

# **Social Identity or Social Capital: Local CEOs and Corporate ESG Performance\***

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## **Compliance with Ethical Standards**

We, the authors of this paper, declare that:

- i. We have no conflict of interest that could have appeared to influence the work reported in this paper;
- ii. Our study does not involve Human Participants and/or Animals;
- iii. All authors are informed consent.
- iv. During the preparation of this work, the authors used Chatgpt's language editing in order to improve readability and language. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the

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## Social Identity or Social Capital: Local CEOs and Corporate ESG Performance

**Abstract:** With environmental, social and corporate governance (ESG) become an indispensable consideration in business decisions, differences between ESG and corporate social responsibility (CSR) has gradually attracted attention. But previous scholars mainly investigated the differences from a qualitative perspective, few proved by empirical methods. Based on the data of 1,807 Chinese listed private firms from 2010–2021, we investigate the impact of local CEOs on corporate ESG performance and its mechanisms from the dual perspectives of social identity and social capital. We then empirically identify the differences between ESG and CSR by testing how local CEOs respond differently to CSR and ESG in different scenarios. We find that firms whose CEOs' birthplace is located in the same city as the location of their corporate headquarters have better ESG performance. The mechanism analysis indicates that local CEOs enhance their ESG performance due to stronger hometown identity rather than social capital. Further analysis found that when companies experience rapid changes in their internal and external environments, local CEOs practice less CSR, but continue to prioritize ESG, shows the company's differentiated attitude towards CSR and ESG.

**Keywords:** ESG; CSR; Informal institutions; Hometown identity; Social capital

### 1. Introduction

Environmental, social and corporate governance (ESG) receives widespread attention and focus from the international community and listed companies. Prior scholars have explored the determinants of corporate ESG performance from the perspectives of both internal and external environments (Clementino and Perkins 2021; Jia and Li 2020; Dimson et al. 2015), but they are mainly concerned with the influence of formal institutions on ESG. The question of whether and how corporate ESG performance is affected by informal institutions, especially social identity and social capital, has not been thoroughly investigated. In addition, some scholars contend that ESG and corporate social responsibility (CSR) are related but fundamentally different in theoretical foundation, standards, and frameworks (Rau and Yu 2024; STARKS 2023; Dathe et al. 2022; Gillan et al. 2021). But they mainly explained the differences from a qualitative perspective, with few scholars illustrating them through empirical research. In this paper, we try to expand the analysis of ESG's influencing factors from the perspective of informal institutions, and further examine whether enterprises may show different attitudes towards ESG and CSR in distinct scenarios with empirical analysis.

The upper echelon theory contends that CEO heterogeneity explains the variations in corporate strategic decisions and their outcomes (Tang et al. 2018; Hambrick 2007). Using upper echelon theory, several scholars have examined the impact of CEO heterogeneity on firms' ESG performance, but their discussions primarily focused on individual characteristics and previous experiences (Oh et al. 2019; Gillan et al. 2021; Al-Shammari et al. 2019). There is relatively little research on how the relationship between CEOs' birthplace and the location of the company's headquarters affects corporate ESG performance. In this study, combining informal institutions and upper echelon theory, we propose and

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test a new determinant of corporate ESG performance differences—local CEOs, meaning CEOs whose birthplace is the same as the location of the company's headquarters.

A person's hometown refers to the birthplace or upbringing location of an individual, carrying personal emotional connections and family and social relationships, deeply impacting their future behavior and decisions (Kong et al. 2020; Lai et al. 2020; Ren et al. 2021). According to the social identity theory (Ashforth and Mael 1989; Akerlof and Kranton 2000; Tajfel and Turner 2004; Kong et al. 2023), when the birthplace of CEOs is the same as the location of the corporate headquarters, local CEOs may be more actively engaged in ESG practices and support the long-term sustainable development of their hometown due to their strong hometown identity. Furthermore, social capital, as a resource that individuals bring to their position in the social structure, is also considered an informal norm (Adler and Kwon 2002; Lin 2017). According to the social capital theory (Lin 2000; Coleman 1994), local CEOs may possess more social capital than nonlocal CEOs, and this social capital advantage may help local CEOs better enhance corporate ESG performance. Therefore, this study hypothesizes that companies with local CEOs will exhibit superior ESG performance.

Prior literature extensively highlights the local CEOs' influence on firms' strategic decisions and their outcomes, including CSR performance (Ren et al. 2023; Bertrand et al. 2021; You 2023) and long-termism (Lai et al. 2020). However, few scholars have focused on the local CEOs' impact on ESG. Despite the interconnectedness of ESG with long-termism and CSR, they are fundamentally distinct concepts (STARKS 2023; Gillan et al. 2021; Clementino and Perkins 2021). For instance, compared to CSR derived from shareholder theory, ESG is based on stakeholder theory (Rau and Yu 2024; Dathe et al. 2022), suggesting that the local CEOs' impact on ESG may differ from their impact on CSR.

We mainly explore three questions: (1) Using local CEOs as an exogenous factor influencing corporate strategic decisions, we test whether this informal institution affects corporate ESG performance. (2) If so, do local CEOs influence ESG through social identity, social capital, or their combined effects? (3) STARKS (2023) and Rau and Yu (2024) highlight the fundamental differences between ESG and CSR from many aspects. To reveal these differences, we study whether local CEOs respond differently to CSR and ESG issues when enterprises' internal and external environments are changing rapidly.

This study investigates the impact of local CEOs on corporate ESG performance using data from 1,807 listed private companies, totaling 10,640 firm-year observations from 2010 to 2021. We find that local CEOs can improve corporate ESG performance. Several robustness checks confirm the fundamental findings. Mechanism analysis shows that local CEOs promote ESG performance for social identity, not social capital. In further analysis, we examine the heterogeneous responses of local CEOs to ESG and CSR when the internal and external environments experience significant changes. The results show that when companies face greater financing constraints and macroeconomic uncertainty, local CEOs still prioritize ESG development but are no longer actively engaged in CSR activities.

This study contributes to the existing research in two ways. Firstly, this work adds to the body of knowledge about corporate strategic choices made by local CEOs and extends the literature on how social identity and social networks impact firms' ESG. The impact of local CEOs on corporate strategies, such as CSR and long-termism, has been investigated, but there is little research on local CEOs' impact on

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ESG. The literature identifying local CEOs' effect corporate ESG performance from social identity and social capital theories is even less. By identifying the underlying mechanisms between local CEOs and ESG, we expand the literature on how social identity and social capital influence corporate strategic decisions and their consequences.

Secondly, our study contributes to the literature comparing CSR and ESG through empirical research. Though some previous studies have highlighted the fundamental differences between CSR and ESG in terms of theoretical foundations, frameworks, and scope, few scholars have empirically investigated their distinctions. Additionally, some scholars have not differentiated between CSR and ESG measures in empirical studies, leading to the confused use of CSR and ESG data. We measure corporate ESG performance using the Huazheng ESG Index, which specializes in evaluating the ESG performance of Chinese listed companies. Furthermore, we introduce internal and external environmental changes, from the perspective of informal institutions, and find that when companies face greater financing constraints and macroeconomic uncertainty, local CEOs respond differently to CSR and ESG. Our study helps to clarify the differences between CSR and ESG in terms of definition, stakeholders, and reputation management.

## **2.Related Literature and Hypothesis Development**

### **2.1.Heterogeneity of CEOs and Corporate ESG Performance**

Upper echelon theory posits that a firm's strategic decisions and outcomes mirror the personal traits and preferences of its executives (Hambrick 2007; Ren et al. 2023). Executives' personal cognition, values, and experiences are influenced by their characteristics and past experiences, and they often integrate personal preferences into decision-making including management styles and corporate strategies (Oh et al. 2019; Cronqvist and Yu 2017). For instance, Tang et al. (2018) revealed that both narcissistic and hubristic CEOs adopt riskier and more aggressive corporate strategies for self-promotion. However, narcissistic CEOs need constant social attention more than hubristic CEOs to receive positive evaluations of themselves. Given the impact of CEO heterogeneity on firms' strategic choices, the ESG development of a firm, as a crucial component of its corporate strategy, may also be influenced by the personality traits of CEOs.

ESG is vital in the long-term development of companies and its impact on overall societal well-being (STARKS 2023; Gillan et al. 2021; Dimson et al. 2015). Existing studies have linked CEOs' heterogeneity to corporate ESG performance, but they have primarily focused on personal characteristics and past experiences of CEOs. The personal characteristics influencing ESG performance include CEOs' narcissism levels (Al-Shammari et al. 2019) and CEOs' age (Oh et al. 2019). Based on a global sample consisting of 134 CEOs from the Fortune 500 list, Al-Shammari et al. (2019) found that narcissistic CEOs are related to more engagement in ESG activities by their firms. In terms of the past experience of CEOs, existing research indicates a connection between corporate ESG performance and CEOs receiving prestigious media awards (Yin et al. 2023), CEOs' educational experience (Oh et al. 2019), and CEOs' childhood experiences with natural disasters (Choi et al. 2023). For example, Choi et al. (2023), using 739 companies from the S&P 1500 as their sample, found that CEOs who experienced childhood natural

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disasters are more attentive to ESG.

Overall, current studies have examined how executives' traits and experiences affect ESG. Nevertheless, there is little research on local CEOs and corporate ESG. Several studies, taking a perspective of social identity, have investigated the relationship between local CEOs and CSR. Ren et al. (2023) found that CEOs' hometown identification improved firms' CSR rankings. However, some scholars contend that inherent distinctions exist between CSR and ESG (STARKS 2023; Gillan et al. 2021). In this case, this paper aims to expand the factors impacting corporate ESG performance from the perspective of local CEOs. Moreover, this study investigates the different responses of local CEOs towards CSR and ESG when companies experience greater financing constraints and macroeconomic uncertainty.

## **2.2.Social identity hypothesis**

Social identity theory contends that people tend to categorize themselves and others into different social groups, such as locals and outsiders (Tajfel and Turner 2004; Dinger et al. 2020). This categorization determines how different social groups treat each other, leading to out-group discrimination and in-group cohesion (Locksley et al. 1980). In reality, people can be divided into multiple groups, creating various social identities like hometown identity.

Environmental psychology suggests that individuals from the same hometown may share common culture, beliefs, and values, leading to a tendency toward mutual identification, both consciously and unconsciously. This results in the establishment of cognitive and emotional connections, referred to as "hometown identity" (Ren et al. 2021; Zhu et al. 2022; Hu 2023). Generally, locals are born and raised in a specific place, naturally fostering a natural attachment to their hometowns and thereby developing a stronger sense of local identity (Hernández et al. 2007; Dinger et al. 2020). This holds true for local CEOs as well. Local CEOs are born and raised in their hometown, and their personal psychological experiences and behavioral traits continuously interact with the local climate and cultural customs. This interaction facilitates the formation of a self-concept as a "local" for local CEOs, leading to a natural emotional attachment and sense of belonging to their hometown. When individuals have a greater emotional attachment to a place, they tend to focus on its long-term development and exhibit a greater sense of responsibility and dedication, such as showing a preference for hometown companies during acquisitions (Jiang et al. 2019) and reducing layoffs of local employees (Yonker 2017a). The attachment and sense of belonging of local CEOs to their hometown motivate them to contribute to their hometown and focus on the long-term social welfare of the local people (Lai et al. 2020). To achieve this goal, local CEOs tend to adopt sustainable development strategies and support ESG initiatives during their tenure, thereby enhancing the company's ESG performance. Therefore, from the perspective of personal identification with their hometown, local CEOs may enhance corporate ESG performance due to their attachment and local affiliation.

