Hometown CEOs and Pollution Emissions: Evidence from Chinese Listed Companies

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Abstract

This study examines the relationship between CEO locality and corporate pollution emissions for a sample of Chinese A-share listed firms from 2008 to 2020. When the CEO's hometown is consistent with the province of firm registration, the local CEOs are more likely to take measures conducive to environmental protection, such as increasing environmental investment to reduce corporate pollution. The results are robust to alternative model specifications, endogeneity issues, sampling criteria, and variable definitions. We identify executive social relations and long-termism as two potential channels. Overall, our findings demonstrate the important role of CEO locality in reducing corporate pollution and fulfilling social responsibilities.

JEL Classification: H23, M51, O17
Keywords: CEO locality, environmental governance, informal institution

1 Introduction

When analyzing the economic behavior of a firm, formal systems such as policies and regulations are always of great concern. However, research shows that formal systems do not completely control and restrict a firm's decision-making, particularly in relation to social responsibility, such as environmental governance. Therefore, when examining a firm's fulfillment of social responsibility, informal systems must also be considered. Informal systems refer to behavior norms that gradually develop through long-term social interaction and are recognized by society, including customs, traditions, moral ethics, and ideologies. Compared to Western countries, China has a rich cultural heritage, and informal systems play a particularly critical role in social and economic development (Chen et al., 2013).

Chinese have a strong attachment to their hometowns, and they have developed a sense of gratitude and awe towards their land since the agricultural civilization (Hu, Song, and Wang, 2017). This emotional attachment is deeply ingrained in their bloodline and is a crucial informal system in Chinese society. Hometown identity, as an important indicator of this informal system, has different effects on various aspects of a firm. Relevant literature shows that hometown identity significantly affects a person's cognition and behavior (Scannell and Gifford, 2010), making individuals feel a sense of belonging and self-control in a familiar environment (Korpela, 1989; Twigger-Ross and Uzzell, 1996), enhancing their confidence in their abilities and decision-making, and leading to economic growth for the firm (Li and Wen, 2022). As a significant indicator of China's informal system, a CEO's hometown identity also significantly affects a firm's innovation capabilities (Ren et al., 2021) and investment decisions (Cao, Liu, and Jia, 2018). Despite the increasing attention given to informal institutions in

Chinese society based on local relationships, there is still a lack of corresponding research on their impact on business operations.

In recent years, green, low-carbon, and sustainable development is currently the global development consensus. The Chinese government has proposed the goal of peak carbon dioxide emissions and carbon neutrality, incorporated it into the overall layout of ecological civilization construction, and emphasized the need to strengthen corporate environmental governance as a key focus to develop the ecological economy better. As an organic component of the economic society, corporate environmental protection measures and active implementation of ESG concepts not only affect their development quality and sustainability but also affect the high-quality development of the entire society. The vast majority of environmental pollution is caused by enterprises, making corporate emissions the main polluters (Shen, Xie, and Chen, 2012). Therefore, energy conservation and emission reduction and promoting corporate environmental governance are considered important actions to achieve high-quality development and enhance dual commercial and social value. Especially in the field of corporate pollution control, according to current research ideas, the basic characteristic of enterprises is profit-oriented. Environmental protection investment is difficult to produce direct and observable economic benefits in the short term (Orsato, 2006), and investment in environmental protection hardware facilities or technology will also have a negative impact on enterprise profit growth, increasing business risks (Arouri et al., 2012). In addition, environmental regulation is an important influencing factor for enterprise emissions. Studies have shown that when large enterprises reduce pollution emissions by reducing pollution intensity, small and medium-sized enterprises mainly adopt the method of reducing production scale to reduce their emissions (Chen, Zhang, and Liu, 2021). Recently,

research has focused on the economic effects of corporate pollution control measures rather than using the CEO's hometown identity as a direct measure.

The research on the impact of CEO hometown identity on corporate environmental performance through related factors in the existing literature is still incomplete. Therefore, the relationship between the informal institution of the CEO's hometown identity and corporate pollution is still a worthy empirical issue to be studied. We connect CEO's hometown identity with corporate pollution and refer to Yonker (2017) indicators to determine whether the CEO is a local person by comparing the CEO's place of birth with the firm's registered information and using the pollution cost of the firm to reflect the degree of pollution. CEO hometown identity can affect the decisions of senior executives (Kyle, Graefe, and Manning, 2005), and the CEO's social relation and long-termism may have two effects on this mechanism: politically connected executives can obtain government subsidies through rent-seeking mechanisms and promote corporate emissions reduction (Yu, Hui, and Pan, 2010), and hometown CEOs may pay more attention to the pollution situation in their hometowns and the firm's emissions. This article takes local CEOs as the entry point to examine whether CEO's hometown identity will have a positive impact on corporate emissions reduction.

This article selects firms listed on the Shanghai and Shenzhen A-share stock markets in China from 2008 to 2020 as research samples and analyzes the impact of hometown identity on corporate pollution fees through a panel data fixed effects model. Our study shows that CEO's hometown identity significantly affects the allocation of pollution fees in firms. To further verify the robustness of the results, we first introduce the instrumental variable *Zone* (Economic Special Zone) as a tool variable for two-stage regression. The CEO's hometown

identity still has a significant positive impact on pollution fees. Secondly, we conduct sample selection in the study, excluding samples with registered addresses in municipalities, all data from 2008-2009, and samples with registered addresses in first-tier cities, and conduct regression again. Finally, we replace the dependent variables with *DFee* and *Inveatment* respectively, and the regression results are consistent with the previous conclusions, which proves the robustness of the research results. At the same time, through heterogeneity analysis, we found that hometown CEOs have a more significant governance effect on state-owned firms, politically related firms, and low-polluting industries, further enriching the empirical results.

In addition, we empirically tested two potential channels through how CEO's hometown identity affects corporate pollution. We found in our research that CEOs' social relations and long-termism have a significant impact on corporate pollution decision-making. For CEO's social relationships, we adopted two indicators, government subsidies for environmental protection *LnGovE* and total subsidies *LnGovT* to firms, as mediating variables. For CEO's long-termism, we adopted retired CEOs *Retire* and ESG environmental performance *ESG* as measures. The coefficients of the mediating variables were all significantly positive, indicating that our speculation about the two channels was correct. Hometown CEOs use social relationships to obtain more government or total subsidies, reducing corporate pollution. When a firm's CEO approaches retirement, pollution levels increase, but the negative impact is mitigated by the CEO's hometown identity consistent with the firm's long-termism. CEO hometown identity promotes the firm's adoption of more environmentally friendly measures by changing the firm's long-termism and focusing on long-term growth.

