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Religious traditions, corporate collaborative culture and ESG performance: Experiences from China

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ABSTRACT

While existing research on ESG has predominantly focused on the role of formal institutions—such as laws and regulations—the influence of informal institutions remains underexplored. This study investigates the impact of religious traditions on ESG performance and its underlying mechanisms, using a sample of Chinese A-share listed firms from 2009 to 2020. The results indicate that religious traditions enhance ESG performance by fostering collaborative corporate culture, with Taoism exerting a greater influence on ESG. Furthermore, stringent environmental regulations strengthen this positive relationship, whereas intense product market competition attenuates it. This research highlights the critical influence of informal institutions on corporate sustainability practices, especially in countries with underdeveloped legal systems.

1. Introduction

Existing research has explored the broad influence of religious traditions—as part of the external corporate environment—on corporate risk-taking (Hilary and Hui, 2009) and social responsibility (Du et al., 2016; Q. Huang et al., 2024). Concurrently, internal corporate culture is shaped by factors such as leadership styles, board composition, and CEO-employee relationships (Davidson et al., 2015; Billings et al., 2022; Barnes and Cheng, 2023). However, whether and how religious traditions influence ESG performance by shaping internal cooperative cultures within organizations remains an unexplored mediating mechanism. Research indicates that values such as trust, reciprocity, and long-term orientation advocated by religious traditions provide the ethical foundation for fostering a collaborative and sharing culture within organizations (Guiso et al., 2016). However, existing research has not examined whether and how corporate collaborative culture mediates between religious traditions and ESG performance. Uncovering this “values-culture-performance” pathway not only deepens our understanding of the micro-transmission mechanisms of informal institutions but also offers a fresh cultural perspective for ESG research.

China, as an emerging country with an imperfect legal system, its unique institutional context—characterized by a rapidly evolving formal regulatory framework alongside deeply entrenched, ancient cultural values—creates a powerful natural experiment (Chen et al., 2013). Moreover, religious traditions, as an important part of the informal system, are universal and influential in China. While Confucian, Buddhist, and Taoist traditions are predominant and deeply influence business ethics, the state-led governance model provides a contrasting formal institutional backdrop (Brook, 1993). This tension allows us to isolate and examine the role of informal institutions more clearly than in settings where formal and informal institutions are more aligned.

China presents a compelling setting to examine the influence of informal institutions like religious traditions on ESG. So, this paper

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takes Confucianism, Buddhism and Taoism as measures of religious traditions, and selects the data of Chinese A-share listed companies in Shanghai and Shenzhen from 2009 to 2020 to study the impact of religion on ESG performance. We find that a strong religious atmosphere contributes to the improvement of ESG performance and shows a positive impact in the three subcomponents of E, S, and G; Religious traditions can improve ESG performance by fostering collaborative corporate culture, and environmental regulations contribute to the positive relationship between religious traditions and ESG performance, while the product market competition weakens it. Heterogeneity analyses reveal that Taoism have a greater impact on ESG performance than Confucianism and Buddhism; and the positive effect of religious traditions is more pronounced in eastern China and in firms less influenced by foreign cultures.

This study extends beyond prior work by: First, it establishes religious traditions as a significant cultural driver of ESG performance, highlighting the underexplored role of informal institutions in shaping sustainable business practices. Second, it identifies collaborative corporate culture as a key mediating mechanism, revealing how external cultural values are internalized into organizational behaviors that enhance ESG outcomes.

The remainder of the paper is structured as follows. Section 2 presents the theoretical analysis and research hypotheses. Section 3 introduces the data and relevant variables. Section 4 details the empirical analysis. Section 5 and 6 report the heterogeneity and robustness test results, respectively. Section 7 concludes the study.

2. Theoretical analysis and research hypothesis

According to institutional theory, when embedded in a particular institutional environment, the way individuals and organizations behave is influenced by that institutional environment. Traditional culture, as an important informal institution, has a constructed value system that deeply influences individual and organizational decision making (Hilary and Hui, 2009). It has been found that the belief systems and doctrines of religious traditions have a profound influence on the values and behaviors of individuals in society (Stulz and Williamson, 2003; Ruan et al., 2014; Zeng et al., 2016). Among them, Confucianism, as one of the hundred schools of thought of the pre-Qin dynasties, incorporates its principle of ‘to establish oneself as one’s own, and to reach out to others as one’s own’ into corporate culture. This can establish a mutually beneficial relationships with its internal employees and external stakeholders, thereby cultivating corporate collaborative culture. On the one hand, this facilitates information sharing among internal departments (Chen et al., 2025) and improves the efficiency of ESG-related projects, and on the other hand, corporations establish long-term and stable partnerships through extensive cooperation with external stakeholders such as governments, social organizations, consumers, and so on (Anderson and Mellor, 2009) in order to reduce the ESG practice costs (Alnafrab, 2024), thus enhancing ESG performance (He and Zhuang, 2023). The ‘Theory of Karma’ emphasized by Buddhism essentially reveals the objective law of interdependence of all things, providing a profound theoretical basis for the necessity of cooperation; while the principle of ‘Six Harmonies and Respect’ provides a concrete code of conduct for teamwork, which can help companies to foster a corporate collaborative culture and carry out ESG practices, a systematic project that requires collaboration among many parties (Pan et al., 2019). Taoism is a local Chinese religion that emphasizes ‘follow nature’s course’ and advocates respecting life and the laws of nature. The concept of ‘yin and yang balance’ focuses on the complementarity and checks and balances of the interests of all parties inside and outside the enterprise. This approach fosters a corporate collaborative culture and builds a harmonious and stable co-operative relationship. These are in line with the concept of environmental protection and social responsibility in corporate ESG.