Hometown identity includes both an individual's identification with their hometown and the hometown and its people's identification with the individual. Hence, the external group's identification with local CEOs may affect corporate ESG performance. The hometown and its people's identification with local CEOs can naturally grant them trust and support (Ren et al. 2021; Guo et al. 2021), reducing

the regulatory pressure and external discrimination from local stakeholders. This makes local CEOs more willing to take on the responsibility of ESG development. Companies usually face short-term interest and supervisory pressure, and the investment and return of ESG activities are often not proportional in the short term. Hence, enterprises often struggle with the pressure of investor returns and stakeholder supervision, neglecting their ESG development. When CEOs hold positions locally, less external supervisory pressure and discrimination can enhance their willingness and determination to engage in ESG activities, thereby advancing the company's ESG development. Furthermore, the hometown and its residents' identification can drive local CEOs to pay more attention to their image, resulting in a heightened focus on their reputation (Ren et al. 2021). Hu (2023) highlights that CEOs' local preferences and hometown identity cause a division in the executive labor market, increasing the relocation costs of local CEOs and restricting their labor market mobility. The increased constraints on mobility reinforce local CEOs' concerns about their personal reputation and career focus. Engagement in ESG activities by companies not only enhances their brand image but also positively affects CEOs' reputations. Therefore, considering both corporate and personal reputation, local CEOs are inclined to make strategic decisions that promote the long-term development of both the company and their hometown, actively participating in ESG development. From the perspective of hometown and local people's identification with local CEOs, their local tenure also promotes corporate ESG performance.

### **2.3.Social Capital Hypothesis**

Over millennia, the Chinese have been adept at cultivating and leveraging “guanxi” showing a keen interest in accomplishing tasks through familiar connections. Such “guanxi” is vital to China's economic development. The formation of “guanxi” includes both inherent inheritance and acquired establishment, with the vast majority relying on the latter (Adler and Kwon 2002). Social capital is the capital that is obtained by building and maintaining social relationships, and by effectively utilizing those relationships (Lin 2017; Siisiainen 2003). Social capital theory highlights the significance of interpersonal relationships and social networks for the value of individuals and organizations (Adler and Kwon 2002; Lin 2017; Rigolini and Huse 2021). In China, geography plays a vital role in social relationship networks, endowing locals with greater social capital (Kong et al. 2020). While providing resources to businesses, social capital also often prompts companies to maintain a good reputation and image (Ren et al. 2021; Spence et al. 2003). Therefore, social capital may explain why companies with local CEOs have better ESG performance.

Firstly, local CEOs, with their extensive social networks, have an advantage in acquiring social capital. This advantage allows them to access various essential resources to enhance corporate ESG practices. Consequently, they can improve corporate ESG performance by providing a more reliable resource base than nonlocal CEOs (Lin 2017; Ren et al. 2021). For companies, enhancing ESG typically involves updating equipment, upgrading technology, and introducing and training ESG talent (McWilliams and Siegel 2001). Equipment improvements and technological upgrades usually require substantial investment and may take a long time to yield returns. At the same time, as ESG is in a nascent phase, the market faces a limited supply but enormous demand for ESG talent, resulting in a significant supply-demand imbalance in the ESG field. The demands for financial, technical, and human resources present

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increased challenges in ESG development for businesses, particularly for small and medium-sized enterprises. Compared to nonlocal CEOs, local CEOs have broader local interpersonal relationships and denser social networks, enabling them to establish closer political-business ties with local governments. This facilitates easier access for companies to special heterogeneous resources such as favorable loans, administrative approval, and talent resources, key for enhancing corporate ESG performance. Additionally, from the perspective of information acquisition, local CEOs have more advantages in accessing information resources. Social capital theory suggests that the better an individual's initial position in the social network is, the greater the quantity and quality of social capital they can acquire (Tsai 2001; Lin 2000). Compared to nonlocal CEOs, local CEOs, being born and working locally, occupy an absolute positional advantage in the social structure. Most friends and family members of local CEOs also reside and work in their hometown, making it easier for local CEOs to gather information about ESG projects in which their companies invest (Lai et al. 2020; Pool et al. 2012; Lin 2000), thereby improving investment performance (Pool et al. 2012). Based on the above analysis, local CEOs exhibit greater potential to enhance corporate ESG performance than nonlocal CEOs due to their advantages in terms of resource and information acquisition.

Secondly, from the standpoint of maintaining social capital, companies need to display a better image and convey a positive corporate reputation to their hometown and its people, thus local CEOs can improve corporate ESG performance. Hometowns gather the most intimate and long-lasting social relationships of local CEOs. These relationships constitute the social ties that underpin their increased social capital (Lai et al. 2020; Ren et al. 2021). To maintain their existing social networks and increase social capital, local CEOs will focus more on personal and corporate reputation, adopting a more long-term business perspective (Lai et al. 2020; Gupta et al. 2023). A good ESG performance can establish a positive corporate image, win a local reputation, and enhance companies' core competitiveness in the local market (STARKS 2023; Asante-Appiah and Lambert 2022). Furthermore, to maintain social capital, local CEOs will reduce opportunistic activities. Within social networks, individuals are generally related by blood or homophily, fostering a lot of informal trust and compliance mechanisms (Kong et al. 2020; Gupta et al. 2023). This collective pressure prevents local CEOs from engaging in activities that could harm the ESG advancement of their hometown. Therefore, from the perspective of maintaining reputation and social capital, local CEOs will also be more proactive in ESG development.

Finally, from the perspective of utilizing social capital, local CEOs serving in their birthplace exhibit a more profound connection to the city's social networks and resources, allowing them to more effectively utilize social capital to enhance ESG performance. Social capital plays a vital role in sharing ESG risks (Ferris et al. 2017), so local CEOs can use their greater social capital to reduce risks involved in ESG practices. A reduction in ESG risks helps local CEOs increase their enthusiasm for ESG development. In addition, compared to nonlocal CEOs, local CEOs have a deeper understanding of the local culture, market, and social dynamics (Ren et al. 2021). This familiarity enables them to better grasp the needs and opportunities of local ESG projects, facilitating effective ESG improvement in their companies. Moreover, social capital theory suggests that social capital is founded on interaction, with effective investment in social capital initiating a positive cycle of investment and returns (Lin 2000,



2017). As local CEOs continue to utilize social capital for ESG development, their interactions with local government officials, business leaders, investors, and other stakeholders will increase, and the social networks established by local CEOs will become broader, deeper, and more influential. This social capital advantage will continue to strengthen the effect of local CEOs in promoting corporate ESG.

### 3.Data and modeling

#### 3.1.Sample and data

This study focuses on private listed companies in the Shanghai and Shenzhen A-shares from 2010 to 2021. In September 2010, China's Ministry of Environmental Protection issued the "Guidelines for Disclosure of Environmental Information by Listed Companies (Draft for Public Comments)," requiring listed companies to regularly disclose environmental information and publish annual environmental reports<sup>1</sup>. Consequently, since 2010, an increasing number of Chinese listed companies began to disclose ESG information, and ESG gradually gained acceptance and recognition from mainstream investment institutions. Thus, the start date of this study is 2010; as most financial and ESG data are updated to 2021, the end date of this study is 2021.

This study utilizes data comprising financial data, ESG data, and CEOs' birthplace data. The financial data was primarily collected from the China Stock Market and Accounting Research (<https://cn.gtadata.com>) and the Chinese Research Data Services Platform ([www.cnrd.com](http://www.cnrd.com)). ESG data was obtained from the Wind database (<https://www.wind.com.cn>). The data on CEOs' birthplaces was manually collected. Specifically, we first obtained the CEOs' identity information from the prospectuses of listed companies, then used various channels such as Baidu and Sina Finance to search for information related to the CEOs' birthplaces.

Following Tang et al. (2023) and Chen et al. (2023), we exclude ST companies, PT companies, financial companies, and samples with missing data. To mitigate the impact of outliers on the empirical results, this study winsorized all the continuous variables at 1% and 99% levels. The final sample of this study consists of 10,640 firm-year observations from 1,807 listed private companies.

#### 3.2.Local CEOs

The core explanatory variable in this study is *Local\_c*. Previous studies mainly measured local CEOs based on whether their birthplaces and the companies' headquarters were in the same country or state (province) (Lai et al. 2020; Ren et al. 2023; Bertrand et al. 2021). This measure may lack precision, so in line with Zhu et al. (2022), we determine whether CEOs are local (*Local\_c*) based on whether the CEOs' birthplace and the location of the companies' headquarters are in the same prefecture-level city. *Local\_c* takes a value of 1 when the CEOs' tenure place and birthplace are the same prefecture-level city; otherwise, it takes a value of 0.

#### 3.3.Corporate ESG performance

Currently, many ESG rating agencies, such as MSCI, Bloomberg, and Huazheng, have released corporate

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<sup>1</sup>[https://www.mee.gov.cn/gkml/sthjbgw/qt/201009/t20100914\\_194484.htm?eqid=c65e85530024370e00000002649111eb](https://www.mee.gov.cn/gkml/sthjbgw/qt/201009/t20100914_194484.htm?eqid=c65e85530024370e00000002649111eb).

ESG ratings (Avramov et al. 2022; Clementino and Perkins 2021; Duque-Grisales and Aguilera-Caracuel 2021). Considering the applicable period and coverage of ESG ratings, we follow Wang et al. (2023) in utilizing the Huazheng ESG Index to evaluate corporate ESG performance (*ESG*). Since 2009, the Huazheng ESG index has been used to assess the ESG performance of Chinese A-share listed companies and now encompasses all Chinese A-share listed firms. It is widely acknowledged and used in both academia and the industry. Following Wang et al. (2023), to measure *ESG*, we assign scores from 1 to 9 to the listed companies' ESG ratings from C to AAA.

### 3.4. Model specification

The model is set as follows:

$$ESG_{it} = \beta_0 + \beta_1 Local\_c_{it} + \beta_2 Controls_{it} + \beta_3 Industry + \beta_4 Year + \varepsilon$$

where  $ESG_{it}$  and  $Local\_c_{it}$  are the *ESG* and *Local\_c* of firm *i* in year *t*;  $Controls_{it}$  are the control variables; *Year* and *Industry* are used to control the year and industry effects, respectively;  $\beta_0$  is a constant term;  $\beta_1, \beta_2, \beta_3$ , and  $\beta_4$  are the estimated coefficients of the corresponding variables;  $\varepsilon$  is the error term.

We control for a set of factors that potentially affect ESG performance based on three dimensions: corporate basic characteristics, corporate governance characteristics, and CEO characteristics. Basic corporate characteristics include firm size (*Size*), firm gearing leverage (*Leverage*), firm profitability (*Roa*), number of years since firms are publicly traded (*Age*); Corporate governance characteristics include equality concentration (*Top1*), board size (*Board*), the proportion of independent directors (*Independent*), dual role (*Dual*); CEO characteristics include CEO's gender (*CEO\_Gen*), CEO's age (*CEO\_Age*), CEO's education (*CEO\_Edu*). Table 1 reports definitions of the variables.