The main contribution of our study lies in three aspects. First, in previous literature

research, scholars have found that identification with one's hometown can influence executive decision-making (Kyle, Graefe, and Manning, 2005), but there is a lack of research on how a CEO's hometown identity affects corporate pollution decision-making. This article provides supplementary ideas on understanding the impact of corporate executive hometown identity on the decision-making process, confirming the influence of CEO hometown identity on their decision-making process. Furthermore, the article focuses on studying corporate pollution behavior and environmental performance, providing new empirical evidence for the relationship between executive hometown identity and corporate environmental governance, and expanding the research direction of informal institutions at the enterprise level. Through empirical research, this article finds that CEO hometown identity has a significant impact on corporate pollution decision-making and improves the understanding of the influence and mechanism of CEO hometown identity on corporate environmental pollution, enriching the research ideas of informal institutions in the microeconomic field.

Second, according to previous scholars, hometown CEOs are more inclined to integrate their self-awareness into their hometown environment (Ratter and Gee, 2012), thus maximizing the reduction of harmful environmental governance behavior in corporate decision-making and even supporting companies to invest more resources in environmental protection and energy conservation to protect their hometown environment. Therefore, this article provides new reference standards for corporate executive evaluation and the selection and corporate social responsibility governance. This article examines the impact mechanism from two aspects: CEO social relationships (government environmental subsidies and total subsidies) and CEO long-term positioning (retired CEOs and ESG performance), providing more comprehensive observation indicators for selecting executives in the enterprise. Our

conclusion shows that CEOs' hometown identity will affect their pollution decision-making because they are more likely to obtain government subsidies and long-term positioning.

Finally, existing literature has identified many factors that influence corporate pollution governance, such as under environmental regulation, large enterprises mainly reduce emission intensity through effective pollution control, while small and medium-sized enterprises mainly reduce pollution emissions by reducing production scale, leading to a reduction in output (Chen, Zhang, and Liu, 2021); and pollution enterprises are affected by the "financing penalty" of green credit, and the green credit policy issued by the state shows strict restrictions on loans to heavily polluting enterprises (Su and Lian, 2018). Our research provides new ideas for managing corporate pollution, that is, starting from the CEO's hometown identity, guiding, managing, and planning the emission governance of relevant pollution enterprises. This provides a theoretical basis for the government to formulate policies for corporate pollution governance, which is conducive to environmental protection and sustainable economic development.

The remainder of the paper is organized as follows: Section 2 briefly reviews relevant literature and develops the main hypothesis. Section 3 describes the sample and empirical design. Section 4 reports the empirical results, including baseline regression, robustness checks and cross-sectional heterogeneity. Section 5 tests the potential mechanisms; Section 6 finally provides conclusions and discusses the policy implications.

2 Literature review and hypothesis development

2.1 CEO hometown identity

Since ancient times, the Chinese people have had a strong attachment to their hometowns. Influenced by thousands of years of Confucianism and traditional culture, China has a remarkably profound emotional connection to one's place of origin (Hu, Song, and Wang, 2017). The sentiment is evident in the current phenomenon of the large-scale return to hometowns during the spring festival period and throughout history. For people, their hometown represents emotional elements such as their growth and memories, life experiences, and cultural identity. It is more than just a place to live, but a haven for the soul. Thinking about one's hometown cultivates a sense of identity with it. This connection is called hometown identity, in which we identify with the local culture and regional spiritual belongings and form a special emotional connection with a particular location (Vicedo, 2017; Greider and Garkovich, 1994). Our hometown holds our warmest and happiest childhood memories. For this reason, people are willing to spend time, effort, and finances to maintain their most cherished places from childhood (Halpenny, 2010).

Hometown identity plays a crucial role in shaping a person's identity. As the place where we were born and raised, our hometown inevitably influences the formation of our psychological traits. A sense of belonging to a particular place can satisfy our human needs for safety, comfort, and continuity (Moore, 2000; Nielsen-Pincus et al., 2010; Scannell and Gifford, 2010). Hometown identity is not just a geographic category but is deeply connected to the environment and social psychology (Qian and Zhu, 2014; Scannell and Gifford, 2010). It can trigger intense emotions, significantly impacting a person's cognition and behavior

(Scannell and Gifford, 2010). Hometown identity can affect a person's judgment and hence, influence their decision-making within firms. An individual's attachment to their hometown can result in a preference for things related to the hometown and consequently impact their decision-making processes. Even though the rational person hypothesis emphasizes that firm executives pursue profit maximization as the ultimate goal (Hambrick and Mason, 1984), environmental psychology suggests that the emotional attachment to one's hometown also influences the decision-making of senior executives (Kyle, Graefe, and Manning, 2005). As such, a CEO's decision-making process may also be affected by their hometown identity, even though they may be driven primarily by a profit motive.

2.2 Environmental governance

The environmental issues in China have had a significant negative impact on the speed and quality of economic growth, public health, and governmental image. Research has indicated that the vast majority of environmental pollution is produced by firms, making them the primary creators of pollution (Shen, Xie, and Chen, 2012). Given the current context of rapid economic development in which we find ourselves, it is even more crucial for industrial firms to control their polluting emissions and fulfill their environmental protection responsibilities, thus progressing in their development while simultaneously protecting the environment.

From a firm environmental governance investment perspective, environmental protection is regarded as part of voluntary investment since formal mechanisms, such as environmental protection laws and regulations, lack mandatory constraints, such as environmental protection taxes (Orsato, 2006). Moreover, businesses are profit-oriented, and environmental

protection investment cannot produce direct and considerable short-term economic benefits (Arouri et al., 2012). Investing in green hardware or technology can adversely affect the growth of corporate profits and increase operational risks. Corporate pollutant emissions are influenced by various factors, and previous studies have mainly focused on the impact of environmental regulations on different types of business pollution behavior. In environmental regulation, large firms primarily reduce their emission intensity through efficient pollution controls, and small and medium firms mainly reduce their pollution emissions by reducing production capacity, resulting in fewer outputs (Chen, Zhang, and Liu, 2021). The implementation of green credit policies can negatively impact the physical operation of heavily polluting firms through financing constraints, thereby forcing them to reduce production and achieve emissions reductions. High-polluting firms affected by financing penalties from green credit policies demonstrate strict limitations on loan issuance, making it difficult to handle the substantial investments required for environmental protection without credit to support them (Su and Lian, 2018).

At the same time, political relations can also impede corporate environmental performance. The impact of political relations was studied from two perspectives: patronage and tunnel channels. The conclusion was that politically connected firms voluntarily spend more money to improve environmental problems and enhance their competitive advantages after losing their political connections, which benefits firms by increasing their value. The pathway through which political relations affect business pollution decisions has been studied in the existing literature. However, the research on the impact of the CEO's hometown identity on corporate environmental performance is not yet fully developed. Therefore, this study examines the impact of this informal system on corporate pollution from the perspective of

whether the CEO is local and supplements existing literature.

2.3 CEO hometown identity and environmental governance

From a business management perspective, corporate pollution emissions decisions are related to the compensation or benefits that firms can obtain from them. The neoclassical economic school holds a positive attitude towards the social and positive external effects of corporate environmental governance. However, in the context of imperfect incentive systems, the additional benefits brought to firms by environmental governance are smaller than the social benefits and the costs incurred cannot receive adequate compensation. As a result, the costs of environmental governance will decrease the enthusiasm of firms to protect the environment. Particularly in firms with high environmental difficulty, there may be behavior among firms with high pollution emissions, such as blame-shifting (Ji and Su, 2016).

