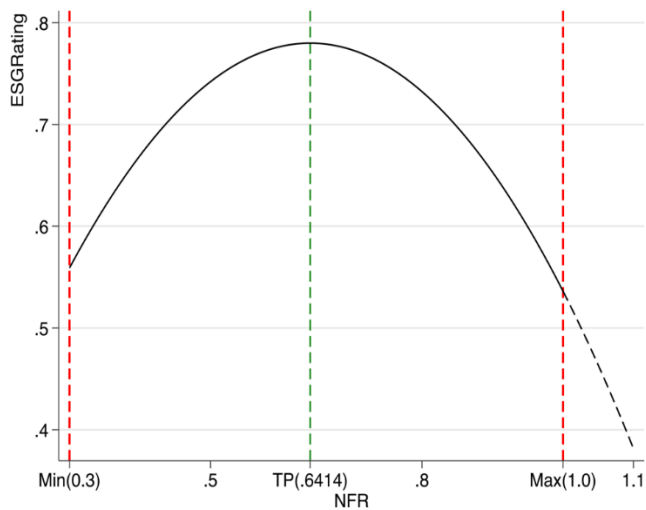


Figure 4. Graphic presentations of the main effect of nonfamily manager involvement on ESG performance

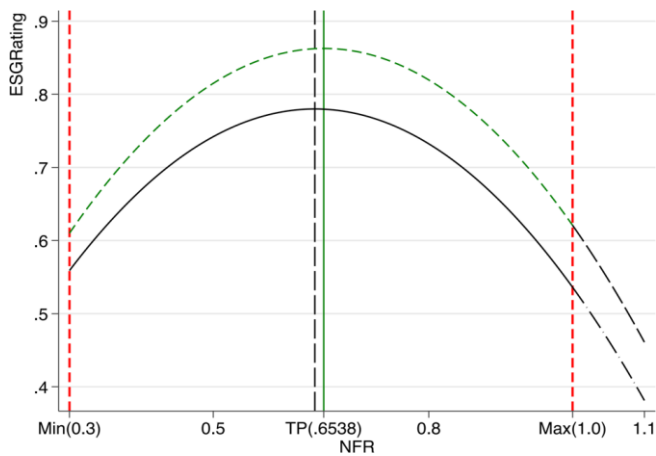


Figure 5. Graphic presentations of the moderation effects of familism

4.4. Robustness Tests

4.4.1. Change in the measurement of ESG performance

Following Zhang et al. (2023), I changed the measurement of ESG performance from Huazheng ESG index to Hexun ESG ratings (Hexun_ESG). Hexun platform releases social responsibility reports of the listed companies in China, and its data is widely used in existing research. Table 6 shows that the coefficients of the linear (NFR) and quadratic terms (NFR^2) are still positive and negative at the 1% level, regardless of the addition of control variables. Thus, the conclusions are robust.

Table 6. Change the measurement of ESG

	Hexun_ESG	Hexun_ESG
NFR	0.830***	1.003***
NFR ²	(2.71) -0.686***	(3.49) -0.840***
Size	(-3.39)	(-4.40) 0.138***
Lev		(14.97) -0.887***
Inst		(-15.81) 0.001***
Dual		(3.18) -0.033**
Top1		(-2.35) 0.004***
Fage		(8.65) -0.001
Board		(-1.13) 0.080**
Big4		(2.04) 0.086**
TMTAge		(2.23) 0.009***
OverseaBack		(3.79) -0.051***
_cons	2.789***	(-3.91) -0.649***
Year FE	(24.50) Yes	(-2.59) Yes
Industry FE	Yes	Yes
R ²	0.052	0.124

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4.4.2. Grouped regressions

Based on prior literature (Haans et al., 2015), I split the data based on the empirically determined turning point (0.6414) and checked whether two linear regressions give slopes that are in line with the predicted shape of the curve. Table 7 presents the regression results.

As shown in Table 7, when $NFR < 0.6414$, the linear term of nonfamily manager involvement is positive ($\beta = 0.34$). When $NFR > 0.6414$, the linear term of nonfamily manager involvement is negative and significant ($\beta = -0.61$; $p < 0.01$). The coefficients of the linear and quadratic terms taken together are in line with the Hypothesis 1. However, when $NFR < 0.6414$, the linear coefficient is not significant as expected ($p > 0.01$). A potential reason for this is that the sample size with NFR less than 0.6414 is relatively small, comprising only 1,345 samples, while the sample size with NFR greater than 0.6414 is above 9,000.