**Table 1** Variable definitions.

| Variable               | Symbol             | Description   | Source                |
|------------------------|--------------------|---|-----------------------|
| ESG performance        | <i>ESG</i>         | 1=C, 2=CC, 3=CCC, 4=B, 5=BB, 6=BBB, 7=A, 8=AA, 9=AAA.                                 | Wang et al. (2023)    |
| Local CEOs             | <i>Local_c</i>     | 1=The city of the firm' headquarters is the same as the CEOs' birth city, 0= No.      | Zhu et al. (2022)     |
| Firm size              | <i>Size</i>        | Ln(Total assets at year-end).   | Ren et al. (2021)     |
| Firm leverage          | <i>Leverage</i>    | The ratio of total liabilities to total assets at year-end.                           | Hu (2023)             |
| Profitability          | <i>Roa</i>         | The ratio of total profit to total assets at year-end.                                | Ren et al. (2021)     |
| Age of firms           | <i>Age</i>         | Ln(Number of years since firms are publicly traded).                                  | Ren et al. (2023)     |
| Equality concentration | <i>Top1</i>        | The ratio of shares held by the largest shareholder.                                  | Ren et al. (2021)     |
| Board size             | <i>Board</i>       | Ln(Number of boards of directors).  | Shahbaz et al. (2020) |
| Independent directors  | <i>Independent</i> | The ratio of the number of independent directors to the total number of directors.    | Ren et al. (2021)     |
| Dual role              | <i>Dual</i>        | 1=The CEO is same as chairman of the board, 0=No.                                     | Shahbaz et al. (2020) |
| CEO's gender           | <i>CEO_Gen</i>     | 1=Male, 0=Female.   | Kong et al. (2020)    |
| CEO's age              | <i>CEO_Age</i>     | Ln(The age of CEO).   | Ren et al. (2021)     |
| CEO's education        | <i>CEO_Edu</i>     | 1=Senior High School or below, 2=Junior college, 3=Undergraduate, 4=Master, 5=Doctor. | Zhu et al. (2022)     |

## 4. Empirical analysis

### 4.1. Descriptive statistics

Table 2 presents the descriptive statistics results. Table 2 shows that the average *ESG* score is 4.131, and the median is 4, suggesting that Chinese private listed companies have moderate ESG performance. *Local\_c* averages 0.324, indicating that 32.4% of Chinese private listed companies are led by local CEOs. In the United States, 30.2% of companies have CEOs born in the same state as the companies' headquarters (Yonker 2017b). Therefore, China exhibits a stronger preference for local CEOs than the United States.

The control variables at the company level are basically consistent with previous studies (Ren et al. 2023; Bertrand et al. 2021). Additionally, regarding the personal attributes of CEOs, the mean values of *CEO\_Gen*, *CEO\_Age* and *CEO\_Edu* are 0.919, 3.906 and 3.295 respectively, indicating that 91.9 % of the CEOs of listed companies in China are male, concentrated in the age of 50, and most of them are undergraduate.

**Table 2** Descriptive statistics.

| Variable           | N      | Mean   | SD    | p25    | p50    | p75    | Min    | Max    |
|--------------------|--------|--------|-------|--------|--------|--------|--------|--------|
| <i>ESG</i>         | 10,640 | 4.131  | 1.260 | 4.000  | 4.000  | 5.000  | 1.000  | 7.000  |
| <i>Local_c</i>     | 10,640 | 0.324  | 0.468 | 0.000  | 0.000  | 1.000  | 0.000  | 1.000  |
| <i>Size</i>        | 10,640 | 21.627 | 1.029 | 20.897 | 21.500 | 22.197 | 14.760 | 26.684 |
| <i>Leverage</i>    | 10,640 | 0.347  | 0.183 | 0.199  | 0.330  | 0.474  | 0.044  | 0.818  |
| <i>Roa</i>         | 10,640 | 0.053  | 0.055 | 0.026  | 0.052  | 0.081  | -0.185 | 0.211  |
| <i>Age</i>         | 10,640 | 1.452  | 0.849 | 0.693  | 1.609  | 2.079  | 0.000  | 3.401  |
| <i>Top1</i>        | 10,640 | 0.337  | 0.139 | 0.229  | 0.319  | 0.426  | 0.091  | 0.708  |
| <i>Board</i>       | 10,640 | 2.077  | 0.183 | 1.946  | 2.197  | 2.197  | 1.386  | 2.773  |
| <i>Independent</i> | 10,640 | 0.380  | 0.055 | 0.333  | 0.364  | 0.429  | 0.000  | 0.750  |
| <i>Dual</i>        | 10,640 | 0.559  | 0.497 | 0.000  | 1.000  | 1.000  | 0.000  | 1.000  |
| <i>CEO_Gen</i>     | 10,640 | 0.919  | 0.273 | 1.000  | 1.000  | 1.000  | 0.000  | 1.000  |
| <i>CEO_Age</i>     | 10,640 | 3.906  | 0.149 | 3.829  | 3.912  | 4.007  | 3.258  | 4.317  |
| <i>CEO_Edu</i>     | 10,640 | 3.295  | 0.896 | 3.000  | 3.000  | 4.000  | 1.000  | 5.000  |

### 4.2. Benchmark regression

Table 3 reports the benchmark regression. According to Column (1), *Local\_c* has a positive coefficient, and passes the 1% significance test. As control variables are added, the coefficients of *Local\_c* in Columns (2), (3), and (4) remain positive and significant at the 1% level, reinforcing the conclusion that *Local\_c* contribute significantly to *ESG*.

The impact of the control variables on *ESG* is analyzed based on Column (4) of Table 3. Notably, *ESG* is significantly influenced by *Size*, *Leverage*, *Roa*, *Age*, *Independent*, *Dual*, and *CEO\_Edu*. The coefficient of *Size* is positive and significant at the 1% level, aligning with the findings of Dremptic et al. (2020). Larger firms tend to prioritize corporate reputation and possess more resources for ESG practices, resulting in superior ESG performance. *Leverage* has a negative coefficient, and passes the 1% significance test, which is consistent with the findings of Tang et al. (2023). High debt levels may induce short-termist behaviors, diverting attention from ESG concerns. The coefficient of *Roa* is positive, and passes the 1% significance test, indicating a positive correlation between *Roa* and *ESG*, supporting the findings of Tang et al. (2023). As highly profitable firms have greater funds for ESG activities, *Roa* positively impacts *ESG*. At the 1% level, the coefficient of *Age* is positive and significant. This finding suggests that companies with a longer history of being listed are more focused on long-term development

and social reputation, and therefore, they are more active in engaging in ESG practices and improving *ESG*. *Independent* has a positive coefficient, and passes the 1% significance test, indicating that *Independent* improves *ESG*, which supports Shahbaz et al. (2020)'s conclusion. The coefficient for *Dual* is positive, and passes the 1% significance test, contrary to the findings of Chen et al. (2023). This discrepancy may be related to the different estimation methods and research periods used in our study. The coefficient for *CEO\_Edu* is positive and significant at the 5% level, indicating that *CEO\_Edu* positively influences *ESG*. This differs from the findings of Oh et al. (2019) as our research data is different from their data.

**Table 3** Baseline regression results.

| Variables              | <i>ESG</i><br>(1)     | <i>ESG</i><br>(2)      | <i>ESG</i><br>(3)      | <i>ESG</i><br>(4)      |
|------------------------|-----------------------|------------------------|------------------------|------------------------|
| <i>Local_c</i>         | 0.154***<br>(6.051)   | 0.156***<br>(6.557)    | 0.166***<br>(7.000)    | 0.174***<br>(7.210)    |
| <i>Size</i>            |                       | 0.238***<br>(15.732)   | 0.240***<br>(15.732)   | 0.239***<br>(15.611)   |
| <i>Leverage</i>        |                       | -0.993***<br>(-12.210) | -1.008***<br>(-12.438) | -1.001***<br>(-12.361) |
| <i>Roa</i>             |                       | 0.872***<br>(3.648)    | 0.806***<br>(3.370)    | 0.793***<br>(3.315)    |
| <i>Age</i>             |                       | 0.421***<br>(22.285)   | 0.416***<br>(21.849)   | 0.414***<br>(21.655)   |
| <i>Top1</i>            |                       |                        | 0.041<br>(0.470)       | 0.055<br>(0.625)       |
| <i>Board</i>           |                       |                        | 0.097<br>(1.183)       | 0.096<br>(1.178)       |
| <i>Independent</i>     |                       |                        | 1.886***<br>(7.236)    | 1.899***<br>(7.283)    |
| <i>Dual</i>            |                       |                        | -0.062***<br>(-2.795)  | -0.070***<br>(-2.955)  |
| <i>CEO_Gen</i>         |                       |                        |                        | -0.007<br>(-0.174)     |
| <i>CEO_Age</i>         |                       |                        |                        | 0.073<br>(0.909)       |
| <i>CEO_Edu</i>         |                       |                        |                        | 0.029**<br>(2.301)     |
| <i>Constant</i>        | 4.081***<br>(285.934) | -1.369***<br>(-4.522)  | -2.317***<br>(-6.354)  | -2.657***<br>(-5.490)  |
| <i>Industry/Year</i>   | Yes                   | Yes                    | Yes                    | Yes                    |
| <i>Observations</i>    | 10,640                | 10,640                 | 10,640                 | 10,640                 |
| <i>R<sup>2</sup> a</i> | 0.0816                | 0.196                  | 0.201                  | 0.202                  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

### 4.3. Robustness checks

#### 4.3.1. Heckman test

The possibility of self-selection bias arises when firms with specific characteristics are more likely to hire local CEOs and actively participate in ESG initiatives. Therefore, the selection of local CEOs by private listed firms might not occur randomly. To address this potential concern, we employ the Heckman two-stage model for additional robustness checks, as suggested by Ren et al. (2021).

We utilize a probit model to estimate the likelihood of private listed companies hiring local CEOs in the first stage. Subsequently, we generate an inverse Mills ratio (*IMR*) based on the first-stage model and incorporate it into the second-stage model. Table 4 reports the results. The positive and significant coefficient of *Local\_c* in Column (2) signifies that the key conclusion of our study remains robust even

after addressing the self-selection issue.

**Table 4** The local CEOs' impact on ESG performance: Heckman two-stage estimation.

| Variables                                   | <i>Local_c</i><br>(1)  | <i>ESG</i><br>(2)      |
|---|------------------------|------------------------|
| <i>Local_c</i>                              |                        | 0.174***<br>(7.218)    |
| <i>IMR</i>                                  |                        | 0.539<br>(0.422)       |
| <i>Size</i>                                 | 0.024<br>(1.485)       | 0.248***<br>(9.194)    |
| <i>Leverage</i>                             | -0.008<br>(-0.094)     | -1.003***<br>(-12.344) |
| <i>Roa</i>                                  | 0.656**<br>(2.507)     | 1.052<br>(1.620)       |
| <i>Age</i>                                  | -0.015<br>(-0.785)     | 0.408***<br>(17.269)   |
| <i>Top1</i>                                 | 0.030<br>(0.300)       | 0.066<br>(0.719)       |
| <i>Board</i>                                | 0.088<br>(0.960)       | 0.130<br>(1.140)       |
| <i>Independent</i>                          | -1.438***<br>(-4.794)  | 1.334<br>(0.980)       |
| <i>Dual</i>                                 | -0.015<br>(-0.536)     | -0.076***<br>(-2.803)  |
| <i>CEO_Gen</i>                              | -0.136***<br>(-2.855)  | -0.059<br>(-0.453)     |
| <i>CEO_Age</i>                              | -0.158<br>(-1.638)     | 0.009<br>(0.054)       |
| <i>CEO_Edu</i>                              | -0.201***<br>(-13.843) | -0.048<br>(-0.263)     |
| <i>Constant</i>                             | 0.809<br>(1.496)       | -2.779***<br>(-4.966)  |
| <i>Industry/Year</i>                        | Yes                    | Yes                    |
| <i>Observations</i>                         | 10,640                 | 10,640                 |
| <i>Pseudo R<sup>2</sup>/R<sup>2</sup> a</i> | 0.042                  | 0.202                  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

#### 4.3.2. Propensity score matching

The relationships between control variables such as company *Size*, *Leverage*, *CEO\_Gen* and *ESG* may not be linear. Given the potential impact of model specification bias on empirical results, we employ propensity score matching (PSM) to tackle potential endogeneity concerns that may arise from model specification bias.

We divide the sample into control and treatment groups based on the local tenure of CEOs. All control variables are used as covariates for one-to-one repeatable matching. We gain 4,904 firm-year samples after matching. Subsequently, we reapply the baseline regression model to the matched samples, with the results displayed in Table 5. The positive and significant coefficient for *Local\_c* in Column (1) indicates that our core findings remain robust after addressing model specification issues.