Meanwhile, in response to the escalating environmental pollution situation, a series of formal systems that include environmental protection laws and regulations have been enacted since the 18th National Congress, proving to be highly effective in driving the transformation of heavily polluting firms. CEOs' sense of identity with their hometown, considered an informal system, plays a significant role in supporting formal systems in three ways. Firstly, igniting CEO's hometown identity can enhance their sense of mission towards environmental protection and thereby restrain the negative impact on their investment in environmental protection, playing a role as a negative regulator. Secondly, CEOs' sense of identity with their hometown will curb the profit-seeking tendencies of their firm. Although the rational person hypothesis emphasizes that the objectives of top executives are typically set to pursue profit maximization (Hambrick and Mason, 1984), environmental psychology suggests that

people's identification with their hometown will impact the decision-making of executives (Kyle, Graefe, and Manning, 2005). They will consciously or subconsciously integrate themselves into their hometown environment (Ratter and Gee, 2012), thus minimizing profit-seeking behavior detrimental to environmental governance and potentially allocating more resources towards investments in environmental protection assets, with the aim of protecting the hometown environment to the greatest extent possible. Thirdly, hometown CEOs shoulder greater group pressure. As China is a typical relationship-oriented society, hometown identity will increase the group influence on top executives, compelling them to bear greater environmental protection responsibilities and obligations. Based on the aforementioned considerations, we propose the following hypothesis:

H1*: Compared to other firms, firms with local CEOs tend to incur lower costs related to pollution emissions.*

On the one hand, in modern firms, the separation of ownership and management creates a divergence in the objective functions of owners and managers, which leads to conflicts of interest and goal differences in the principal-agent relationship. The central problem of the principal-agent relationship is how to design the optimal contract to motivate the agents in the context of conflicts of interest and information asymmetry faced by the principal (Lewis and Sappington, 1991). The issues of agency problems and incentives distribution have long been topics of concern for directors in corporate governance. Studies have shown that the stronger the incentives given to the agent, the more the CEO will focus on the correctness of their decisions, and the more likely they are to adhere to their views and refuse the principal's orders.

On the other hand, considering the actual ownership of the firm by the directors, even

if it is separated from the CEO's control, agreement on the interests can create an indirect impact on the local directors' decisions on the firm's pollution control. Studies have shown that through management shareholdings, the interests between executives and directors can remain aligned, thus mitigating agency problems (Singh and Davidson III, 2003). Based on the previous section on the impact of local directors on pollution emissions, we propose the following research hypothesis:

H2: *Compared to other firms, firms that have local directors tend to exhibit lower levels of pollution emissions.*

3 Data and Methodology

3.1 Sample construction and data source

This article studied a sample of China's A-share listed firms from 2008 to 2020. In 2008, there was a significant reform of corporate income tax, in which both domestic and foreign-funded firms were merged, and the tax rate was uniformly adjusted. Therefore, the sample period was selected from the beginning of 2008.

Up to the year 2020, this article processed the initial sample data as follows: (1) excluded ST and *ST firms; (2) excluded listed firms in the financial and insurance sectors; (3) excluded observations with missing values that cannot be manually collected; (4) excluded samples with abnormal values, such as those with an asset-liability ratio greater than or equal to one, a board size of zero, net profit or income tax expenses less than or equal to zero.

The financial data at the firm level is derived from the Guotai An (CSMAR) database, and the native place data of executives partially come from the Guotai An (CSMAR)

executive personal characteristics database, while the remaining is collected manually from search engines such as Baidu. Additionally, to eliminate the impact of extreme values on empirical research, all continuous variables designed in this article were subjected to Winsorize truncation processing at the 1st and 99th percentiles. The final sample consists of 6,957 firm-year observations with 722 unique firms.

3.2 Empirical Model

Build the following regression model for panel data regression analysis and examine the factors influencing the emission performance of firms:

$$Fee = \beta_0 + \beta_1 CEO\_HI + \alpha X + \delta_t + \xi_r + \varepsilon, \tag{1}$$

where i denotes the firm, t represents the year.

3.2.1 Dependent variable

This article references literature such as Hu (2012) and uses pollutant discharge fees paid after standardizing with total assets at the end of the year as an indicator to measure corporate pollution control. Pollution fees are charges that companies pay to the environmental protection administrative authorities to eliminate their environmental responsibilities or compensate for environmental damages, and their collection and use are subject to relevant national laws and regulations such as the "Regulations on the Management of Collection and Use of Pollutant Discharge Fees" (State Council Order No. 369). Pollution fees have a punitive nature and are a mandatory environmental protection measure. Since 2018, the pollution fee for companies has been further reformed into an environmental protection tax. The variable representing the pollution fee/environmental protection tax of the firm is denoted as a fee, and a natural logarithmic transformation is

applied.

3.2.2 Independent variable

In this study, we focus on the firm's CEO as our research object, as their special emotional connections to their hometown may affect their decision-making regarding corporate pollution. We adopted the indicators proposed by Yonker (2017), using the CEO's place of origin to measure their hometown, assuming that CEOs generally have a strong sense of identity with their place of origin. We measure whether the firm's registered location is in the same province as the CEO's place of origin as a standard for measuring the firms with local CEOs. If the firm's registered location is in the same province as the CEO's province of origin, we consider the CEO as having hometown identification. We use the logical variable *CEO_HI* to represent hometown identification. When the firm's registered location is consistent with the CEO's place of origin, we assign a value of one and zero otherwise.

3.2.3 Control variable

Many factors affect corporate pollution emissions. Referring to previous studies, we use company-level variables such as average firm size *Size*, average firm leverage *Lev*, CEO average age *Age*, average male percentage of CEOs *Male*, firm profitability *ROA*, main business income rate *Growth*, Tobin's Q value *TobinQ*, and other CEO characteristics as control variables to test the impact of these factors on corporate pollution emissions. The measurement methods are shown in Table 1. δ_t represents the year fixed effects, and ξ_r represents the industry fixed effects.

(Insert Table 1 about here)

3.3 Summary statistics

Table 2 presents the descriptive statistics of the main variables. The results show that the mean value of the firm's pollution indicator (Fee) is 14.11, with a minimum of 0 and a maximum of 20.15, indicating significant differences in pollutant fees among the sample firms. The average value of CEO hometown identity (*CEO_HI*) is 0.35, indicating that 35% of the 6,957 CEO observations are local CEOs, suggesting that many firms choose non-local CEOs. The average firm size (Size) is 22.49 and the average leverage ratio (Lev) is 48%. The average CEO age (Age) is 49.83 and the average proportion of male CEOs (Male) is 85%.