H1. Religious traditions can improve ESG performance by influencing corporate collaborative culture.

Grounded in institutional theory, this paper investigates the mechanism through which religious traditions—as informal institution—shape ESG performance. Shaped by long-term historical evolution, such institutions often demonstrate greater cultural persistence than formal rules and exert profound impacts on organizational behavior, particularly in China, which is characterized by a land-based civilization built upon patriarchal kinship structures. Empirical studies within the Chinese context further corroborate the complementary relationship between informal and formal institutional institutions (Chen et al., 2013; Zhang et al., 2024). This paper thus proposes that religious traditions function as a system of “moral constraints” on managers, whereas formal institutions—such as environmental regulations—impose “behavioral constraints”. Together, these parallel mechanisms function synergistically to enhance ESG performance.

Enterprises operating within a competitive market environment are inevitably shaped by its conditions, prompting adaptive changes in corporate behavior. As product market competition intensifies, managers face heightened pressure to prioritize short-term financial gains over long-term ethical and social commitments, including those encouraged by religious traditions (Zhang et al., 2021). According to Threat-Rigidity Theory (Staw et al., 1981), competitive pressures trigger resource conservation and rigidity, leading firms to reduce commitments to intangible cultural and social assets such as cooperation and trust. Additionally, financial constraints and profit compression diminish managers’ willingness to uphold ethical norms and foster internal collaboration (Sharma et al., 2014). Since religious traditions often foster collaborative culture as a channel for improving ESG performance, the competitive pressure that undermines such cultural mechanisms is likely to weaken the positive influence of religion on ESG performance.

H2. Environmental regulations strengthen the positive relationship between religious traditions and ESG performance, while product market competition weakens the relationship.

3. Data and study design

3.1. Samples and data

In order to avoid the interference of the COVID-19 pandemic on the enterprise operation data, this paper selects the main board listed companies of Shanghai and Shenzhen A-shares from 2009 to 2020 as the research sample. In order to ensure the quality of the data, it was screened according to the following principles: 1. Exclude financial sector, ST and PT companies; 2. Exclude samples with data anomalies or serious missing variables; 3. Exclude firms that listed after 2018 because of insufficient years of observation. The final unbalanced panel data of 21,314 firm-year observations is used in the benchmark regression. All continuous variables were subjected to a 1 % reduction of the tails.

3.2. Definition of variables

3.2.1. Dependent variables

In this paper, Huazheng ESG is used to assess the ESG performance of companies, and the Huazheng index covers all A-share listed companies. The rating consists of nine grades from high to low (AAA-C), and this paper assigns a score of 9 to 1 to each of the nine grades from 'AAA' to 'C'. ESG data is sourced from the Huazheng ESG evaluation database.

3.2.2. Independent variable

Existing literature employs three primary methods to measure religious influence: regional counts of religious sites, proportions of religious adherents, and levels of religious participation (Hilary and Hui, 2009; Chen et al., 2013). However, these methods have low feasibility in China, where systematic data on religious affiliation are unavailable—unlike in Western contexts where service attendance offers a standard metric. Moreover, such aggregate regional measures risk inducing cross-sectional dependence and obscure firm-level heterogeneity in religious exposure.

To address these limitations, we follow the existing literature (Chen et al., 2013; Huang et al., 2024; Du et al., 2013) in using the number of religious sites within a defined radius of a firm's registered address. This geographic-proximity-based measure captures variations in firms' exposure to local religious environments. Its validity is supported by Du et al. (2016), who found a strong correlation between a similarly constructed proximity-based measure and executives' self-reported religiosity in a sample of family firms. We therefore argue that this approach offers a reliable and context-appropriate measure of religious traditions influence in the Chinese setting.

Our study conceptualizes 'religious traditions' broadly to include these philosophico-ethical systems, which function analogously to religions in providing a moral framework for individuals and organizations (Wang and Juslin, 2009; Vuong et al., 2018). Consequently, this paper focuses on Confucianism, Buddhism, and Taoism as they constitute the 'Three Teachings' that have shaped Chinese civilization for millennia and are the dominant systems of ethical thought and cultural practice (Brook, 1993). While Islam and Christianity are present in China, their adherents constitute a small minority of the population, and their historical influence on mainstream Chinese business culture is comparatively limited. Therefore, this paper categorizes the three cultures of Confucianism, Buddhism, and Taoism as religious traditions. In addition, as an important part of traditional Chinese culture, ancestral hall culture has a close connection and complementary role with Confucian philosophy of filial piety (Chen, 2016; Huang et al., 2024). Therefore, this paper also incorporates ancestral halls as a measure of religious traditions and categorizes them as Confucianism. This paper uses the number of religious sites within a radius of 10 km from a listed company's place of incorporation to measure the atmosphere of religious traditions around the listed company. These sites include Confucian temples, ancestral halls, Buddhist monasteries and Taoist palaces. The Confucius Temple data comes from the CNRDS and the official website of China Confucius Temple. China ancestral halls data from China Open Database (CnOpenData). The data on Buddhist monasteries and Taoist palaces come from the official website of the State Administration for Religious Affairs. Then the location data of the enterprises and religious sites were collected manually through Baidu map, and finally the number of sites within a 10 km radius from the listed company was calculated.