**Table 5** The local CEOs' impact on ESG: PSM estimation.

| Variables       | <i>ESG</i><br>(1)     |
|-----------------|-----------------------|
| <i>Local_c</i>  | 0.217***<br>(6.616)   |
| <i>Size</i>     | 0.220***<br>(9.598)   |
| <i>Leverage</i> | -0.953***<br>(-7.887) |
| <i>Roa</i>      | 0.747**               |

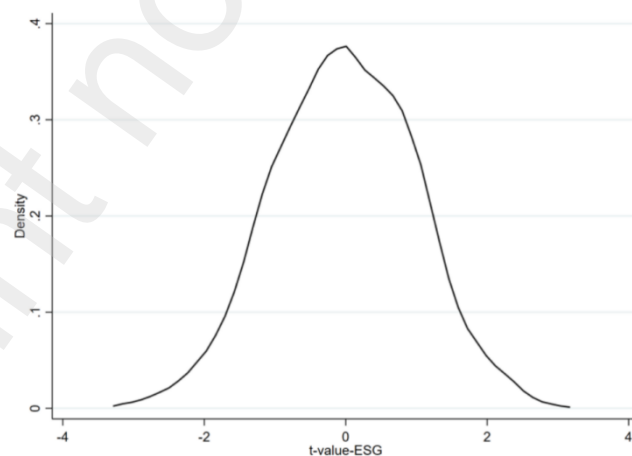
|                        |           |
|------------------------|-----------|
|                        | (2.005)   |
| <i>Age</i>             | 0.464***  |
|                        | (16.200)  |
| <i>Top1</i>            | 0.093     |
|                        | (0.707)   |
| <i>Board</i>           | 0.107     |
|                        | (0.807)   |
| <i>Independent</i>     | 1.682***  |
|                        | (3.939)   |
| <i>Dual</i>            | -0.023    |
|                        | (-0.664)  |
| <i>CEO_Gen</i>         | -0.022    |
|                        | (-0.371)  |
| <i>CEO_Age</i>         | 0.104     |
|                        | (0.903)   |
| <i>CEO_Edu</i>         | 0.022     |
|                        | (1.149)   |
| <i>Constant</i>        | -2.453*** |
|                        | (-3.364)  |
| <i>Industry/Year</i>   | Yes       |
| <i>Observations</i>    | 4,904     |
| <i>R<sup>2</sup> a</i> | 0.217     |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

#### 4.3.3. Placebo test

To exclude the possibility that other random factors lead to the positive impact of *Local\_c* on *ESG*. Following Lai et al. (2020), we conduct a placebo test.

We first assign local CEOs in a random order to various companies, match these randomly ordered local CEOs with corporate ESG performance, and then conduct regressions with the random sample 1000 times. The t-values of the placebo regression results in Figure 1 are all lower than those of the benchmark regression. This finding suggests that the treatment effect of the dummy variable constructed in this study does not exist, meaning that local CEOs do indeed enhance corporate ESG performance, and this is not due to other noise.



**Figure 1** The local CEOs' impact on ESG: Placebo test.

#### 4.3.4. Instrumental variables approach

Given that CEOs' birthplaces are not self-determined, *Local\_c* is considered relatively exogenous. However, potential omitted variables may introduce endogeneity issues, impacting the estimation results. We use two instrumental variables and a two-stage regression to conduct endogeneity checks. The first

instrumental variable is the number of dialects in the province where the listed company operates (*Diad*). Language differences reflect diverse groups and cultures (Kong et al. 2023). An increase in dialects in a province implies greater ethnic and cultural diversity, potentially making it more challenging for nonlocal CEOs to acclimate to local culture, understand local markets, and seize possible business opportunities (Kong et al. 2020). Therefore, in provinces with more dialects, companies tend to hire local CEOs, indicating a positive correlation between *Diad* and *Local\_c*. Moreover, the evolution of dialects is a long process, mainly influenced by historical factors, so it does not directly impact the current ESG performance of companies. Therefore, *Diad* meets the relevance and exogeneity conditions.

The second instrumental variable is the number of Ming and Qing scholars in the city where a listed company is located (*Cyna*). The traditional belief that “All work is inferior, only reading is superior” enhances Chinese appreciation for environments with rich cultural heritage. Consequently, when CEOs are born in places with more scholars, they tend to stay and work locally rather than seeking opportunities elsewhere. Moreover, being born in a place renowned for producing talents fosters individual pride and deepens attachment and identification with one’s hometown. Therefore, when CEOs’ birthplaces have more Ming and Qing scholars, they will have a stronger sense of local identity, making them more inclined to stay in their hometowns. This indicates that *Cyna* meets the relevance criteria for instrumental variables. Additionally, as *Cyna* is a historical variable, it does not directly influence contemporary corporate decision-making, satisfying the exogeneity restriction condition

Using the two instrumental variables, we first perform first-stage regressions for *Local\_c*. The first-stage estimation results are reported in Columns (1) and (3). At the 1% level, *Diad* and *Cyna* are both positive and statistically significant, based on the coefficients found in Columns (1) and (3). With first-stage F-values of 44.58 and 78.68, respectively, this shows that both *Diad* and *Cyna* raise *Local\_c* and there is no weak instrument variable problem. The results of the second-stage estimation are shown in Columns (2) and (4). The positive and significant coefficients for *Local\_c* in Columns (2) and (4) show that *Local\_c* still improves *ESG* even after instrumental variable regression is used to account for endogeneity concerns.

Furthermore, following Kong et al. (2020), we include *Diad* and *Cyna* as instrumental variables in the model. The first-stage test results in Column (5) show that both *Diad* and *Cyna* still have a significant positive impact on *Local\_c*. The *Hansen J* index’s P-value is 0.768, suggesting that the two instrumental variables are exogenous and that there is no overidentification issue. From Column (6), *Local\_c*’s positive effect on *ESG* remains statistically significant in the second-stage regression. The IV regression results affirm the robustness of the conclusion that *Local\_c* promotes *ESG* when considering endogeneity.

**Table 6** The local CEOs’ impact on ESG performance: IV estimation.

| Variables      | <i>Local_c</i>       | <i>ESG</i> | <i>Local_c</i>       | <i>ESG</i> | <i>Local_c</i>       | <i>ESG</i> |
|----------------|----------------------|------------|----------------------|------------|----------------------|------------|
|                | IV1: Diad            |            | IV2: Dyna            |            | IV1&IV2              |            |
|                | (1)                  | (2)        | (3)                  | (4)        | (5)                  | (6)        |
| <i>Diad</i>    | 0.125***<br>(27.348) |            |                      |            | 0.129***<br>(27.075) |            |
| <i>Dyna</i>    |                      |            | 0.063***<br>(44.902) |            | 0.063***<br>(45.646) |            |
| <i>Local_c</i> |                      | 0.374***   |                      | 0.327***   |                      | 0.338***   |

|                         |           |           |           |           |               |           |
|-------------------------|-----------|-----------|-----------|-----------|---------------|-----------|
|                         |           | (2.664)   |           | (4.447)   |               | (5.212)   |
| <i>Size</i>             | 0.010*    | 0.236***  | 0.011**   | 0.237***  | 0.010*        | 0.237***  |
|                         | (1.785)   | (15.471)  | (2.047)   | (15.598)  | (1.952)       | (15.586)  |
| <i>Leverage</i>         | -0.051*   | -0.999*** | -0.025    | -0.999*** | -0.066**      | -0.999*** |
|                         | (-1.690)  | (-12.347) | (-0.878)  | (-12.369) | (-2.326)      | (-12.365) |
| <i>Roa</i>              | 0.208**   | 0.750***  | 0.148*    | 0.760***  | 0.137*        | 0.758***  |
|                         | (2.456)   | (3.123)   | (1.813)   | (3.172)   | (1.713)       | (3.167)   |
| <i>Age</i>              | -0.006    | 0.415***  | -0.008    | 0.415***  | -0.009        | 0.415***  |
|                         | (-0.891)  | (21.745)  | (-1.280)  | (21.752)  | (-1.424)      | (21.754)  |
| <i>Top1</i>             | 0.016     | 0.054     | 0.004     | 0.054     | 0.016         | 0.054     |
|                         | (0.465)   | (0.613)   | (0.137)   | (0.616)   | (0.500)       | (0.615)   |
| <i>Board</i>            | 0.017     | 0.090     | 0.020     | 0.091     | 0.003         | 0.091     |
|                         | (0.560)   | (1.095)   | (0.699)   | (1.115)   | (0.097)       | (1.111)   |
| <i>Independent</i>      | -0.522*** | 1.995***  | -0.426*** | 1.973***  | -0.470***     | 1.978***  |
|                         | (-5.469)  | (7.378)   | (-4.594)  | (7.535)   | (-5.177)      | (7.554)   |
| <i>Dual</i>             | -0.003    | -0.069*** | 0.011     | -0.070*** | 0.011         | -0.070*** |
|                         | (-0.350)  | (-2.915)  | (1.191)   | (-2.929)  | (1.283)       | (-2.926)  |
| <i>CEO_Gen</i>          | -0.061*** | 0.003     | -0.042*** | 0.001     | -0.055***     | 0.001     |
|                         | (-3.680)  | (0.069)   | (-2.594)  | (0.013)   | (-3.449)      | (0.026)   |
| <i>CEO_Age</i>          | -0.032    | 0.084     | 0.012     | 0.081     | 0.034         | 0.082     |
|                         | (-0.944)  | (1.032)   | (0.378)   | (1.007)   | (1.070)       | (1.014)   |
| <i>CEO_Edu</i>          | -0.068*** | 0.043***  | -0.064*** | 0.040***  | -0.061***     | 0.041***  |
|                         | (-13.528) | (2.710)   | (-13.589) | (2.909)   | (-13.060)     | (3.024)   |
| <i>Constant</i>         | 0.465**   | -3.576*** | 0.153     | -3.542*** | -0.109        | -3.550*** |
|                         | (2.534)   | (-7.183)  | (0.867)   | (-7.210)  | (-0.630)      | (-7.237)  |
| <i>Industry/Year</i>    | Yes       | Yes       | Yes       | Yes       | Yes           | Yes       |
| <i>Observations</i>     | 10,640    | 10,640    | 10,640    | 10,640    | 10,640        | 10,640    |
| <i>R<sup>2</sup> _a</i> | 0.075     | 0.196     | 0.149     | 0.199     | 0.180         | 0.198     |
| <i>Weak-IV F.</i>       | 44.58     | 44.58     | 78.68     | 78.68     | 92.54         | 92.54     |
| <i>Hansen's J</i>       |           |           |           |           | Chi2(1)=0.087 | P =0.768  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

#### 4.3.5. Replacing the independent variable

In addition to ESG ratings, the Huazheng ESG database also provides ESG scores (*ESG\_Score*) for listed companies. To strengthen the reliability of our findings, we substitute *ESG* with *ESG\_Score*. Table 7 reports the results of replacing an independent variable. The positive and significant coefficient of *Local\_c* in Column (1) indicates that local CEOs can improve corporate ESG performance even after replacing an explanatory variable. This finding reinforces the robustness of our core conclusions.

#### 4.3.6. Replacing the dependent variable

Previous studies have primarily identified local CEOs based on whether their birth province coincides with the province where the company's headquarters is situated (Ren et al. 2021; Yonker 2017b). In this section, we adopt a similar approach by utilizing local CEOs at the provincial level (*Local\_p*) as a replacement for *Local\_c* to estimate its impact on *ESG*. *Local\_p* is 1 if the province where the firm's headquarters is located matches the province where the CEO was born; otherwise, it is 0.

Table 7 reports the results of replacing a dependent variable. *Local\_p*'s coefficient is still positive and significant, but smaller than *Local\_c*'s coefficient in the baseline regression. These findings suggest that the proximity between the birthplace of local CEOs and the company's headquarters strengthens the ties



between local CEOs and their hometowns, fostering increased interaction between the company and the local government, community, and residents.