(Insert Table 2 about here)

4 Empirical Results

4.1 Baseline regression

First, the sample period of this article is from 2008 to 2020. Using a panel data fixed effects model, it analyzes the impact of hometown identity on corporate pollution fees and uses pollution fees to reflect corporate pollution-related decisions. In Columns (1) and (2), CEO hometown identity *CEO_HI* is regarded as the primary explanatory variable, with firm-level variables such as firm size, leverage ratio, and ROA serving as control variables along with industry and year fixed effects. In Columns (3) and (4), the director's hometown identity *DIR_HI* is used as the primary explanatory variable, with executive-level variables such as CEO compensation, CEO age, CEO male proportion, and CEO education level serving as control variables along with industry and year fixed effects. Table 3 presents the basic regression results of the effect of hometown identity on corporate pollution fees.

In Model 1, the explanatory variable only includes variables that have significant differences between different firms and have a significant impact on pollution decisions. From the first column of Table 3, it is evident that only *CEO_HI* and variables that represent the firm's profitability, such as *ROA*, have significant regression coefficients. Among them, we find that the coefficient of CEO hometown identity (*CEO_HI*) is positive and statistically significant at the 1% level. As shown in the second column of Table 3, after adding firm-level control variables such as CEO compensation, CEO age, CEO male proportion, and CEO education level, *CEO_HI* remains significant at the 1% level. The variable *ROA* decreases significance and the regression coefficient of *Edu* is significant at the 0.1% level. This regression result confirms that the firms with local CEOs significantly affect firms' pollution fees, indicating that whether or not CEOs are locals significantly impacts their relevant decisions on firm pollution discharge.

To eliminate the potential impact of the director's hometown identity on CEO pollution decision-making, we replaced the CEO hometown identity variable with the director's and conducted a basic regression analysis. As shown in the third column of Table 3, only *Size* has significant regression coefficients at the 0.1% level. After adding firm-level variables into the regression, only the regression coefficients of *Size* is significant at the 1% level and *ROA* at the 1% level. However, the director's hometown identity *DIR_HI* variables are not significant. Therefore, it can be concluded that whether or not directors are locals has no significant impact on the firm's pollution discharge, further confirming that firms with local CEOs significantly influence corporate pollution fees.

(Insert Table 3 about here)

4.2 Robustness checks

4.2.1 The instrumental variable regression

A potential reversed causal relationship may be the underlying factor causing the regression results mentioned above. Based on this hypothesis, we constructed an instrumental variable, *Zone* (Special Economic Zone), and conducted robustness tests through a two-stage estimation method. In the study, a dummy variable, *Zone* representing whether the registration city of the firm is in a special economic zone, was created as an instrumental variable for firms with local CEOs. A value of one is assigned if the city is located in a special economic zone and zero otherwise.

The *Zone* variable meets the relevance requirement for the instrumental variable. Since the establishment of special economic zones, the investment environment in the designated areas has improved, and there has been an increase in their openness and visibility. This has resulted in an increase in attractiveness for foreign and domestic investment and an influx of talent, including business management personnel. Therefore, it is more unlikely for locally-based CEOs to be found in firms located in special economic zones than in non-special economic zone regions. Thus, the instrumental variable highly correlates with the endogenous explanatory variable *CEO_HI*.

The *Zone* variable meets the exogeneity requirement for the instrumental variable. China's special economic zones emerged in the late 1970s and early 1980s and grew in the 1990s. They are an important form of regional economic development in China. In the empirical scope, we included the five special economic zones established before 2010, namely, the Shenzhen, Xiamen, Zhuhai, and Shantou special economic zones established

in 1980 and the Hainan special economic zone established in 1988. The establishment of special economic zones is aimed at attracting foreign investment and high-tech industries, expanding export-oriented trade, reducing the cost of goods circulation, reducing tariffs, increasing product quality and export volume, and talent cultivation. There are no significant preferential policies or regulations related to environmental protection or green development in special economic zones. Therefore, constructing special economic zones is not related to local environmental quality and corporate pollution control, ensuring that the instrumental variable is not related to the interference items. Therefore, the *Zone* variable satisfies the relevance and exogeneity requirements for an instrumental variable.

Table 4 presents the results of the two-stage regression based on the *Zone* (Special Economic Zone) as the instrumental variable. Columns (1) and (2) measure the CEO's hometown identity, while Columns (3) and (4) measure the director's hometown identity. As can be seen from the regression results in the first stage, *Zone* is significantly and negatively correlated with both *CEO_HI* and *DIR_HI* at the 0.1% level, indicating that the establishment of special economic zones has a significant negative impact on the proportion of CEOs or directors who identify with their hometowns. According to the regression results in the second stage in Column (2), the variable of *CEO_HI* remains significantly positively correlated with Corporate pollution fees, while the regression coefficient of *DIR_HI* in Column (4) is no longer significant, which is consistent with the expected results from the previous discussion. The two-stage regression model based on the instrument variable *Zone* shows the primary empirical findings are intact after controlling for endogeneity.

(Insert Table 4 about here)

4.2.2 Sampling Criteria

When firms are located in municipalities directly under the central government, they often face higher environmental regulatory policies. Therefore, such firms tend to be more sensitive to emission fees. The macroeconomic situation, such as the negative impact of the 2008-2009 financial crisis on corporate finance, may also affect firms' emission control decisions and interfere with their sensitivity to emission fees. In addition, firms located in first-tier cities usually have access to more government subsidies and have stronger incentives for pollution control due to higher economic development levels. To eliminate the impact of these factors, we removed samples with registered addresses in municipalities directly under the central government, all data from 2008-2009, and samples with registered addresses in first-tier cities and conducted regression analysis again.

Table 5 presents the regression results by removing the special sample. We can observe that even after removing samples with registered addresses in municipalities directly under the central government, all data from 2008-2009, and samples with registered addresses in first-tier cities, the regression coefficient of CEO hometown identity *CEO_HI* is still significant at the 1% level, while the regression coefficient of director hometown identity *DIR_HI* is not significant, which is consistent with the previous conclusion.

(Insert Table 5 about here)

4.2.3 Alternative Variable Definitions

In this article, two replacements were made for the dependent variable. First, the pollution fees Fee were replaced with $DFee$, which takes as the natural logarithm of newly increased the firm's cost of dealing with the pollution generated by the firm. The results are

shown in Columns (1) and (2) of Table 6. The regression results of the CEO's hometown identity are still significant after replacing the dependent variable, while the coefficient of the director's hometown identity is smaller and not significant. This is more consistent with the analytical path results of the empirical research in the previous text, which excludes the path where the director's hometown identity has an indirect impact on executive decision-making due to their ownership of the firm. It further locks the informal institution of hometown identity onto the CEO's decision-maker role.