Table 7. Grouped regression results

	NFR<0.6414	NFR>0.6414
NFR	0.337	-0.609***
Size	(1.01) 0.210***	(-6.24) 0.247***
	(4.86)	(17.47)
Lev	-1.531***	-1.249***
	(-7.22)	(-16.98)
Inst	-0.001	-0.001
Dual	(-0.46) -0.152***	(-1.24) -0.059**
	(-2.70)	(-2.41)
Top1	0.004*	0.002***
	(1.89)	(2.70)
Fage	-0.000	-0.009***
	(-0.05)	(-4.17)
Board	-0.377**	-0.008
	(-2.36)	(-0.13)
Big4	0.244	-0.059
	(1.38)	(-0.86)
TMTAge	0.009	0.019***
	(0.97)	(4.98)
OverseaBack	0.089	-0.042*
	(1.61)	(-1.86)
_cons	0.235	-1.044***
	(0.25)	(-3.02)
Year FE	Yes	Yes
Industry FE	Yes	Yes
N	1345	9079
R ²	0.153	0.111

4.4.3. Instrumental variable method

Endogeneity should be controlled because the results may be affected by reverse causality in the model. For instance, lower ESG performance may prompt family firms to hire more nonfamily managers. Thus, controlling for endogeneity is especially integral.

Following Fang et al. (2021), I constructed an instrumental variable that is likely to strongly related to the independent variable (the proportion of nonfamily managers in a family firm), but likely to be irrelevant to the dependent variable (ESG performance). This endogenous variable, namely the average size of the management team, was measured as the average number of managers for all firms in each industry in each province.

Results are shown in Table 8. In the first stage, the instrumental and control variables were used to predict the value of nonfamily manager involvement. In the second stage, the dependent variables were regressed against the predicted value obtained in the first stage and the control variables to test Hypothesis 1.

The first-stage regression results indicate that the instrumental variable (Average management team) is strongly related to the independent variable (*NFR*), at the 1% level. The second-stage regression results show that the coefficients of the linear (*NFR*) and quadratic terms (*NFR*²) are still positive and negative at the 1% level. Thus, my conclusions remain unchanged.

Table 8. Instrumental variable method

Variables	First Stage	Second Stage	Second Stage
	NFR	ESGRating	ESGRating
Averagemanagementteam	0.0977***		
	(10.74)		
NFR		1.6702**	10.4908***
NFR ²		(2.47)	(2.62) -5.3468**
			(-2.15)
Controls	Yes	Yes	Yes
_cons	0.5130	-2.5151	-6.1949
	(11.61)	(-4.48)	(-3.57)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
R ²	0.1059	0.1064	0.1064
F-statistics	51.74***	47.74***	47.74***

***p<0.01, **p<0.05, *p<0.1

5. Discussion and Conclusion

Family firms are regarded as one of the most integral forms of economic organizations all across the world (Chen et al., 2021). Building on the existing research, in this paper I offer a dynamic model of nonfamily manager influence in the family firm by combing the agency theory, social emotional wealth theory and the stewardship theory. Based on an empirical analysis of panel data of Chinese listed family firms from 2013 to 2022, I propose that there is an inverted U-shaped relationship between nonfamily manager involvement

and ESG performance. The mechanism behind is the trade-off between the agency advantages and agency costs brought by the non-family managers. Furthermore, by integrating the role of Chinese traditional culture “familism”, I posit that familism strengthens this non linear relationship. Several robustness checks are done to validate the findings.

This study makes contributions to both the academia and the industry in several ways. First, this study challenges the “either/or” assumptions between professional management and family management. Unlike prior studies which emphasize the role of family members regarding the pursuit of nonfinancial goals, this study enriches the literature from the critical role of hired managers. Second, from the view

point of informal interactions, this paper explores the role of familism in the “defamilization” process of family firms. This provides a new angle to position research on family business. Lastly, especially for family firms in China that face financial constraints, ESG can serve as a signal linking the family and external stakeholders, ultimately enhancing the firm value (Aydoğmuş et al., 2022). From the perspective of professional management, the research findings offer two major recommendations for the family firms aspiring to improve their ESG performance. First, maintain an appropriate level of nonfamily manager involvement; Second, strengthen hired managers’ sense of belonging and cultural identification with the firm through informal interactions.

However, this paper’s contributions should be viewed in light of its limitations. Primarily, this research focuses mainly on the panel data of Chinese listed firms and examines the mechanism role of Chinese traditional culture. Future research can analyze these mechanisms from a cross-national perspective. Moreover, this paper conducts quantitative analysis based on the second-hand panel data. Future study can explore using the qualitative analysis to have a more comprehensive understanding of the topic.

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