In line with the theories of social identity and social capital, the effect of local CEOs in enhancing firms' ESG performance diminishes when defining local CEOs is based on the alignment of the CEOs' birth province with the province of the firm's headquarters, aligning with the findings of Ren et al. (2023). Finally, this finding also shows that determining whether CEOs are local based on the consistency between their birth city and the company's headquarters city is more accurate, proving the scientific and feasible nature of the research design of this paper.

**Table 7** The local CEOs' impact on ESG performance: replacing the independent and dependent variables.

| Variables              | ESG_Score              | ESG                    |
|------------------------|------------------------|------------------------|
|                        | (1)                    | (2)                    |
| <i>Local_c</i>         | 0.752***<br>(7.584)    |                        |
| <i>Local_p</i>         |                        | 0.128***<br>(5.484)    |
| <i>Size</i>            | 1.258***<br>(19.851)   | 0.239***<br>(15.662)   |
| <i>Leverage</i>        | -2.905***<br>(-8.709)  | -0.999***<br>(-12.307) |
| <i>Roa</i>             | 12.204***<br>(11.670)  | 0.817***<br>(3.412)    |
| <i>Age</i>             | -1.380***<br>(-20.333) | 0.411***<br>(21.493)   |
| <i>Top1</i>            | -0.528<br>(-1.498)     | 0.071<br>(0.815)       |
| <i>Board</i>           | 0.401<br>(1.219)       | 0.103<br>(1.256)       |
| <i>Independent</i>     | 9.053***<br>(8.554)    | 1.853***<br>(7.118)    |
| <i>Dual</i>            | -0.237**<br>(-2.435)   | -0.074***<br>(-3.107)  |
| <i>CEO_Gen</i>         | -0.061<br>(-0.359)     | -0.009<br>(-0.230)     |
| <i>CEO_Age</i>         | 0.243<br>(0.719)       | 0.068<br>(0.836)       |
| <i>CEO_Edu</i>         | 0.028<br>(0.557)       | 0.028**<br>(2.212)     |
| <i>Constant</i>        | 43.413***<br>(21.969)  | -2.669***<br>(-5.493)  |
| <i>Industry/Year</i>   | Yes                    | Yes                    |
| <i>Observations</i>    | 10,640                 | 10,640                 |
| <i>R<sup>2</sup> a</i> | 0.142                  | 0.200                  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

## 5. Mechanism analysis

Drawing upon the theoretical framework established in Section 2, we contend that both social identity theory and social capital theory offer valuable insights into understanding the observed phenomenon where *Local\_c* positively influences *ESG*. This section aims to empirically examine and ascertain which theory better elucidates the core findings of this study.

### 5.1. Explanations based on social identity theory

Culture exerts a profound influence on how individuals think, interact, and make strategic decisions by shaping personal preferences and values. Within traditional Chinese norms, a strong emphasis on

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bloodline kinship and fellowship has given rise to a set of shared norms encompassing daily life, social interactions, and education. These norms, integral to Chinese Confucian and clan cultures, are consistently present in Chinese society and continually shape individual values and behavioral decisions (Guo et al. 2021).

In China, clan culture embodies ideas such as “one’s own clan” and “one’s own family,” emphasizing the natural attachment and mutual identification of individuals with their hometowns and clans. Under the profound influence of clan culture, members from the same hometown participate together in activities such as building ancestral halls, and worshipping deities and ancestors. These activities maintain the identity recognition of the clans among the townspeople and promote mutual dependency and trust among them (Guo et al. 2021). Consequently, with the reinforcement of clan “identity” beliefs, the sense of hometown identification and local belonging among local CEOs becomes stronger. According to the analysis provided, clan culture boosts the motivation of local CEOs to enhance corporate ESG performance.

Additionally, Chinese Confucian culture encompasses ideas such as “creating a world truly shared by all” “establishing virtue and reputation” and “leaving a good name for generations,” emphasizing the pursuit of personal fame and enduring legacy as core values. Confucian culture emphasizes the value of pursuing personal reputation and making one’s name enduringly known. Confucianism advocates individuals to pursue benevolence and contribute to society while building a lasting personal reputation through noble character and care for others. Moreover, Confucianism emphasizes that an individual’s reputation is not fleeting but can be passed on to future generations, profoundly impacting the reputation of the entire family. Consequently, Confucianism encourages people to strive for a reputation that endures through positive behaviors and contributions to society. Local CEOs, in comparison to their nonlocal counterparts, may have a more enduring impact in terms of reputation. To improve their local standing and ensure the longevity of their reputation through future generations, local CEOs tend to engage in ESG activities with a lasting positive impact on their hometown and its residents.

We measure clan culture through two different variables. First, following Guo et al. (2021), we measure clan culture by quantifying genealogies per capita in the city where the firm is located during the Qing Dynasty (*Clan\_1*). Second, following Talhelm et al. (2014), we measure clan culture by quantifying the per capita area of rice cultivation in the rural areas of the city where the company is situated in 1978 (*Clan\_2*). Genealogies, which record the origins, lineages, and histories of clans, are the core carriers of clan culture. Therefore, in areas with a strong clan culture atmosphere, clan members tend to preserve more genealogies.

Furthermore, since clan institutions evolved from agrarian economies and rice cultivation often requires heightened cooperation among farmers. Therefore, the area of rice cultivation can, to a certain extent, measure the clan culture of the region.

Similarly, we measure Confucian culture through two different variables. First, following Kung and Ma (2014), we identify it by using the number of remaining Confucian schools in the company’s city (*Confu\_1*). Second, following Huang et al. (2023), we measure it by using the number of remaining Confucian academies in the company’s city (*Confu\_2*). Schools and academies are important vehicles

for Confucian teaching and education, so the number of Confucian schools and academies in an area can be used to measure the extent of Confucian culture.

Table 8 presents the results for hypotheses rooted in social identity theory. The positive and significant coefficients for *Local\_c*×*Clan\_1* and *Local\_c*×*Clan\_2* in Columns (1) and (2) indicate that clan culture amplifies *Local\_c*'s positive impact on *ESG*. Similarly, the positive and significant coefficients for *Local\_c*×*Confu\_1* and *Local\_c*×*Confu\_2* in Columns (3) and (4) indicate that Confucian culture amplifies *Local\_c*'s enhancing impact on *ESG*. By combining the moderating influences of Confucian and clan cultures, we suggest that social identity theory adeptly accounts for the superior ESG performance of companies led by local CEOs.

**Table 8** The positive impact of local CEOs on ESG performance: social identity theory.

| Variables                       | ESG<br>(1)             | ESG<br>(2)             | ESG<br>(3)             | ESG<br>(4)             |
|---------------------------------|------------------------|------------------------|------------------------|------------------------|
| <i>Local_c</i>                  | 0.078<br>(1.401)       | 0.078<br>(1.540)       | -0.071<br>(-0.955)     | -0.011<br>(-0.180)     |
| <i>Clan_1</i>                   | 0.005<br>(0.641)       |                        |                        |                        |
| <i>Local_c</i> × <i>Clan_1</i>  | 0.024*<br>(1.672)      |                        |                        |                        |
| <i>Clan_2</i>                   |                        | 0.047<br>(1.161)       |                        |                        |
| <i>Local_c</i> × <i>Clan_2</i>  |                        | 0.157**<br>(2.084)     |                        |                        |
| <i>Confu_1</i>                  |                        |                        | 0.018**<br>(2.176)     |                        |
| <i>Local_c</i> × <i>Confu_1</i> |                        |                        | 0.063***<br>(2.933)    |                        |
| <i>Confu_2</i>                  |                        |                        |                        | -0.024<br>(-1.431)     |
| <i>Local_c</i> × <i>Confu_2</i> |                        |                        |                        | 0.104***<br>(3.351)    |
| <i>Size</i>                     | 0.239***<br>(15.673)   | 0.242***<br>(15.763)   | 0.239***<br>(15.665)   | 0.240***<br>(15.655)   |
| <i>Leverage</i>                 | -1.002***<br>(-12.370) | -1.009***<br>(-12.439) | -1.010***<br>(-12.491) | -1.010***<br>(-12.458) |
| <i>Roa</i>                      | 0.782***<br>(3.264)    | 0.780***<br>(3.260)    | 0.766***<br>(3.206)    | 0.775***<br>(3.243)    |
| <i>Age</i>                      | 0.412***<br>(21.535)   | 0.413***<br>(21.594)   | 0.411***<br>(21.502)   | 0.412***<br>(21.529)   |
| <i>Top1</i>                     | 0.046<br>(0.527)       | 0.042<br>(0.478)       | 0.061<br>(0.702)       | 0.048<br>(0.549)       |
| <i>Board</i>                    | 0.095<br>(1.155)       | 0.092<br>(1.129)       | 0.094<br>(1.146)       | 0.084<br>(1.021)       |
| <i>Independent</i>              | 1.883***<br>(7.214)    | 1.866***<br>(7.138)    | 1.903***<br>(7.306)    | 1.865***<br>(7.145)    |
| <i>Dual</i>                     | -0.072***<br>(-3.051)  | -0.074***<br>(-3.126)  | -0.065***<br>(-2.717)  | -0.070***<br>(-2.953)  |
| <i>CEO_Gen</i>                  | -0.012<br>(-0.301)     | -0.019<br>(-0.466)     | -0.018<br>(-0.457)     | -0.013<br>(-0.312)     |
| <i>CEO_Age</i>                  | 0.090<br>(1.112)       | 0.097<br>(1.192)       | 0.097<br>(1.201)       | 0.085<br>(1.059)       |
| <i>CEO_Edu</i>                  | 0.030**<br>(2.368)     | 0.028**<br>(2.204)     | 0.029**<br>(2.347)     | 0.031**<br>(2.483)     |
| <i>Constant</i>                 | -2.737***<br>(-5.637)  | -2.804***<br>(-5.756)  | -2.776***<br>(-5.741)  | -2.644***<br>(-5.466)  |
| <i>Industry/Year</i>            | Yes                    | Yes                    | Yes                    | Yes                    |
| <i>Observations</i>             | 10,640                 | 10,640                 | 10,640                 | 10,640                 |
| <i>R<sup>2</sup> a</i>          | 0.202                  | 0.202                  | 0.203                  | 0.202                  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance

at the 10%, 5%, and 1% level, respectively.

## 5.2. Explanations based on social capital theory

According to the theoretical analysis in Section 2, we argue that local CEOs have the ability to establish social capital, such as political connections, at a lower cost. This facilitates easier access to diverse resources such as credit and information, and enables them to efficiently maintain and leverage these resources, which is beneficial for *ESG* improvement. In accordance with Ren et al. (2021), we primarily consider the impact of social capital from three aspects: political capital, business capital, and other forms of social capital.

### 5.2.1. Considering the impact of political and business capital

In China, political capital holds paramount importance as a kind of social capital, given the government's control over vital resources such as policies and taxes crucial for the survival and development of enterprises.

Referring to Ren et al. (2021), we adopt three measures to assess the degree of political connection: (1) Whether the CEO has political connections (*PC\_dummy*) is indicated by whether the CEO has served as a deputy to the National People's Congress (NPC) or a member of the China People's Political Consultative Conference (CPPCC) at the county level or higher. If the CEO has served, *PC\_dummy* is 1; otherwise, it is 0. (2) The CEOs' political connection level (*PC\_level*) is denoted by the rank held as either a deputy to the NPC or a member of the CPPCC. The variable *PC\_level* ranges from 0 to 4, with each value representing a different political connection level: 0 signifies no political connections, 1 represents the county level, 2 represents the city level, 3 represents the provincial level, and 4 represents the national level. (3) The change in government officials (*PC\_change*) is represented by whether there was a change in the position of the party secretary or mayor in the company's city within that year. *PC\_change* is 1 if a change occurred; otherwise, it is 0.