After that, we replaced the pollution fees Fee with $Investment$, which takes as the natural logarithm of the environmental investment of firms, and the empirical results are shown in Table 6, columns (3) and (4). It can be seen that CEO hometown identity *CEO_HI* also has a significant positive correlation with environmental investment, while the coefficient of the director hometown identity *DIR_HI* is much smaller than that of *CEO_HI* and still not significant, further denying the indirect impact path of directors on environmental pollution management. Environmental investment is also a business expense directly controlled by decision-makers in corporate operations. While executives pursue the maximization of their utility function, investment decisions are less affected by the hometown identity of directors and other shareholders but are more directly affected by their own identity and social reactions. Therefore, firms with local CEOs make a significant contribution to corporate emissions.

(Insert Table 6 about here)

4.3 Cross-sectional heterogeneity

4.3.1 State ownership

Firstly, we divided the sample firms into two categories according to whether they are state-owned firms, and the empirical results are shown in Table 7, Columns (1) and (2). The analysis shows a significant positive correlation between CEO hometown identity and environmental pollution management in state-owned firms, while the results are not significant, and the coefficients are smaller for non-state-owned firms. After analysis, the possible influencing paths for this result are that state-owned firms are more sensitive to policies and are subject to direct environmental regulatory systems, while non-state-owned firms face less regulatory pressure. This results in CEO's hometown identity having a more significant impact on environmental pollution management in state-owned firms.

4.3.2 Political connection

Secondly, we divided the existing samples based on the level of political connection, and the results are shown in Table 7, Columns (3) and (4) demonstrate that there is a significant positive correlation between CEO hometown identity and environmental pollution management in firms with high political connection, while the positive correlation coefficient is much smaller and the result is not significant in firms with low political connection. The possible reason for this phenomenon may be that firms with high political connections are more likely to obtain government support for environmental investment. In contrast, Firms with low political connections have a harder time obtaining similar policy benefits, which makes the regression results for firms with local CEOs insignificant in these firms.

4.3.3 Industry pollution level

Finally, we divided the sample into high-polluting and low-polluting industries, and the empirical results are shown in Table 7, Columns (5) and (6). It can be seen that firms with local CEOs have a significant positive correlation with pollution control in low-polluting industries, while the regression results for heavy-polluting industries are not significant. Analyzing the possible influencing paths, we find that low-polluting industries have lower requirements for pollution control costs and technology. Therefore, the impact of informal institutions, such as the CEO hometown identity, on decision-making is more significant. On the other hand, high-polluting industries are limited by the development of pollution control technologies and high-cost control, and the influence of the CEO hometown identity on decision-making is relatively smaller.

(Insert Table 7 about here)

5 Potential channels

5.1 Social relation channel

The environmental governance of firms has many uncertain features, and it is difficult to achieve environmental protection goals quickly by relying on their resources. As a powerful fiscal policy, government subsidies can effectively promote the spontaneous adoption of environmental protection measures by firms. Some scholars have found that environmental subsidies from the government can stimulate government green innovation, thereby accelerating the progress of environmental governance in firms (Luo et al., 2016). Other scholars have explored the cost path of firms and have found that government subsidies

can effectively reduce costs and increase corporate funding, as evidenced by the micro-industrial firms level in China (Yao and Zhu, 2019).

Due to the scarcity of government subsidies, firms usually actively seek relevant resources to acquire them (Zhao et al., 2015). Existing research has shown that politically affiliated executives can obtain government subsidies through rent-seeking mechanisms (Yu, Hui, and Pan, 2010). Officials and regulators tend to tilt resources towards hometown development from a fiscal transfer perspective (Fan and Li, 2014) Based on the motivation to repay the hometown, CEOs with hometown identity can use their identity and social relationships to more easily obtain government subsidies, supporting the role of social identity theory in informal institutions (Guo and Du, 2011).

Therefore, we added the variable of CEO political relation to the study and investigated the role of informal institutions in social relations. That is, whether the CEO hometown identity can increase government environmental subsidies through political relations and thus have a positive impact on the governance of corporate environmental pollution. In the study, two measurement variables were selected: government environmental subsidies *LnGovE* and total subsidies*LnGovT*. The mediating variable method was used to investigate whether this path was significant. In the specific empirical process, logarithmic processing was adopted. If the correlation coefficient of the empirical results is positive and significant, it proves that this mechanism exists.

Our results are reported in Table 8. The positive coefficient and statistically significant coefficient of *CEO_HI* in Columns (1) and (3) indicate that firms with local CEOs are more likely to reduce their pollution levels by seeking government environmental subsidies or total subsidies. The coefficients in Columns (2) and (4) examining directors' hometown identity are

insignificant, indicating that whether the firm's directors are locals has no significant impact on the firm's pollution decision-making, further confirming the importance of whether the firm's CEO is local. This evidence supports our expectations that local CEOs can improve corporate pollution because they have certain social relations.

(Insert Table 8 about here)

5.2 CEO long-termism channel

CEOs with hometown identity may be more concerned about the sustainable development of their hometown and the long-term growth of their firm. We predict that hometown CEOs are more likely than non-hometown CEOs to have a long-term vision for hometown and firm development, pay attention to future growth, and therefore be more concerned about hometown pollution and firm emissions. We conducted the following two tests to verify this mechanism.

Firstly, we examined whether local CEOs approaching retirement are more supportive of corporate emission reduction than non-hometown CEOs. CEOs approaching retirement age may reduce their commitment to long-term investment, as they are unlikely to benefit from any investment with delayed returns (Kang, 2016); and there is a tendency for the number of patent applications in the firm to decrease as the CEO approaches retirement (Ren et al., 2021). Therefore, we created a dummy variable: *Retire*. If the CEO's age is 58 or above, it is assigned a value of one and zero otherwise. If the correlation coefficient of the empirical results is positive and significant, it proves that firms with local CEOs can promote corporate emission reduction because they are more long-term oriented.

Secondly, ESG stands for Environment, Social, and Governance, three English words

that combine to form an acronym. The ESG concept was introduced by the United Nations Environmental Programme in 2004, emphasizing that firms should focus on environmental protection, fulfill social responsibilities, improve corporate governance, strive for sustainable and high-quality development, and reflect their non-financial performance in environmental, social, and governance dimensions to explore how to better incorporate relevant issues into asset management, securities, economic services, and related research. In 2006, the United Nations Principles for Responsible Investment (PRI) were issued to encourage the inclusion of ESG factors in investment decision-making processes to create a financial system that balances economic efficiency and sustainability. In September 2020, the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Climate Disclosure Standards Board (CDSB), the International Integrated Reporting Council (IIRC), and the Carbon Disclosure Project (CDP) jointly published a plan to build a unified ESG disclosure standard. At the same time, the World Economic Forum and the four major accounting firms have also established unified ESG rating and review standards.

With the continuous enrichment of ESG-related concepts and tools, ESG will play an increasingly important role as a filter in the capital market and gradually become an internationally recognized mainstream investment concept. High-quality ESG disclosure helps firms communicate their vision and opportunities for sustainable development to stakeholders and is also essential for firms to obtain financing from the market and enhance market value. More than 50 stock exchanges globally provide guidelines for ESG disclosure by listed firms. In May 2022, the State-owned Assets Supervision and Administration Commission of the State Council issued a plan to improve the quality of state-owned firm-controlled listed firms, raising the requirements for domestic ESG management and

information disclosure by another level and proposing to implement the new development concept and explore the establishment of a sound ESG system.