Table 1
Variable Definition Table.

VARIABLES	Variable description
Age	The number of years from the company's listing to the year of the statistic (excluding companies listed after 2018), in natural logarithms
Size	The natural logarithm of the firm's total assets
Top1	Proportion of shares held by the largest shareholder (%)
Lev	The ratio of a company's total liabilities to its total assets
Ind	Proportion of independent directors (%)
Board	Total number of board members
Roa	The ratio of a company's net worth to its total assets
Dual	Company chairman and general manager of the two positions is the same person to take 1, otherwise 0
Inst	Shareholding of institutional investors (%)
Mshare	Shareholding of company management (%)
SOE	Nature of ownership, 1 for state-owned enterprises, 0 otherwise

3.2.3. Control variables

Referring to the existing relevant literature, this paper controls a set of variables, including company listing age (*Age*), company size (*Size*), top shareholder shareholding (*Top1*), gearing ratio (*Lev*), independent director ratio (*Ind*), board size (*Board*), total net asset margin (*Roa*), dual position (*Dual*), institutional investor shareholding (*Inst*), management shareholding (*Mshare*), nature of ownership (*SOE*). Company financial data is sourced from CSMAR. [Table 1](#) shows the description of variable definitions.

4. Empirical analysis

4.1. Descriptive statistics

[Table 2](#) reports the results of descriptive statistics for the main variables.

4.2. Regression model

To test the effect of religious tradition on ESG performance, this paper constructs a model:

$$ESG_{i,t} = \beta_0 + \beta_1 Religion_i + \beta_2 Control_{i,t} + Year + Industry + \varepsilon_{i,t} \quad (1)$$

The dependent variable $ESG_{i,t}$ represents the ESG performance of listed company i in year t . The independent variable $Religion_i$ represents the number of religious sites within 10 km radius from company i . The more religious sites there are, the greater religious influence. $Control_{i,t}$ represents the control variable, as [Table 1](#) described. $Year$ and $Industry$ denote year and industry fixed effects, respectively. Finally, this paper uses firm-level clustering robust standard errors for the calculations.

4.3. Empirical results

4.3.1. Religious traditions and ESG performance

The benchmark regression results are shown in [Table 3](#). The coefficients of Religion10 are all positive and statistically significant at the 1 % level. To evaluate economic significance, we compute the effect of a one-standard-deviation increase in Religion10 ($SD=27.7755$) based on Column (3) (coefficient=0.0021). This change raises the ESG score by 0.0583 points, equivalent to 6.1 % of one standard deviation of the ESG measure (0.0583/0.953). The result indicates that religious traditions exert an economically meaningful influence on ESG performance. This result strengthens the studies of [Chen et al. \(2013\)](#) and [Huang et al., 2024](#). It further illustrates that the culture of religious traditions passed down locally in the region continues to influence human economic behavior.

4.3.2. Religious traditions and sub-dimensions of ESG

Replace ESG performance in the model with three sub-dimensions: environmental (E), social (S) and governance (G). The regression results are shown in [Table 4](#). All regression coefficients are statistically significant, indicating that religious traditions have a significant positive effect on the improvement of E, S and G performance, with religion having a greater impact on both the E and S, and a lesser impact on the G. This result is in general agreement with the findings of [Huang et al., 2024](#).

4.3.3. Endogeneity test

This study employs historical information data to measure religious traditions, thereby mitigating endogeneity issues stemming

Table 2
Descriptive statistics.

VarName	Obs	Mean	SD	Min	Max
Religion10	21,314	20.4291	27.7755	0.0000	13.5000
ESG	21,314	4.0954	0.9526	1.0000	4.0000
E	21,314	1.8602	1.0424	1.0000	2.0000
S	21,314	4.3357	1.7085	1.0000	4.0000
G	21,314	5.3970	1.2125	1.0000	6.0000
Age	21,314	2.6187	0.6037	1.0986	2.7726
Size	21,314	22.2891	1.3188	14.9416	22.1158
Top1	21,314	0.3622	0.1518	0.0220	0.3432
Lev	21,314	0.4437	0.2021	0.0071	0.4388
Ind	21,314	0.3713	0.0544	0.0000	0.3333
Board	21,314	8.7709	1.7095	4.0000	9.0000
Roa	21,314	0.0397	0.0685	-2.7463	0.0370
Dual	21,314	0.2316	0.4219	0.0000	0.0000
Inst	21,314	0.4790	0.2391	0.0000	0.5036
Mshare	21,314	0.1017	0.1834	0.0000	0.0005
SOE	21,314	0.4472	0.4972	0.0000	0.0000

Note: The sample consists of Chinese A-share listed companies from 2009 to 2020. See [Table 1](#) and [Section 3.1](#). Samples and data for detailed variable definitions and data sources. The following tables use the same notation.

Table 3
Impact of religious traditions on ESG performance.