**Table 9** The positive impact of local CEOs on ESG performance: controlling political capital and business capital.

| Variables        | ESG<br>(1)            | ESG<br>(2)             | ESG<br>(3)             |
|------------------|-----------------------|------------------------|------------------------|
| <i>Local_c</i>   | 0.162***<br>(4.227)   | 0.174***<br>(7.207)    | 0.162***<br>(6.622)    |
| <i>PC_dummy</i>  | 0.166<br>(1.589)      |                        | 0.163**<br>(2.104)     |
| <i>PC_level</i>  | -0.024<br>(-0.773)    |                        | -0.023<br>(-1.036)     |
| <i>PC_change</i> | 0.029<br>(1.146)      |                        | 0.029<br>(1.122)       |
| <i>BC_asso</i>   |                       | 0.009<br>(0.207)       | -0.008<br>(-0.185)     |
| <i>BC_fin</i>    |                       | 0.045<br>(0.926)       | 0.035<br>(0.712)       |
| <i>Size</i>      | 0.236***<br>(9.684)   | 0.239***<br>(15.613)   | 0.236***<br>(15.355)   |
| <i>Leverage</i>  | -1.008***<br>(-8.704) | -1.000***<br>(-12.348) | -1.007***<br>(-12.440) |
| <i>Roa</i>       | 0.822***<br>(2.669)   | 0.797***<br>(3.328)    | 0.826***<br>(3.452)    |
| <i>Age</i>       | 0.414***<br>(14.769)  | 0.413***<br>(21.566)   | 0.414***<br>(21.625)   |
| <i>Top1</i>      | 0.059<br>(0.448)      | 0.053<br>(0.612)       | 0.058<br>(0.663)       |
| <i>Board</i>     | 0.100<br>(0.830)      | 0.094<br>(1.151)       | 0.098<br>(1.199)       |

|                        |                       |                       |                       |
|------------------------|-----------------------|-----------------------|-----------------------|
| <i>Independent</i>     | 1.894***<br>(4.996)   | 1.896***<br>(7.254)   | 1.896***<br>(7.267)   |
| <i>Dual</i>            | -0.063*<br>(-1.752)   | -0.073***<br>(-3.027) | -0.064***<br>(-2.649) |
| <i>CEO_Gen</i>         | -0.006<br>(-0.092)    | -0.006<br>(-0.141)    | -0.005<br>(-0.131)    |
| <i>CEO_Age</i>         | 0.067<br>(0.533)      | 0.076<br>(0.944)      | 0.069<br>(0.858)      |
| <i>CEO_Edu</i>         | 0.027<br>(1.459)      | 0.029**<br>(2.302)    | 0.027**<br>(2.141)    |
| <i>Constant</i>        | -2.620***<br>(-3.409) | -2.665***<br>(-5.499) | -2.630***<br>(-5.387) |
| <i>Industry/Year</i>   | Yes                   | Yes                   | Yes                   |
| <i>Observations</i>    | 10,640                | 10,640                | 10,640                |
| <i>R<sup>2</sup> a</i> | 0.203                 | 0.202                 | 0.202                 |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

Business connection (BC) is another key resource for firms seeking resources and build their businesses, thus we further study the impact of business ties. We assess the degree of business ties via two methods: (1) Whether the CEO holds a position in one or more industry associations (*BC\_asso*). If the CEO holds, *BC\_asso* is 1; otherwise, it is 0. (2) Whether the CEO has worked in the financial sector (*BC\_fin*). If the CEO has worked, *BC\_fin* is 1; otherwise, it is 0.

The results, taking into account political capital and business capital, are presented in Table 9. The coefficients of *PC\_dummy*, *PC\_level*, and *PC\_change* in Column (1) are all insignificant, suggesting that political capital does not significantly impact ESG. The coefficients of *BC\_asso* and *BC\_fin* in Column (2) also fail to pass the 10% significance test, indicating that business capital has no effect on ESG. Additionally, *Local\_c*'s coefficients in Columns (1) and (2), after controlling for political capital or business capital, are 0.162 and 0.174, respectively, both significant at the 1% level. In column (3), *Local\_c*'s coefficient, after controlling for both political and commercial capital, remains positive and passes the 1% significance test. These findings indicate that ESG's improvement by *Local\_c* is not influenced by political capital or business capital.

### 5.2.2. Tests from a perspective of CEOs' tenure

In addition to considering the effects of political and business capital, following Ren et al. (2021), we utilize CEOs' tenure (*CEO\_tenure*) to measure the effects of other capitals. Typically, as the tenure of CEOs increases, the difference in resources between local and nonlocal CEOs decreases. *Local\_c*'s positive impact on ESG due to social capital is expected to diminish with longer tenure. Table 10 reports the results for CEOs with varying tenure periods. Table 10 reveals that the coefficients of *Local\_c* exhibit an upward trend as *CEO\_tenure* increases rather than a decreasing trend, and all these coefficients pass the 1% significance test. The findings in Table 10 indicate that social capital theory cannot explain why firms with local CEOs exhibit better ESG performance.

**Table 10** The positive impact of local CEOs on ESG performance: other capitals.

| Variables       | ESG<br>(1)             | ESG<br>(2)            | ESG<br>(3)            | ESG<br>(4)            |
|-----------------|------------------------|-----------------------|-----------------------|-----------------------|
|                 | Tenure <3              | 3<=Tenure <5          | 5<=Tenure <10         | Tenure>10             |
| <i>Local_c</i>  | 0.134***<br>(2.708)    | 0.152***<br>(3.673)   | 0.198***<br>(5.740)   | 0.200**<br>(2.567)    |
| <i>Size</i>     | 0.266***<br>(8.410)    | 0.102***<br>(3.314)   | 0.260***<br>(11.795)  | 0.402***<br>(9.538)   |
| <i>Leverage</i> | -1.635***<br>(-10.605) | -0.432***<br>(-2.765) | -0.543***<br>(-4.611) | -1.020***<br>(-4.195) |

|                        |                       |                     |                       |                       |
|------------------------|-----------------------|---------------------|-----------------------|-----------------------|
| <i>Roa</i>             | -1.008**<br>(-2.060)  | 2.456***<br>(5.224) | 1.643***<br>(4.945)   | 1.747**<br>(2.533)    |
| <i>Age</i>             | 0.661***<br>(20.142)  | 0.177***<br>(4.180) | -0.120**<br>(-2.462)  | 0.200<br>(1.504)      |
| <i>Top1</i>            | -0.037<br>(-0.219)    | 0.018<br>(0.117)    | 0.120<br>(0.972)      | -0.135<br>(-0.527)    |
| <i>Board</i>           | 0.237<br>(1.459)      | 0.084<br>(0.556)    | 0.094<br>(0.792)      | 0.048<br>(0.201)      |
| <i>Independent</i>     | 2.228***<br>(4.087)   | 1.704***<br>(3.772) | 2.110***<br>(5.477)   | 1.322**<br>(2.021)    |
| <i>Dual</i>            | -0.124***<br>(-2.588) | -0.012<br>(-0.291)  | -0.059*<br>(-1.715)   | -0.191**<br>(-2.501)  |
| <i>CEO_Gen</i>         | 0.046<br>(0.529)      | 0.031<br>(0.506)    | -0.067<br>(-1.211)    | -0.066<br>(-0.508)    |
| <i>CEO_Age</i>         | 0.120<br>(0.817)      | -0.106<br>(-0.787)  | 0.009<br>(0.072)      | 0.631**<br>(2.009)    |
| <i>CEO_Edu</i>         | 0.058**<br>(2.275)    | 0.007<br>(0.356)    | 0.011<br>(0.603)      | 0.052<br>(1.255)      |
| <i>Constant</i>        | -4.180***<br>(-4.390) | 1.489*<br>(1.687)   | -2.020***<br>(-2.744) | -7.899***<br>(-4.889) |
| <i>Industry/Year</i>   | Yes                   | Yes                 | Yes                   | Yes                   |
| <i>Observations</i>    | 3,241                 | 2,603               | 3,677                 | 1,068                 |
| <i>R<sup>2</sup> a</i> | 0.298                 | 0.106               | 0.116                 | 0.207                 |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

### 5.2.3. Tests from a perspective of talent mobility

Social mobility and social connection are strongly correlated (Li et al. 2008), highlighting that the ability to gain social capital is constrained by individual mobility. To curtail the size of large cities, the Chinese government implemented a stringent household registration management system. Hence, migrant populations, lacking a “Hukou”, face limitations in enjoying urban public services such as education, healthcare, and pensions, severely restricting labor mobility in China. In October 2015, recognizing the challenges faced by migrant populations, the Chinese State Council enacted the Interim Regulations on Residence Permits, aiming to safeguard the legal rights of migrants at a legal level. As the household registration system continues to undergo reforms, numerous cities have relaxed settlement restrictions to attract talent, resulting in a significant improvement in China’s talent market mobility.

The increase in individual mobility correspondingly diminishes the comparative advantage of local CEOs in terms of social capital, resulting in a subsequent decrease in the difference of social capital between local and nonlocal CEOs. If our core findings are attributable to social capital, we would expect the impact of *Local\_c* on *ESG* to diminish over the 2016-2021 period.

To test this hypothesis, we designate 2015 as the turning point of China’s household registration system reform and divide the sample into two periods: 2010-2015 (characterized by weak social mobility) and 2016-2021 (characterized by strong social mobility). Table 11 reports the results for the two periods. Table 11 shows that *Local\_c*’s coefficient is greater during strong social mobility periods than the weak social mobility periods, suggesting that *Local\_c* has a greater effect on *ESG* during strong social mobility periods. This means that the social capital theory hypothesis does not work to explain why companies with local CEOs exhibit better ESG performance.

**Table 11** The impact of local CEOs on ESG performance over time.

| Variables      | <i>ESG</i> |           |
|----------------|------------|-----------|
|                | 2010-2015  | 2016-2021 |
| <i>Local_c</i> | 0.106***   | 0.222***  |

|                        |           |           |
|------------------------|-----------|-----------|
|                        | (2.882)   | (7.117)   |
| <i>Size</i>            | 0.307***  | 0.217***  |
|                        | (12.819)  | (10.499)  |
| <i>Leverage</i>        | -1.665*** | -0.697*** |
|                        | (-13.988) | (-6.239)  |
| <i>Roa</i>             | -1.446*** | 1.533***  |
|                        | (-3.469)  | (5.261)   |
| <i>Age</i>             | 0.559***  | 0.342***  |
|                        | (20.038)  | (12.807)  |
| <i>Top1</i>            | -0.147    | 0.221*    |
|                        | (-1.185)  | (1.848)   |
| <i>Board</i>           | 0.110     | 0.113     |
|                        | (0.905)   | (1.033)   |
| <i>Independent</i>     | 2.089***  | 1.797***  |
|                        | (5.810)   | (4.993)   |
| <i>Dual</i>            | -0.003    | -0.111*** |
|                        | (-0.089)  | (-3.587)  |
| <i>CEO_Gen</i>         | -0.014    | -0.021    |
|                        | (-0.223)  | (-0.398)  |
| <i>CEO_Age</i>         | -0.087    | 0.171     |
|                        | (-0.710)  | (1.635)   |
| <i>CEO_Edu</i>         | 0.059***  | 0.012     |
|                        | (3.063)   | (0.705)   |
| <i>Constant</i>        | -3.422*** | -2.597*** |
|                        | (-4.671)  | (-4.033)  |
| <i>Industry/Year</i>   | Yes       | Yes       |
| <i>Observations</i>    | 4,054     | 6,586     |
| <i>R<sup>2</sup> a</i> | 0.286     | 0.167     |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

## 6. Further analysis

A significant amount of research confuses ESG and CSR; in fact, there are fundamental differences between them (STARKS 2023; Rau and Yu 2024; Gillan et al. 2021; Dathe et al. 2022). To reveal their specific differences, we introduce internal and external environmental changes to unveil whether local CEOs exhibit differential actions to ESG and CSR development under increased financial constraints and macroeconomic uncertainty from an informal system perspective. Referring to Zhu et al. (2022), this section utilizes Hexun's social responsibility rating to measure enterprises' CSR performance (*CSR\_rating*).