The ESG indicators disclosed by the Hong Kong Stock Exchange cover four dimensions in the environmental category, including emissions, resource usage, environment and natural resources, and climate change. In the social category, there are eight dimensions, including employment, health and safety, development and training, labor standards, supply chain management, product responsibility, anti-corruption, and community investment. Given that the level of corporate pollution is specifically considered in the environmental indicators through the four dimensions, and waste data and emission reduction measures and achievements are included in the emission dimension, while the total energy utilization and density are linked to pollution in the resource usage dimension, the environmental category scores can reflect a firm's awareness of sustainable development and environmental protection, indicating that the CEO hometown identity is consistent with the long-termism of the firm.

Moreover, ESG performance has a positive impact on a firm's level of green innovation. For example, Jinman (2022) analyzed Chinese listed firms as samples and empirically demonstrated that firms with better ESG performance not only have a higher historical ability for green innovation but also have higher investments in green innovation in the current period. By implementing green innovation, firms can improve the efficiency and sustainability of various production processes, promote energy efficiency, reduce corporate emissions, and benefit from long-term sustainable development.

Therefore, we will use *ESG* as the mediating variable, defined as environmental performance. If the coefficient of *ESG* is significantly positive, it proves that firms with

local CEOs are associated with significant long-termism for the corporate vision, including emissions reduction.

Our results are reported in Table 9. The positive coefficient and statistically significant coefficient of *CEO_HI* in Column (1) indicate that although pollution increases when a firm's CEO is approaching retirement, CEO hometown identity mitigates this negative impact, which supports our view that CEO hometown identity is consistent with the long-termism of the firm. The positive coefficient and statistically significant coefficient of *CEO_HI* in Column (3) indicate that firms with local CEOs tend to adopt corporate green innovation to reduce pollution levels and achieve long-term development. The coefficients in Columns (2) and (4) examining directors' hometown identity are insignificant, indicating that whether the firm's directors are locals has no significant impact on the firm's pollution decision-making, further confirming the importance of whether the firm's CEO is local. This evidence supports our expectations that local CEOs can improve corporate pollution by focusing on long-term goals.

(Insert Table 9 about here)

In summary, in this section, we explored two mechanisms for the incentive effect of CEO hometown identity on corporate pollution discharge: social relation and CEO long-termism. For the social relation of CEOs, we adopted two indicators: government environmental subsidies and total subsidies for corporates as intermediary variables. For the long-termism of CEOs, we measure their age and ESG performance. If the coefficients of the mediating variables are significantly positive, it indicates that our speculation about the two mechanisms is correct. As shown in Table 8 and 9, it can be seen that the

coefficients of the four indicators are significantly positive, indicating the existence of these two channels. That is, firms with local CEOs strive for more government subsidies through social relations, thereby achieving firms emission reduction; And by changing the long-termism of the firms, focusing on the long-term growth of the firm, promoting the adoption of more environmentally friendly measures by the corporate.

6 Conlusion

In recent years, there has been a growing body of research on informal institutional factors related to corporate pollution. However, the influence of firms with local CEOs on corporate pollution remains largely unexplored. This study delves into the significance of firms with local CEOs in relation to corporate pollution, conducting a theoretical review of past literature and examining relevant contemporary issues to elucidate underlying mechanisms. Employing corporate pollution fees as a means of measuring pollution levels, this study analyzes the relationship between CEO's hometown identity and corporate pollution discharge. Furthermore, it investigates potential channels through which a CEO's social network and long-termism may act as mediating factors that impact corporate environmental practices.

To verify the aforementioned predictions, this study utilized panel data fixed effects models based on the Chinese A-share listed firms between 2008 and 2020. Empirical results revealed that firms with local CEOs could bolster environmental action within the firm. The study further adopted a two-stage regression approach, using Special Economic Zone as an instrumental variable to confirm the robustness of the results. The regression results confirmed that firms with local CEOs are associated with significantly higher corporate

pollution fees. To further explore the CEO hometown identity's influence on firms, we replaced the dependent variable with pollution fees and environmental investments, respectively, and further isolated the CEO hometown identity as the explanatory variable. Regarding heterogeneity analysis, we categorized firms into two groups based on whether they were state-owned, their political relation, and whether they operated in polluting industries and conducted separate regressions. Results indicated that a CEO's hometown identity has a more pronounced effect on the governance of state-owned, politically affiliated, and low-polluting industry firms. Finally, this study explored two channels - CEO social relations and long-termism - using environmental subsidies and total subsidies, CEO age, and environmental performance indicators to verify these mechanisms. The results confirmed their existence.

In summary, this study confirms the positive implications of a CEO's hometown identity on reducing corporate pollution and fulfilling social responsibility. With increasing emphasis on achieving sustainable development, firms are expected to take responsibility for controlling pollution levels and striving towards environmentally-friendly practices. This study highlights the important role of a CEO's hometown identity as a non-environmental measure in promoting environmental protection and sustainable development. The findings of this study have significant policy implications, suggesting that local CEOs are more likely to implement measures that benefit the local ecological environment, resulting in a direct impact on the level of corporate pollution. When appointing new CEOs, firms must consider social responsibility holistically while maintaining flexibility to meet long-termism and sustainable development requirements. However, there are still limitations to this study. One area not thoroughly considered is the role of local CEOs in various industries. This will

be a key focus of future research in this field.

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Table 1: Variable definitions

Variables	Definitions
Dependent variables	
Fee	The natural logarithm of the firm's cost of dealing with the pollution generated by the firm.
DFee	The natural logarithm of newly increased the firm's cost of dealing with the pollution generated by the firm.
Investment	The natural logarithm of the environmental investment of firms.
LnGovE	The natural logarithm of environmental government subsidies.
LnGovT	The natural logarithm of total government subsidies.
Retire	A dummy variable takes the value of one if the CEO's age is above 58, and zero otherwise.
ESG	The natural logarithm of corporate ESG indicators published by the Hong Kong Stock Exchange.
Independent variables	
CEO_HI	CEO hometown identity. A dummy variable taken as one if the firm's CEO's hometown and the firm's location are the same, and zero otherwise.
DIR_HI	Director hometown identity. A dummy variable taken as one if the firm's director's hometown and the firm's location are the same, and zero otherwise.
Zone	A dummy variable. When the location of the corporate is in a special economic zone, it takes one, and zero otherwise.
Control variables	
Size	The natural logarithm of the company's total assets.
Lev	Total liabilities/total assets.
ROA	Net profit/total assets.
Growth	Annual growth rate of main business income.
TobinQ	Tobin's Q Value: (Market Value of Equity + Number of Non-Tradable Shares x Net Assets per Share + Book Value of Liabilities) / Total Assets.
Top1	Shareholding ratio of the largest shareholder: Number of shares held by the largest shareholder/total number of shares.
Bonus	CEO compensation: the natural logarithm of the sum of the top three CEO salaries.
Age	CEO Age: Age of CEO.
Male	CEO Male: An indicator takes the value of one when the CEO is a male and zero otherwise.
Edu	CEO Education An indicator takes the value of one if the CEO has a Master's or Doctoral degree, and zero otherwise.