VARIABLES	(1) ESG	(2) ESG	(3) ESG
Religion10	0.0023*** (4.4389)	0.0023*** (5.1043)	0.0021*** (4.8154)
Size		0.2042*** (18.9818)	0.2576*** (22.0608)
Roa		2.0274*** (10.5718)	1.7347*** (9.7027)
Age		-0.0718*** (-3.1753)	-0.2098*** (-8.8081)
Lev		-0.6411*** (-9.2295)	-0.8333*** (-12.0222)
Ind		1.2875*** (5.9596)	1.3225*** (6.5049)
Mshare		0.6103*** (6.5974)	0.4269*** (4.7381)
Top1		-0.1586 (-1.6433)	-0.2481*** (-2.7924)
Board		0.0178** (2.2662)	0.0138* (1.8188)
Inst		0.2454*** (3.1953)	0.1330* (1.8231)
Dual		0.0143 (0.5801)	0.0109 (0.4583)
SOE		0.1870*** (5.9162)	0.2043*** (6.8488)
Constant	4.0492*** (229.3494)	-0.9558*** (-3.9742)	-1.5632*** (-6.4648)
Year/Industry FE	No	No	Yes
Observations	21,314	21,314	21,314
R-squared	0.0043	0.1333	0.1891

Note: Values in parentheses are t-values. *, **, and *** denote significance levels of 10 %, 5 %, and 1 %, respectively. The following tables use the same notation.

Table 4
Impact of religious traditions on E,S and G.

VARIABLES	(1) E	(2) E	(3) S	(4) S	(5) G	(6) G
Religion10	0.0014*** (2.7145)	0.0018*** (3.5009)	0.0037*** (4.2588)	0.0026*** (3.3529)	0.0010** (2.1598)	0.0011** (2.4761)
Size	0.2440*** (18.7392)	0.2361*** (16.8641)	0.3428*** (15.2476)	0.2849*** (13.5081)	0.0380*** (3.0125)	0.1722*** (13.0088)
Roa	0.0677 (0.5396)	0.1910 (1.4695)	2.3373*** (8.1756)	2.2390*** (8.0514)	3.0247*** (10.6044)	2.5383*** (10.1984)
Age	-0.0934*** (-3.6444)	-0.0456* (-1.6530)	-0.3446*** (-7.9740)	-0.2801*** (-7.1885)	0.0726*** (2.7684)	-0.2004*** (-7.3321)
Lev	-0.1699** (-2.2615)	0.0178 (0.2267)	0.5573*** (3.7299)	0.2145* (1.7039)	-1.6715*** (-20.7484)	-1.8927*** (-24.0010)
Ind	0.2041 (0.7944)	0.2727 (1.0934)	-0.7812* (-1.7853)	-0.2165 (-0.5880)	3.3048*** (13.2424)	3.0645*** (13.6191)
Mshare	-0.0633 (-0.5990)	0.0290 (0.2707)	0.4600*** (2.5861)	0.7565*** (5.0346)	0.9113*** (8.0133)	0.3975*** (3.6264)
Top1	-0.1855* (-1.6597)	-0.1368 (-1.2457)	-0.7496*** (-3.7457)	-0.5964*** (-3.7535)	0.1110 (1.0360)	-0.1005 (-1.0153)
Board	0.0007 (0.0761)	0.0084 (0.9137)	-0.0168 (-1.0428)	0.0231* (1.6601)	0.0405*** (4.8881)	0.0077 (0.9869)
Inst	-0.0202 (-0.2348)	0.0732 (0.8443)	0.0541 (0.3464)	0.1953 (1.5445)	0.5338*** (6.0421)	0.1789** (2.1276)
Dual	-0.0037 (-0.1238)	-0.0155 (-0.5268)	-0.0108 (-0.2273)	0.0044 (0.1092)	0.0530 (1.1226)	0.0259 (0.9233)
SOE	-0.0312 (-0.8476)	0.0030 (0.0844)	-0.0857 (-1.3463)	-0.0660 (-1.3054)	0.4980*** (14.1958)	0.4780*** (14.8226)
Constant	-3.2748*** (-11.2768)	-3.4969*** (-12.0106)	-2.1418*** (-4.2594)	-1.5678*** (-3.6059)	2.7589*** (10.0344)	1.2847*** (4.7638)
Year/Industry FE	No	Yes	No	Yes	No	Yes
Observations	21,314	21,314	21,314	21,314	21,314	21,314
R-squared	0.0789	0.1083	0.0910	0.2336	0.1778	0.2590

from reverse causality to a certain extent. However, it remains unable to eliminate the risk of omitted variables. Consequently, we use the instrumental variable method to address endogeneity concerns. The article refers to the research methodology of [Xu and Li. \(2019\)](#), which utilizes the number of chastity arches in the region where the firm is located as an instrumental variable (IV). [Table 5](#) presents the 2SLS regression results. The first-stage regression demonstrates a strong positive association between IV and religious traditions, satisfying the relevance condition. The second-stage results the Religion10 coefficient is significant and positive at the 1 % level, indicating a pronounced positive effect of religious traditions on ESG performance.