The KZ index serves as a metric for corporate finance constraints (*Cfc*), reflecting the changes in an enterprise's internal environments (Ding et al. 2022; Kaplan and Zingales 1997). Therefore, we utilize the KZ index as a metric for assessing the internal environments. We create the binary variable *Cfc*, which is assigned a value of 1 when the corporate financing constraint exceeds the industry median for each year, and 0 otherwise.

Macroeconomic uncertainty (*Meu*), representing the unpredictability of macroeconomic changes, is a crucial indicator of shifts in the external environments of the firms (Rossi and Sekhposyan 2015; Jia and Li 2020). Thus, we use the prefecture-level GDP growth rate's volatility to identify macroeconomic uncertainty. Volatility is quantified by calculating the standard deviation of the GDP growth rate from year *t* to year *t*+2 for the city where the company is located.

Table 12 presents the moderating effects of *Cfc* and *Meu* on the relationship between *Local\_c* and *ESG*. The coefficients of *Local\_c*×*Cfc* and *Local\_c*×*Meu* in Columns (3) and (5) are 0.099 and 0.027, respectively. Both are significant at the 1% level, meaning that local CEOs pay more attention to their

personal image and corporate reputation when faced with greater financing constraints and macroeconomic uncertainty. They demonstrate a stronger commitment to making corporate decisions that foster long-term local development. Consequently, the positive impact of *Local\_c* on *ESG* becomes more greater when local CEOs possess a determined resolve to ESG development, ensuring sustainable corporate development, particularly in times of accelerated changes in their firms' internal and external environments.

Table 13 reports the moderating effects of *Cfc* and *Meu* on the correlation between *Local\_c* and *CSR\_rating*. The coefficient of *Local\_c*×*Cfc* in Column (3) is 0.001, but it is not significant at the 10% level. Similarly, the coefficient of *Local\_c*×*Meu* in Column (5) is 0.011, which is also not significant at the 10% level. These findings indicate that *Cfc* and *Meu* do not have a moderating influence on the correlation between *Local\_c* and *CSR\_rating*.

**Table 12** The moderating impacts of internal and external environments on the relationship between local CEOs and ESG performance.

| Variables                   | ESG<br>(1)             | ESG<br>(2)            | ESG<br>(3)            | ESG<br>(4)             | ESG<br>(5)             |
|-----------------------------|------------------------|-----------------------|-----------------------|------------------------|------------------------|
| <i>Local_c</i>              | 0.174***<br>(7.210)    |                       | 0.123***<br>(3.611)   |                        | 0.121***<br>(3.605)    |
| <i>Cfc</i>                  |                        | -0.180***<br>(-6.842) | -0.212***<br>(-7.010) |                        |                        |
| <i>Local_c</i> × <i>Cfc</i> |                        |                       | 0.099**<br>(2.113)    |                        |                        |
| <i>Meu</i>                  |                        |                       |                       | -0.013*<br>(-1.757)    | -0.020**<br>(-2.306)   |
| <i>Local_c</i> × <i>Meu</i> |                        |                       |                       |                        | 0.027**<br>(2.213)     |
| <i>Size</i>                 | 0.239***<br>(15.611)   | 0.232***<br>(15.063)  | 0.230***<br>(15.046)  | 0.240***<br>(15.628)   | 0.239***<br>(15.691)   |
| <i>Leverage</i>             | -1.001***<br>(-12.361) | -0.770***<br>(-8.644) | -0.768***<br>(-8.667) | -1.001***<br>(-12.333) | -1.002***<br>(-12.406) |
| <i>Roa</i>                  | 0.793***<br>(3.315)    | 0.444*<br>(1.787)     | 0.414*<br>(1.676)     | 0.820***<br>(3.401)    | 0.770***<br>(3.207)    |
| <i>Age</i>                  | 0.414***<br>(21.655)   | 0.417***<br>(21.780)  | 0.419***<br>(21.998)  | 0.413***<br>(21.536)   | 0.414***<br>(21.652)   |
| <i>Top1</i>                 | 0.055<br>(0.625)       | 0.020<br>(0.228)      | 0.021<br>(0.241)      | 0.056<br>(0.638)       | 0.057<br>(0.648)       |
| <i>Board</i>                | 0.096<br>(1.178)       | 0.099<br>(1.207)      | 0.094<br>(1.151)      | 0.100<br>(1.215)       | 0.094<br>(1.153)       |
| <i>Independent</i>          | 1.899***<br>(7.283)    | 1.809***<br>(6.961)   | 1.885***<br>(7.256)   | 1.798***<br>(6.893)    | 1.885***<br>(7.224)    |
| <i>Dual</i>                 | -0.070***<br>(-2.955)  | -0.068***<br>(-2.876) | -0.067***<br>(-2.831) | -0.071***<br>(-2.978)  | -0.070***<br>(-2.932)  |
| <i>CEO_Gen</i>              | -0.007<br>(-0.174)     | -0.017<br>(-0.412)    | -0.007<br>(-0.185)    | -0.015<br>(-0.381)     | -0.009<br>(-0.216)     |
| <i>CEO_Age</i>              | 0.073<br>(0.909)       | 0.063<br>(0.781)      | 0.072<br>(0.893)      | 0.066<br>(0.810)       | 0.074<br>(0.911)       |
| <i>CEO_Edu</i>              | 0.029**<br>(2.301)     | 0.016<br>(1.303)      | 0.028**<br>(2.236)    | 0.016<br>(1.319)       | 0.028**<br>(2.261)     |
| <i>Constant</i>             | -2.657***<br>(-5.490)  | -2.310***<br>(-4.768) | -2.408***<br>(-4.995) | -2.498***<br>(-5.138)  | -2.619***<br>(-5.411)  |
| <i>Industry/Year</i>        | Yes                    | Yes                   | Yes                   | Yes                    | Yes                    |
| <i>Observations</i>         | 10,640                 | 10,640                | 10,640                | 10,640                 | 10,640                 |
| <i>R<sup>2</sup> a</i>      | 0.202                  | 0.201                 | 0.205                 | 0.198                  | 0.202                  |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

From Table 13, it is apparent that while *Local\_c* increases *CSR\_rating*, local CEOs no longer exhibit superior CSR performance when firms encounter heightened financing constraints and increased



uncertainty in the external environments. We identify three primary reasons for the disparate moderating effects of the internal and external environments on local CEOs' ESG and CSR performance.

First, in terms of the definitions of CSR and ESG, CSR centers on the ethical obligations of firms in social and environmental realms. In contrast, ESG not only emphasizes ethical obligations in social, environmental, and governance aspects but also underscores the need for firms to manage ESG-related risks and explore ESG-related business opportunities (Clementino and Perkins 2021; Dathe et al. 2022). Essentially, CSR involves “doing good” on a moral level, while ESG entails “acting both righteously and beneficially” at the corporate strategy level (Rau and Yu 2024; Dathe et al. 2022). ESG's broader connotation encompasses a wider array of corporate strategies and policy changes, highlighting the adaptability and governance capabilities of enterprises in response to shifts in the external environments. Consequently, ESG needs closer attention to and adaptation to changes in the external environments, justifying the significance of *Cfc* and *Meu* as moderating variables between *Local\_c* and *ESG*.

**Table 13** The moderating impacts of internal and external environments on the relationship between local CEOs and CSR performance.

| Variables                   | <i>CSR_rating</i><br>(1) | <i>CSR_rating</i><br>(2) | <i>CSR_rating</i><br>(3) | <i>CSR_rating</i><br>(4) | <i>CSR_rating</i><br>(5) |
|-----------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Local_c</i>              | 0.014*<br>(1.744)        |                          | 0.011<br>(0.871)         |                          | 0.008<br>(0.714)         |
| <i>Cfc</i>                  |                          | -0.009***<br>(-3.458)    | -0.009***<br>(-3.151)    |                          |                          |
| <i>Local_c</i> × <i>Cfc</i> |                          |                          | 0.001<br>(0.272)         |                          |                          |
| <i>Meu</i>                  |                          |                          |                          | -0.003<br>(-0.335)       | -0.006<br>(-0.643)       |
| <i>Local_c</i> × <i>Meu</i> |                          |                          |                          |                          | 0.011<br>(0.687)         |
| <i>Size</i>                 | 0.060***<br>(10.863)     | 0.060***<br>(10.854)     | 0.060***<br>(10.842)     | 0.060***<br>(10.867)     | 0.060***<br>(10.842)     |
| <i>Leverage</i>             | 0.052**<br>(2.088)       | 0.053**<br>(2.131)       | 0.053**<br>(2.133)       | 0.055**<br>(2.039)       | 0.055**<br>(2.047)       |
| <i>Roa</i>                  | 1.875***<br>(19.929)     | 1.870***<br>(19.930)     | 1.867***<br>(19.877)     | 1.872***<br>(19.455)     | 1.869***<br>(19.446)     |
| <i>Age</i>                  | 0.044***<br>(8.112)      | 0.045***<br>(8.141)      | 0.045***<br>(8.141)      | 0.044***<br>(8.091)      | 0.045***<br>(8.140)      |
| <i>Top1</i>                 | -0.024<br>(-0.808)       | -0.024<br>(-0.798)       | -0.024<br>(-0.798)       | -0.025<br>(-0.828)       | -0.024<br>(-0.824)       |
| <i>Board</i>                | -0.003<br>(-0.100)       | -0.004<br>(-0.139)       | -0.005<br>(-0.153)       | -0.003<br>(-0.087)       | -0.003<br>(-0.099)       |
| <i>Independent</i>          | -0.022<br>(-0.238)       | -0.040<br>(-0.435)       | -0.033<br>(-0.365)       | -0.029<br>(-0.311)       | -0.023<br>(-0.248)       |
| <i>Dual</i>                 | 0.001<br>(0.193)         | 0.001<br>(0.185)         | 0.002<br>(0.195)         | 0.001<br>(0.192)         | 0.002<br>(0.206)         |
| <i>CEO_Gen</i>              | -0.007<br>(-0.449)       | -0.007<br>(-0.487)       | -0.007<br>(-0.449)       | -0.007<br>(-0.496)       | -0.006<br>(-0.444)       |
| <i>CEO_Age</i>              | -0.013<br>(-0.484)       | -0.013<br>(-0.481)       | -0.012<br>(-0.457)       | -0.014<br>(-0.512)       | -0.013<br>(-0.485)       |
| <i>CEO_Edu</i>              | 0.010**<br>(2.519)       | 0.009**<br>(2.246)       | 0.010**<br>(2.468)       | 0.009**<br>(2.280)       | 0.010**<br>(2.507)       |
| <i>Constant</i>             | 0.624***<br>(3.632)      | 0.659***<br>(3.835)      | 0.650***<br>(3.777)      | 0.637***<br>(3.725)      | 0.630***<br>(3.679)      |
| <i>Industry/Year</i>        | Yes                      | Yes                      | Yes                      | Yes                      | Yes                      |
| <i>Observations</i>         | 10,640                   | 10,640                   | 10,640                   | 10,640                   | 10,640                   |
| <i>R<sup>2</sup> a</i>      | 0.160                    | 0.161                    | 0.161                    | 0.160                    | 0.160                    |

The t-statistics based on robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* denote the significance at the 10%, 5%, and 1% level, respectively.

Secondly, in terms of stakeholders, CSR engages non-qualified stakeholders such as the general public,

communities, and charities (Rau and Yu 2024). In contrast, ESG primarily involves stakeholders like investors, policy makers (regulators), and suppliers, all of which are closely tied to the interests of the enterprises (Rau and Yu 2024). CEOs naturally focus more on changes in the external environments during the ESG governance process as these stakeholders are intimately associated with the enterprises' interests.