Table 2: Summary statistics

	Mean	S.D.	Min	Q25	Median	Q75	Max	N
Fee	14.11	3.04	0.00	13.27	14.57	15.67	20.15	6,957
CEO_HI	0.35	0.48	0.00	0.00	0.00	1.00	1.00	6,957
Size	22.49	1.28	17.80	21.62	22.35	23.30	27.29	6,957
Lev	0.48	0.21	0.02	0.32	0.48	0.64	1.76	6,957
ROA	0.03	0.08	-1.15	0.01	0.03	0.06	0.79	6,957
Growth	0.67	15.24	-0.95	-0.02	0.10	0.26	665.54	6,957
TobinQ	1.85	1.65	0.15	1.16	1.48	2.05	78.75	6,957
Top1	0.36	0.15	0.02	0.25	0.35	0.45	0.90	6,957
Bonus	12.14	1.20	4.74	11.23	12.28	13.02	17.53	6,957
Age	49.83	8.25	24.00	45.00	50.00	55.00	87.00	6,957
Male	0.85	0.35	0.00	1.00	1.00	1.00	1.00	6,957
Edu	0.60	0.49	0.00	0.00	1.00	1.00	1.00	6,957

Table 3: The Effect of Local CEOs or Directors on Corporate Pollution Discharge

This table presents how local CEOs or directors affect corporate pollution discharge. The dependent variable is *Fee* (the natural logarithm of the firm's cost of dealing with the pollution generated by the firm in year t). The independent variables are *CEO_HI* (taken as one of the firm's CEO's hometown and the firm's location are the same, and zero otherwise) and *DIR_HI* (taken as one of the firm's director's hometown and the firm's location are the same and zero otherwise). Detailed definitions of all variables are reported in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) Fee	(2) Fee	(3) Fee	(4) Fee
CEO_HI	0.567**	0.558**		
	(2.07)	(2.09)		
DIR_HI			0.350	0.258
			(1.57)	(1.03)
Size	1.042***	1.022***	1.016***	1.023***
	(9.10)	(8.18)	(13.58)	(11.18)
Lev	-0.032	0.190	-0.346	-0.412
	(-0.04)	(0.23)	(-0.65)	(-0.63)
ROA	1.582	0.250	1.162	2.029*
	(1.13)	(0.16)	(1.33)	(1.85)
Growth	-0.007	-0.010	-0.001	-0.006
	(-0.74)	(-1.44)	(-0.26)	(-0.80)
TobinQ	0.033	0.038	-0.026	-0.051
	(0.54)	(0.64)	(-0.39)	(-0.53)
Top1	1.451	1.423	1.178**	0.902
	(1.34)	(1.25)	(2.11)	(1.44)
Bonus		0.365***		0.021
		(3.02)		(0.39)
Age		0.013		0.008
		(0.73)		(0.94)
Male		-0.160		-0.343
		(-0.52)		(-1.01)
Edu		-0.349		-0.079
		(-1.57)		(-0.50)
Obs	4,364	4,364	4,167	4,167
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of Firms	357	357	324	324
Adjusted R^2	0.27	0.28	0.25	0.23

Table 4: Instrumental Variable Regression

This table presents the results of the two-stage regression based on the *Zone*(Special Economic Zone) as the instrumental variable. Column (1) and (2) measure the CEO hometown identity, Column (3) and (4) measure the director hometown identity.The dependent variable is *Fee* (the natural logarithm of the firm's cost of dealing with the pollution generated by the firm in year t). The independent variables are *Zone* (a dummy variable. When the location of the corporate is in a special economic zone, it takes one, otherwise it takes zone and zero otherwise), *CEO_HI* (taken as one if the firm's CEO's hometown and the firm's location are the same and zero otherwise) and *DIR_HI* (taken as one if the firm's director's hometown and the firm's location are the same and zero otherwise). Detailed definitions of all variables are reported in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) CEO Stage 1	(2) CEO Stage 2	(3) Director Stage 1	(4) Director Stage 2
Zone	-0.347***		-0.344***	
	(-8.85)		(-10.27)	
CEO_HI		0.558**		
		(2.09)		
DIR_HI				0.258
				(1.03)
Size	-0.086***	1.022***	-0.078***	1.023***
	(-5.28)	(8.18)	(-4.62)	(11.18)
Lev	-0.014	0.190	-0.004	-0.412
	(-0.15)	(0.23)	(-0.05)	(-0.63)
ROA	0.059	0.250	0.128	2.029*
	(0.43)	(0.16)	(1.02)	(1.85)
Growth	-0.000***	-0.010	-0.000**	-0.006
	(-2.60)	(-1.44)	(-2.25)	(-0.80)
TobinQ	-0.002	0.038	0.002	-0.051
	(-0.27)	(0.64)	(0.23)	(-0.53)
Top1	-0.151	1.423	-0.142	0.902
	(-1.07)	(1.25)	(-0.99)	(1.44)
Bonus	0.018	0.365***	0.012*	0.021
	(1.09)	(3.02)	(1.82)	(0.39)
Age	0.002	0.013	0.000	0.008
	(1.53)	(0.73)	(0.27)	(0.94)
Male	-0.031	-0.160	-0.026	-0.343
	(-1.39)	(-0.52)	(-1.46)	(-1.01)
Edu	-0.020	-0.349	-0.022	-0.079
	(-0.87)	(-1.57)	(-1.08)	(-0.50)
Obs	5,854	5,854	5,187	5,187
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of Firms	378	378	369	369
Adjusted R^2	0.10	0.28	0.09	0.23