4.3.4. Mechanism analysis

This study adopts the text analysis approach following [Pan et al. \(2019\)](#) to measure corporate collaborative culture. The specific procedure is as follows: First, based on the lexicon constructed by [Fiordelisi and Ricci. \(2014\)](#) and a Chinese thesaurus, we constructed a domain-specific dictionary containing keywords such as “cooperate” (*hezuo*), “synergy” (*xietong*), “share” (*gongxiang*), and “win-win” (*shuangying*). Second, we performed text analysis on the MD&A section of annual reports of listed companies and calculated the ratio of the frequency of collaborative words to the total word count. Finally, to improve measurement validity, we implemented rigorous text filtering measures, including: using a Chinese word segmentation tool to eliminate ambiguities; excluding sentences containing negation words to avoid semantic reversal; and removing sentences mentioning specific collaborative entities (e.g., names of partner companies) to distinguish between cultural advocacy and business cooperation. The higher the word frequency, the more the corporate culture emphasizes collaboration. [Table 6](#) presents the regression results for the mediating role of corporate collaborative culture between religious traditions and ESG performance. From column (3), we can find that the coefficient of *Religion10* is positive and statistically significant at the 10 % level. This result shows that there is a significant positive relationship between religious traditions and corporate collaborative culture. This finding supports hypothesis H1, suggesting that religious traditions can improve ESG performance by influencing corporate collaborative culture.

4.3.5. The moderating role of environmental regulations and product market competition

To ensure the explanatory power of the coefficients of the interaction terms, this paper centers the independent and moderator variables before constructing the interaction terms. Referring to [Zhang and Chen. \(2021\)](#), we constructed the strength of environmental regulations enforcement (*ER*) of provincial governments based on the frequency of “environmental protection” related words in the work reports of each provincial government. Referring to [Wang et al. \(2022\)](#) and [Tang et al. \(2022\)](#), the Herfindahl Index (*HHI*) was used to construct the product market competition. *HHI* is the sum of the squares of the share of each company’s main business revenue in the industry to the total main business revenue of the industry, calculated as follows:

Table 5
Instrumental variable estimation.

VARIABLES	(1) The first-stage Religion10	(2) The second-stage ESG
IV	0.0900*** (8.3381)	
Religion10		0.6069*** (5.2149)
Size	-0.0084 (-1.0402)	0.2613*** (33.3318)
Roa	0.3063** (2.5442)	1.5655*** (12.8047)
Age	0.0470*** (2.5919)	-0.2384*** (-13.0484)
Lev	-0.1490*** (-3.0653)	-0.7495*** (-14.8695)
Ind	-0.0957 (-0.6142)	1.3872*** (9.1366)
Mshare	0.0188 (0.2686)	0.4046*** (5.9413)
Top1	0.0016 (0.0247)	-0.2551*** (-4.1215)
Board	-0.0382*** (-7.1697)	0.0362*** (5.2661)
Inst	-0.0889 (-1.5881)	0.1788*** (3.2401)
Dual	0.0047 (0.2497)	0.0083 (0.4488)
SOE	-0.0732*** (-3.8241)	0.2435*** (12.0090)
Year/Industry FE	Yes	Yes
Observations	21,314	21,314
Weak identification test (Cragg-Donald Wald F statistic)		69.5247***
Stock-Yogo weak ID test critical values: 10 % maximal IV size		16.38

Table 6
Mechanism analysis.

VARIABLES	(1) COP	(2) COP	(3) COP
Religion10	0.0010** (2.1071)	0.0010** (2.3005)	0.0008* (1.6997)
Size		0.0040*** (6.9099)	0.0022*** (3.2069)
Roa		-0.0065 (-1.0533)	-0.0016 (-0.3044)
Age		-0.0087*** (-6.6726)	-0.0041*** (-2.9508)
Lev		-0.0057 (-1.5951)	-0.0036 (-1.1288)
Ind		0.0099 (1.0169)	0.0121 (1.2650)
Mshare		-0.0125*** (-3.2081)	-0.0027 (-0.6537)
Top1		-0.0090** (-2.0635)	-0.0034 (-0.7954)
Board		-0.0003 (-0.7803)	0.0002 (0.4435)
Inst		-0.0075** (-2.3284)	-0.0020 (-0.5948)
Dual		0.0008 (0.7605)	0.0008 (0.8043)
SOE		-0.0047*** (-3.2427)	-0.0050*** (-3.4901)
Constant	0.0589*** (45.4957)	0.0045 (0.3478)	0.0212 (1.5845)
Year/Industry FE	No	No	Yes
Observations	12,943	12,943	12,943
R-squared	0.0012	0.0429	0.1322

$$HHI = \sum_{i=1}^N \left(\frac{X_i}{X} \right)^2$$

where N is the number of listed companies in the industry, X_i is the main business revenue of an individual firm, and X is the sum of the main business revenue of the firm's industry. $\frac{X_i}{X}$ is the share of firm i 's main business revenue in the total main business revenue of the industry. The smaller the HHI index, the more intense the product market competition.

Table 7 presents the results of the moderating effect tests for environmental regulations and product market competition. It can be found that the regression coefficients of $Religion10 \times ER$ and $Religion10 \times HHI$ are both significantly positive. This result suggests that environmental regulations strengthen the positive relationship between religious traditions and ESG performance, while product market competition weakens the relationship. This result confirms hypothesis H2.