Thirdly, regarding reputation management, CSR aims to avoid negative reputation issues, while ESG seeks to enhance corporate reputation capital and further attract ESG investors and improve employee loyalty. To enhance corporate reputation capital, CEOs naturally focus more on the close connections with corporate strategy and operations, ultimately making strategic decisions based on changes in the external business environments. Thus, both increased financing constraints and macroeconomic uncertainty reinforce *Local\_c*'s ESG-enhancing effect, while neither influences *Local\_c*'s CSR\_rating-enhancing effect.

## 7. Conclusion

This study utilizes a panel regression model to examine the impact of local CEOs on corporate ESG performance based on data from 1,807 Chinese listed private firms spanning from 2010 to 2021. The findings reveal that local CEOs are significant in advancing corporate ESG performance. The findings remain consistent even after rigorous robustness checks. Mechanism analysis indicates that the better ESG performance associated with local CEOs stems from their hometown identity. Social capital is not the underlying mechanism through which local CEOs promote corporate ESG performance; this study excludes the hypothesis of social capital theory. This study, upon further examination, reveals that when companies face greater financing constraints and macroeconomic uncertainty, local CEOs continue to prioritize ESG development but no longer emphasize CSR development.

The implications of our findings can be extended to policymakers seeking to bolster corporate ESG practices and enhance overall ESG performance, especially in nations grappling with insufficient formal institutions. Our findings have important policy implications for the government in driving corporate ESG development and enhancing corporate ESG performance, particularly in countries with insufficient formal systems. First, the government should improve the development of informal institutions and strengthen informal governance to compensate for the shortcomings in formal systems in the process of enhancing corporate ESG performance. Second, social identity is the underlying mechanism through which local CEOs promote corporate ESG performance, while social capital is not, so enhancing CEOs' social identity is crucial in the process of local CEOs driving corporate ESG development. Third, ESG and CSR have essential differences, the government should recognize their distinctions and provide differentiated incentive policies to encourage companies to strengthen ESG and CSR development.

## References:

- Adler, P. S., & Kwon, S.-W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.
- Akerlof, G. A., & Kranton, R. E. (2000). Economics and identity. *The Quarterly Journal of Economics*, 115(3), 715-753.
- Al-Shammari, M., Rasheed, A., & Al-Shammari, H. A. (2019). CEO narcissism and corporate social responsibility: does CEO narcissism affect CSR focus? *Journal of Business Research*, 104, 106-117.

- Asante-Appiah, B., & Lambert, T. A. (2022). The role of the external auditor in managing environmental, social, and governance (ESG) reputation risk. *Review of Accounting Studies*, 1-53.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20-39.
- Avramov, D., Cheng, S., Lioui, A., & Tarelli, A. (2022). Sustainable investing with ESG rating uncertainty. *Journal of Financial Economics*, 145(2), 642-664.
- Bertrand, O., Betschinger, M.-A., & Moschieri, C. (2021). Are firms with foreign CEOs better citizens? A study of the impact of CEO foreignness on corporate social performance. *Journal of International Business Studies*, 52, 525-543.
- Chen, J., Yang, Y., Liu, R., Geng, Y., & Ren, X. (2023). Green bond issuance and corporate ESG performance: the perspective of internal attention and external supervision. *Humanities and Social Sciences Communications*, 10(1), 1-12.
- Choi, D., Shin, H., & Kim, K. (2023). CEO's childhood experience of natural disaster and CSR activities. *Journal of Business Ethics*, 1-26.
- Clementino, E., & Perkins, R. (2021). How do companies respond to environmental, social and governance (ESG) ratings? Evidence from Italy. *Journal of Business Ethics*, 171, 379-397.
- Coleman, J. S. (1994). *Foundations of Social Theory*: Harvard University Press.
- Cronqvist, H., & Yu, F. (2017). Shaped by their daughters: Executives, female socialization, and corporate social responsibility. *Journal of Financial Economics*, 126(3), 543-562.
- Dathe, T., Dathe, R., Dathe, I., & Helmold, M. (2022). *Corporate social responsibility (CSR), sustainability and environmental social governance (ESG): approaches to ethical management*: Springer Nature.
- Dimson, E., Karakaş, O., & Li, X. (2015). Active ownership. *The Review of Financial Studies*, 28(12), 3225-3268.
- Ding, N., Gu, L., & Peng, Y. (2022). Fintech, financial constraints and innovation: Evidence from China. *Journal of Corporate Finance*, 73, 102194.
- Dinger, J., Conger, M., Hekman, D., & Bustamante, C. (2020). Somebody that I used to know: the immediate and long-term effects of social identity in post-disaster business communities. *Journal of Business Ethics*, 166, 115-141.
- Drempetic, S., Klein, C., & Zwergel, B. (2020). The influence of firm size on the ESG score: Corporate sustainability ratings under review. *Journal of Business Ethics*, 167, 333-360.
- Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, social and governance (ESG) scores and financial performance of multinationals: Moderating effects of geographic international diversification and financial slack. *Journal of Business Ethics*, 168(2), 315-334.
- Ferris, S. P., Javakhadze, D., & Rajkovic, T. (2017). CEO social capital, risk-taking and corporate policies. *Journal of Corporate Finance*, 47, 46-71.
- Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, 101889.
- Guo, P., Shi, G., Tian, G. G., & Duan, S. (2021). Politicians' hometown favoritism and corporate investments: The role of social identity. *Journal of Banking & Finance*, 125, 106092.
- Gupta, A., Nemani, A., & Raman, K. (2023). Ethical Issues Around Share Repurchase Announcements: The Role of Social Capital. *Journal of Business Ethics*, 1-24.
- Hambrick, D. C. (2007). Upper Echelons Theory: An Update. *Academy of Management Review*, 32(2).
- Hernández, B., Hidalgo, M. C., Salazar-Laplace, M. E., & Hess, S. (2007). Place attachment and place identity in natives and non-natives. *Journal of Environmental Psychology*, 27(4), 310-319.
- Hu, Y. (2023). Local CEOs, career concerns and voluntary disclosure. *Journal of Business Finance & Accounting*, 50(3-4), 565-597.
- Huang, M., Li, X., Xia, J., & Li, M. (2023). Does Confucianism Prompt Firms to Participate in Poverty Alleviation Campaigns? *Journal of Business Ethics*, 1-20.
- Jia, J., & Li, Z. (2020). Does external uncertainty matter in corporate sustainability performance? *Journal of Corporate Finance*, 65, 101743.
- Jiang, F., Qian, Y., & Yonker, S. E. (2019). Hometown biased acquisitions. *Journal of Financial and Quantitative Analysis*, 54(5), 2017-2051.
- Kaplan, S. N., & Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints? *The Quarterly Journal of Economics*, 112(1), 169-215.
- Kong, D., Pan, Y., Tian, G. G., & Zhang, P. (2020). CEOs' hometown connections and access to trade credit: Evidence from China. *Journal of Corporate Finance*, 62, 101574.

- Kong, G., Kong, T. D., Qin, N., & Yu, L. (2023). Ethnic diversity, trust and corporate social responsibility: the moderating effects of marketization and language. *Journal of Business Ethics*, 187(3), 449-471.
- Kung, J. K.-s., & Ma, C. (2014). Can cultural norms reduce conflicts? Confucianism and peasant rebellions in Qing China. *Journal of Development Economics*, 111, 132-149.
- Lai, S., Li, Z., & Yang, Y. G. (2020). East, West, home's best: Do local CEOs behave less myopically? *The Accounting Review*, 95(2), 227-255.
- Li, Y., Savage, M., & Warde, A. (2008). Social mobility and social capital in contemporary Britain. *The British Journal of Sociology*, 59(3), 391-411.
- Lin, N. (2000). Inequality in social capital. *Contemporary Sociology*, 29(6), 785-795.
- Lin, N. (2017). Building a network theory of social capital. *Social Capital*, 3-28.
- Locksley, A., Ortiz, V., & Hepburn, C. (1980). Social categorization and discriminatory behavior: Extinguishing the minimal intergroup discrimination effect. *Journal of Personality and Social Psychology*, 39(5), 773.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117-127.
- Oh, W.-Y., Chang, Y. K., & Jung, R. (2019). Board characteristics and corporate social responsibility: does family involvement in management matter? *Journal of Business Research*, 103, 23-33.
- Pool, V. K., Stoffman, N., & Yonker, S. E. (2012). No place like home: Familiarity in mutual fund manager portfolio choice. *The Review of Financial Studies*, 25(8), 2563-2599.
- Rau, P. R., & Yu, T. (2024). A survey on ESG: investors, institutions and firms. *China Finance Review International*, 14(1), 3-33.
- Ren, S., Cheng, Y., Hu, Y., & Yin, C. (2021). Feeling right at home: Hometown CEOs and firm innovation. *Journal of Corporate Finance*, 66, 101815.
- Ren, S., Sun, H., & Tang, Y. (2023). CEO's hometown identity and corporate social responsibility. *Journal of Management*, 49(7), 2455-2489.
- Rigolini, A., & Huse, M. (2021). Women and multiple board memberships: Social capital and institutional pressure. *Journal of Business Ethics*, 169, 443-459.
- Rossi, B., & Sekhposyan, T. (2015). Macroeconomic uncertainty indices based on nowcast and forecast error distributions. *American Economic Review*, 105(5), 650-655.
- Shahbaz, M., Karaman, A. S., Kilic, M., & Uyar, A. (2020). Board attributes, CSR engagement, and corporate performance: what is the nexus in the energy sector? *Energy Policy*, 143, 111582.
- Siisiainen, M. (2003). Two concepts of social capital: Bourdieu vs. Putnam. *International Journal of Contemporary Sociology*, 40(2), 183-204.
- Spence, L. J., Schmidpeter, R., & Habisch, A. (2003). Assessing social capital: Small and medium sized enterprises in Germany and the UK. *Journal of Business Ethics*, 47, 17-29.
- STARKS, L. T. (2023). Presidential Address: Sustainable Finance and ESG Issues—Value versus Values. *The Journal of Finance*.
- Tajfel, H., & Turner, J. C. (2004). The Social Identity Theory of Intergroup Behavior. In *Political Psychology* (pp. 276-293): Psychology Press.
- Talhelm, T., Zhang, X., Oishi, S., Shimin, C., Duan, D., Lan, X., et al. (2014). Large-scale psychological differences within China explained by rice versus wheat agriculture. *Science*, 344(6184), 603-608.
- Tang, S., He, L., Su, F., & Zhou, X. (2023). Does directors' and officers' liability insurance improve corporate ESG performance? Evidence from China. *International Journal of Finance & Economics*.
- Tang, Y., Mack, D. Z., & Chen, G. (2018). The differential effects of CEO narcissism and hubris on corporate social responsibility. *Strategic Management Journal*, 39(5), 1370-1387.
- Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, 44(5), 996-1004.
- Wang, H., Shen, H., & Li, S. (2023). ESG performance and stock price fragility. *Finance Research Letters*, 104101.
- Yin, J., Li, J., & Ma, J. (2023). The Effects of CEO Awards on Corporate Social Responsibility Focus. *Journal of Business Ethics*, 1-20.
- Yonker, S. E. (2017a). Do managers give hometown labor an edge? *The Review of Financial Studies*, 30(10), 3581-3604.
- Yonker, S. E. (2017b). Geography and the market for CEOs. *Management Science*, 63(3), 609-630.
- You, L. (2023). The impact of social norms of responsibility on corporate social responsibility short title: The impact of social norms of responsibility on corporate social responsibility. *Journal of Business Ethics*, 1-18.

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Zhu, H., Pan, Y., Qiu, J., & Xiao, J. (2022). Hometown ties and favoritism in Chinese corporations: Evidence from CEO dismissals and corporate social responsibility. *Journal of Business Ethics*, 1-28.