5. Heterogeneity test

5.1. Heterogeneity of different beliefs

Since different religious beliefs have different systems of thought that may have different impacts, this paper further examines the relationship between the three religions and ESG performance. As shown in Table 8, it can be found that all three religions have a significantly positive effect on ESG performance. Among them, Taoism has a greater impact on ESG performance than Confucianism and Buddhism. The dominant effect of Taoism, compared to other traditions, may stem from its unique philosophical congruence with core business trade-offs. While Confucianism emphasizes hierarchical social structures and Buddhism focuses on personal enlightenment and afterlife, Taoist principles like 'wuwei' (non-interference) and 'ziran' (naturalness) provide a pragmatic framework for balancing profit motives with societal harmony. The concept of 'wuwei' encourages managers to avoid short-sighted, aggressive profit-seeking that harms environmental and social equilibrium, instead promoting sustainable growth that aligns with natural and societal rhythms (Xing and Starik, 2017). This strategic adaptability makes Taoism particularly resonant for managers navigating complex modern business environments, offering a culturally authentic path to integrating sustainability into core strategy, rather than treating it as a separate ethical obligation. Collectively, these findings suggest that the observed effect of religious traditions on ESG performance stems from the distinct contributions of China's three major belief systems.

Table 7
The moderating role of environmental regulations and product market competition.

VARIABLES	(1) ESG	(2) ESG
Religion10	0.0116*** (4.8317)	0.0111*** (5.1577)
ER	1.3237*** (3.8316)	
Religion10 × ER	0.0201* (1.6984)	
HHI		-2.3171** (-2.0719)
Religion10 × HHI		0.0654* (1.7535)
Size	1.2787*** (20.8103)	1.2969*** (21.9067)
Roa	9.0394*** (9.0354)	8.9983*** (9.7052)
Age	-1.0536*** (-8.4373)	-1.0708*** (-8.9603)
Lev	-4.1353*** (-11.1505)	-4.2643*** (-12.2178)
Ind	7.3195*** (6.9299)	6.9546*** (6.8794)
Mshare	2.2506*** (4.7633)	2.2084*** (4.9538)
Top1	-1.3969*** (-3.0198)	-1.3417*** (-3.0133)
Board	0.0658* (1.6828)	0.0669* (1.7658)
Inst	0.7709** (2.0053)	0.7260** (2.0085)
Dual	0.0660 (0.5244)	0.0656 (0.5586)
SOE	1.1240*** (7.1671)	1.0673*** (7.1224)
Constant	44.0698*** (34.8744)	44.5306*** (36.3754)
Year/Industry FE	Yes	Yes
Observations	19,244	21,285
R-squared	0.2133	0.2082

Table 8
Heterogeneity of religious beliefs.

VARIABLES	(1) ESG	(2) ESG	(3) ESG
Confu10	0.0027*** (2.8471)		
Budd10		0.0029*** (3.5502)	
Tao10			0.0060*** (5.2078)
Controls	Yes	Yes	Yes
Constant	-1.5001*** (-6.2069)	-1.5597*** (-6.4126)	-1.5285*** (-6.3221)
Year/Industry FE	Yes	Yes	Yes
Observations	21,314	21,314	21,314
R-squared	0.1868	0.1874	0.1887

5.2. Heterogeneity of regions

Given significant regional disparities in economic development, market conditions, and resource endowments, we conduct grouped regressions by dividing China's 30 provinces into eastern, central, and western regions following the National Bureau of Statistics classification. As shown in Table 9, the coefficient on Religion10 is positive and significant at the 1 % level only in the eastern region. This may be attributed to the region's more efficient resource allocation, advanced green industry development, and stronger corporate ESG engagement, which collectively amplify the influence of religious traditions on ESG performance.

Table 9
Property rights heterogeneity.

VARIABLES	(1) Eastern region	(2) Central region	(3) Western region
Religion10	ESG 0.0019*** (4.2935)	ESG 0.0005 (0.2765)	ESG 0.0010 (0.4075)
Controls	Yes	Yes	Yes
Constant	−1.3264*** (−4.6544)	−0.7434 (−1.2440)	−2.2092*** (−3.2985)
Year/Industry FE	Yes	Yes	Yes
Observations	14,653	3595	3066
R-squared	0.1888	0.1800	0.2049

5.3. Heterogeneity of foreign cultures

Social and cultural values vary significantly across countries, shaping distinct cognitive patterns and behavioral characteristics among individuals and organizations. Drawing on upper echelons theory, we argue that managers' cultural values and perceptions—largely shaped by their early cultural environment—influence corporate decision-making. Long-term acculturation molds executives' value preferences, which are reflected in their behavioral choices. Overseas experiences may thus reconfigure executives' cognitive frameworks, potentially diminishing the influence of local religious traditions on corporate behavior. Specifically, executives with overseas experience may integrate foreign cultural concepts into firm governance (Dai, 2018; Zhang et al., 2025), thereby reducing the salience of domestic religious traditions. Since cultures differentially affect corporate social responsibility (del Mar Miras-Rodríguez et al., 2015), we expect foreign cultural exposure to attenuate the role of local religious norms on ESG performance.

Following Dai and Kong (2017), we define a dummy variable *Oversea* that equals 1 if executives have overseas experience. As shown in Table 10, the regression coefficient of *Religion10* is significantly positive only for firms that are less influenced by foreign cultures, indicating that cross-cultural exposure weakens the influence of religious traditions.

6. Robustness test

We conduct a series of robustness checks to validate our findings, including: (1) replacing explanatory variables. Using the number of religious sites within a radius of 30, 50, and 100 km from the listed company's place of incorporation as well as the location of the corporate executives' place of domicile to measure religious traditions; (2) replacing explanatory variables. Substituting our primary ESG measure with Hexun's CSR scores and Bloomberg's ESG ratings; (3) excluding firms headquartered in Beijing, Shanghai, and Guangdong to address potential regional bias; (4) controlling for provincial GDP per capita, urbanization, population density to account for regional economic disparities - all of which consistently confirm our baseline results.

7. Conclusion

This paper examines the impact of religious traditions on ESG performance and its underlying mechanism. Our empirical analysis yields three key findings. First, we establish a positive association between religious traditions and ESG performance, particularly in E and S dimensions. Second, our mechanism analysis reveals that religious traditions enhance ESG performance through fostering collaborative corporate culture. Furthermore, this effect is moderated by external factors: it strengthens under more stringent environmental regulations and weaker product market competition. Third, heterogeneity tests indicate that the impact of Taoist culture is more substantial for firms located in eastern China and those with internationally experienced executives.

The implications of this study are as follows: As an important part of traditional Chinese culture, the main ideas of religion in promoting harmonious development are consistent with contemporary values. However, in an era of rapid economic development, such informal systems are often easily overlooked, and the positive impact of informal systems on individuals or societies cannot be

Table 10
Heterogeneity of foreign cultures.

VARIABLES	(1) No overseas experience ESG	(2) Overseas experience ESG
Religion10	0.0021*** (4.6062)	0.0015 (1.2092)
Controls	Yes	Yes
Constant	−1.5626*** (−6.2747)	−1.6091** (−2.1211)
Year/Industry FE	Yes	Yes
Observations	19,726	1569
R-squared	0.1898	0.2204

replaced by formal systems. Therefore, in the process of constructing and improving the ESG evaluation index system of enterprises, in addition to the formal system, informal systems should be included.

Future research may be expanded in multiple directions: First, the analysis can extend beyond the sample of Chinese A-share listed companies to include economies with diverse religious and cultural backgrounds (such as regions dominated by Islam or Christianity), thereby testing the cross-cultural universality of religious traditions' influence on ESG performance. Second, this study reveals the distinctive influence of Taoism on ESG performance, though the underlying philosophical mechanisms remain underexplored. Comparative studies of religious traditions and interdisciplinary approaches integrating philosophy and management would further illuminate Taoism's unique role in shaping sustainable business behavior.

CRedit authorship contribution statement

Liangjun Wang: Writing – review & editing, Visualization, Supervision, Methodology, Formal analysis, Conceptualization. **Xin Chen:** Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Methodology, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

I have nothing to declare.

Data availability

Data will be made available on request.

References

- Alnafrh, I., 2024. ESG practices mitigating geopolitical risks: implications for sustainable environmental management. *J. Environ. Manag.* 358, 120923. <https://doi.org/10.1016/j.jenvman.2024.120923>.
- Anderson, L.R., Mellor, J.M., 2009. Religion and cooperation in a public goods experiment. *Econ. Lett.* 105, 58–60. <https://doi.org/10.1016/j.econlet.2009.05.016>.
- Barnes, S., Cheng, Y., 2023. Employee approval of CEOs and firm value: evidence from employees' choice awards. *J. Corp. Finance* 78, 102341. <https://doi.org/10.1016/j.jcorpfin.2022.102341>.
- Billings, M.B., Klein, A., Shi, Y.C., 2022. Investors' response to the #MeToo movement: does corporate culture matter? *Rev. Account. Stud.* 27, 897–937. <https://doi.org/10.1007/s11142-022-09695-z>.
- Brook, T., 1993. Rethinking syncretism: the unity of the three teachings and their joint worship in late-imperial China. *J. Chin. Relig.* 21, 13–44. <https://doi.org/10.1179/073776993805307448>.
- Chen, D., Hu, X., Liang, S., 2013. Religious tradition and corporate governance. *Econ. Res.* 48 (09), 71–84.
- Chen, N., 2016. Governing rural culture: agency, space and the re-production of ancestral temples in contemporary China. *J. Rural Stud.* 47, 141–152. <https://doi.org/10.1016/j.jrurstud.2016.07.029>.
- Chen, W., Luo, Y., Rao, M., et al., 2025. Too much teamwork? The effect of corporate collaboration culture on breakthrough innovation. *Finance Res. Lett.* 78, 106913. <https://doi.org/10.1016/j.frl.2025.106913>.
- Dai, Y., 2018. Taking your company global: the effect of returnee managers on overseas customers. *China Finance Rev. Int.* 9, 51–72. <https://doi.org/10.1108/CFRI-03-2018-0024>.
- Dai, Y., Kong, D., 2017. Can executives with overseas experience improve corporate investment efficiency? *World Econ.* 40 (01), 168–192.
- Davidson, R., Dey, A., Smith, A., 2015. Executives' "off-the-job" behavior, corporate culture, and financial reporting risk. *J. Financ. Econ.* 117, 5–28. <https://doi.org/10.1016/j.jfineco.2013.07.004>.
- del Mar Miras-Rodríguez, M., Carrasco-Gallego, A., Escobar-Pérez, B., 2015. Are socially responsible behaviors paid off equally? A cross-cultural analysis. *Corp. Soc. Responsib. Environ. Manag.* 22, 237–256. <https://doi.org/10.1002/csr.1344>.
- Du, X., 2013. Does religion matter to owner-manager agency costs? Evidence from China. *J. Bus. Ethics* 118, 319–347. <https://doi.org/10.1007/s10551-012-1569-y>.
- Du, X., Du, Y., Zeng, Q., et al., 2016. Religious atmosphere, law enforcement, and corporate social responsibility: evidence from China. *Asia Pac. J. Manag.* 33, 229–265. <https://doi.org/10.1007/s10490-015-9441-0>.
- Fiordelisi, F., Ricci, O., 2014. Corporate culture and CEO turnover. *J. Corp. Finance* 28, 66–82. <https://doi.org/10.1016/j.jcorpfin.2013.11.009>.
- Guiso, L., Zingales, L., Sapienza, P., 2016. Long-term persistence. *J. Eur. Econ. Assoc.* 14 (6), 1401–1436. <http://www.jstor.org/stable/44631334>.
- He, Q., Zhuang, P., 2023. How do co-institutional investors affect corporate ESG performance? *Secur. Mark. Her.* (03), 3–12.
- Hilary, G., Hui, W.K., 2009. Does religion matter in corporate decision making in America? *J. Financ. Econ.* 93 (3), 455–473.
- Huang, Q., Yuan, W., Zheng, C., et al., 2024. Can Confucianism improve ESG performance? *Finance Res. Lett.*, 64105462 <https://doi.org/10.1016/j.frl.2024.105462>.
- Huang, R., Shi, Y., Li, D., 2024. Religious atmosphere, seismic impact, and corporate charitable donations in China. *Energy Econ.*, 131107369 <https://doi.org/10.1016/j.eneco.2024.107369>.
- Pan, J., Pan, Y., Ma, Y., 2019. The value of "cooperation"? Cooperation culture and corporate innovation. *Financ. Res.* (01), 148–167.
- Ruan, R., Zheng, F., Liu, L., 2014. Religious belief and social conflict: root cause or tool? *Econ. (Q.)* 13 (1), 793–816.
- Sharma, E., Mazar, N., Alter, A.L., et al., 2014. Financial deprivation selectively shifts moral standards and compromises moral decisions. *Organ. Behav. Hum. Decis. Process. Behav. Ethics* 123, 90–100. <https://doi.org/10.1016/j.obhdp.2013.09.001>.
- Staw, B.M., Sandelands, L.E., Dutton, J.E., 1981. Threat rigidity effects in organizational behavior: a multilevel analysis. *Adm. Sci. Q.* 26 (4), 501–524. <https://doi.org/10.2307/2392337>.
- Stulz, M.R., Williamson, R., 2003. Culture, openness, and finance. *J. Financ. Econ.* 70 (3), 313–349. [https://doi.org/10.1016/S0304-405X\(03\)00173-9](https://doi.org/10.1016/S0304-405X(03)00173-9).
- Tang, Y., Wang, Y., Tang, C., 2022. The digital economy, market structure and performance innovation. *China Ind. Econ.* (10), 62–80. <https://doi.org/10.19581/j.cnki.ciejournal.2022.10.004>.
- Vuong, Q.H., Bui, Q.K., La, V.P., et al., 2018. Cultural additivity: behavioural insights from the interaction of Confucianism, Buddhism and Taoism in folktales. *Palgrave Commun* 4, 143. <https://doi.org/10.1057/s41599-018-0189-2>.
- Wang, C., Lu, C., Dai, J., 2022. Product market competition, economic policy uncertainty and corporate investment efficiency. *J. Beijing Jiaotong Univ. (Soc. Sci. Ed.)* 21 (04), 134–149. <https://doi.org/10.16797/j.cnki.11-5224/c.20221028.001>.
- Wang, L., Juslin, H., 2009. The impact of Chinese culture on corporate social responsibility: the harmony approach. *J. Bus. Ethics* 88, 433–451. <https://doi.org/10.1007/s10551-009-0306-7>.

- Xing, Y., Starik, M., 2017. Taoist leadership and employee green behaviour: a cultural and philosophical microfoundation of sustainability. *J. Organ. Behav.* 38 (9), 1302–1319. <https://www.jstor.org/stable/26610684>.
- Xu, X., Li, W., 2019. Confucian tradition and corporate innovation: the power of culture. *Financ. Res.* (09), 112–130.
- Zeng, J., Zhang, Y., Yang, X., 2016. Religious beliefs and the tone of personal social responsibility of executives—A perspective based on the personal donation behavior of executives in Chinese private enterprises. *Manag. World* (04), 97–110. <https://doi.org/10.19744/j.cnki.11-1235/f.2016.04.009>.
- Zhang, J., Chen, S., 2021. Financial development, environmental regulations and economic green transformation. *Financ. Res.* 47 (11), 78–93.
- Zhang, M., Lan, H., Chen, W., et al., 2021. Indigenous religious tradition and corporate tax avoidance—an empirical study based on 34,100 monasteries and 8349 temples in China. *J. Econ. (Q.)* 21, 1345–1368. <https://doi.org/10.13821/j.cnki.ceq.2021.04.11>.
- Zhang, N., Bo, L., Wang, X., 2024. Confucian culture and corporate default risk: assessing the governance influence of traditional culture. *Int. Rev. Econ. Finance* 94, 103378. <https://doi.org/10.1016/j.iref.2024.103378>.
- Zhang, Z., Cheng, J., Xu, Y., 2025. Executives' ESG cognition, ESG responsibility fulfillment, and corporate competitive advantage: evidence from China. *Finance Res. Lett.* 83, 107724. <https://doi.org/10.1016/j.frl.2025.107724>.