Table 5: Robustness of Sample Selection

This table presents robustness tests on the local CEOs or directors on corporate pollution discharge by removing the special sample. Columns (1) and (2) delete firms in the four municipalities(Beijing, Shanghai, Tianjin, and Chongqing). Columns (3) and (4) exclude the observations for 2008-2009 because of the financial crisis. Columns (5) and (6) delete firms in first-tier cities (Beijing, Shanghai, Guangzhou,and Shenzhen). The dependent variable is *Fee* (the natural logarithm of the firm's cost of dealing with the pollution generated by the firm in year t). The independent variables are *CEO_HI* (taken as one if the firm's CEO's hometown and the firm's location are the same, and zero otherwise) and *DIR_HI* (taken as one if the firm's director's hometown and the firm's location are the same and zero otherwise). Detailed definitions of all variables are reported in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Excluding firms in municipality		Excluding observations of 2008-2009		Excluding firms in first-tier cities	
	(1) CEO	(2) Director	(3) CEO	(4) Director	(5) CEO	(6) Director
CEO_HI	0.567**		0.567**		0.601**	
	(2.00)		(2.12)		(2.10)	
DIR_HI		0.262		0.248		0.271
		(0.92)		(0.98)		(0.96)
Size	0.965***	1.002***	1.007***	1.018***	0.953***	1.001***
	(5.52)	(9.14)	(8.02)	(11.07)	(5.48)	(9.24)
Lev	0.173	-0.388	0.287	-0.367	0.233	-0.402
	(0.18)	(-0.55)	(0.34)	(-0.56)	(0.26)	(-0.59)
ROA	0.772	2.374**	0.471	2.084*	0.581	2.111*
	(0.45)	(2.07)	(0.29)	(1.89)	(0.35)	(1.83)
Growth	-0.010	-0.007	-0.010	-0.006	-0.009	-0.006
	(-1.42)	(-0.96)	(-1.49)	(-0.79)	(-1.38)	(-0.83)
TobinQ	0.043	-0.060	0.034	-0.053	0.042	-0.050
	(0.71)	(-0.57)	(0.56)	(-0.55)	(0.72)	(-0.49)
Top1	1.486	0.831	1.424	0.899	1.597	0.873
	(1.25)	(1.19)	(1.25)	(1.43)	(1.34)	(1.26)
Bonus	0.372***	0.007	0.372***	0.025	0.361***	0.018
	(2.77)	(0.12)	(3.08)	(0.47)	(2.72)	(0.31)
Age	0.013	0.004	0.015	0.009	0.015	0.006
	(0.69)	(0.48)	(0.79)	(0.96)	(0.78)	(0.64)
Male	-0.189	-0.377	-0.170	-0.346	-0.193	-0.348
	(-0.57)	(-1.10)	(-0.56)	(-1.02)	(-0.59)	(-0.99)
Edu	-0.368	-0.075	-0.353	-0.082	-0.364	-0.036
	(-1.61)	(-0.45)	(-1.57)	(-0.52)	(-1.59)	(-0.22)
Obs	3,651	2,692	3,828	2,931	3,645	2,704
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of Firms	325	265	345	202	326	270
Adjusted R^2	0.22	0.20	0.28	0.23	0.22	0.20

Table 6: Alternative Corporate Pollution Measures

This table presents how the local CEOs or directors affect corporate pollution using alternative corporate pollution measures. The dependent variables are $DFee$(The natural logarithm of the newly increased firm's cost of dealing with the pollution generated by the firm) and $Investment$(The natural logarithm of the environmental investment of corporates). The independent variables are *CEO_HI* (taken as one if the firm's CEO's hometown and the firm's location are the same, and zero otherwise) and *DIR_HI* (taken as one if the firm's director's hometown and the firm's location are the same and zero otherwise). The detailed definitions of the variables can be found in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1) *DFee*	(2) *Investment*	(3) *DFee*	(4) *Investment*
CEO_HI	0.652**	0.289		
	(2.32)	(1.48)		
DIR_HI			0.340*	0.150
			(1.82)	(1.17)
Size	0.942***	0.874***	0.667***	0.402***
	(9.28)	(11.82)	(5.09)	(4.47)
Lev	1.570**	0.580	-0.943	-0.332
	(2.34)	(1.36)	(-1.29)	(-0.88)
ROA	4.448**	1.613	-0.790	-0.373
	(2.19)	(1.21)	(-0.52)	(-0.50)
Growth	0.001	-0.022*	-0.016**	-0.010**
	(0.05)	(-1.95)	(-2.14)	(-2.39)
TobinQ	0.058	0.013	0.054	0.027
	(0.81)	(0.20)	(1.39)	(1.00)
Top1	-2.011	0.203	0.313	0.542
	(-1.40)	(0.39)	(0.48)	(1.39)
Bonus	0.171	0.006	-0.186**	-0.054**
	(1.37)	(0.12)	(-2.09)	(-2.12)
Age	0.023	-0.005	0.010	0.002
	(1.26)	(-0.84)	(1.13)	(0.29)
Male	0.267	-0.173	0.145	-0.004
	(0.83)	(-0.80)	(1.05)	(-0.05)
Edu	0.197	-0.039	-0.128	-0.039
	(1.08)	(-0.34)	(-0.99)	(-0.44)
Obs	3,953	3,560	2,850	2,758
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of Firms	371	369	316	306
Adjusted R^2	0.35	0.39	0.16	0.07

Table 7: Cross-sectional Heterogeneity

This table presents the results of heterogeneity analysis on state ownership, political connection, and industrial pollution level.*CEO_HI* is CEO hometown identity, a dummy variable taken as one if the firm's CEO's hometown and the firm's location are the same, and zero otherwise. Detailed definitions of variables can be found in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	State Ownership		Political Connection		Industry pollution level	
	(1)	(2)	(3)	(4)	(5)	(6)
	Yes	No	Low	High	Low	High
CEO_HI	0.655*	0.250	0.092	0.826***	0.752**	0.552
	(1.97)	(0.70)	(0.25)	(2.74)	(2.20)	(1.59)
Size	1.139***	0.781***	1.296***	0.936***	1.049***	1.053***
	(7.34)	(3.69)	(5.51)	(6.30)	(6.10)	(5.96)
Lev	-1.479	1.603	0.173	0.222	-0.842	0.692
	(-1.35)	(1.19)	(0.09)	(0.24)	(-0.58)	(0.70)
ROA	-3.194	3.441*	2.511	0.386	-3.617	3.589*
	(-1.47)	(1.77)	(0.60)	(0.22)	(-1.53)	(1.68)
Growth	-0.130*	-0.005	-0.009	-0.048	-0.107	-0.014**
	(-1.89)	(-0.61)	(-1.13)	(-0.57)	(-1.42)	(-2.07)
TobinQ	-0.102	0.037	0.160	0.021	0.045	0.078
	(-0.90)	(0.55)	(1.19)	(0.31)	(0.57)	(1.07)
Top1	0.152	1.873	1.270	1.334	0.801	1.441
	(0.14)	(1.24)	(0.54)	(1.09)	(0.59)	(1.03)
Bonus	0.250*	0.365**	0.561***	0.298**	0.501**	0.300**
	(1.68)	(2.01)	(2.99)	(2.16)	(2.01)	(2.01)
Age	0.011	0.025	0.009	0.019	0.008	0.008
	(0.45)	(1.23)	(0.43)	(0.82)	(0.36)	(0.34)
Male	0.062	-0.785	0.044	-0.281	-0.323	-0.384
	(0.23)	(-1.10)	(0.12)	(-0.79)	(-0.50)	(-1.18)
Edu	-0.181	-0.442	-0.537*	-0.245	-0.158	-0.452
	(-0.86)	(-1.12)	(-1.93)	(-0.90)	(-0.52)	(-1.45)
Obs	4,239	3,608	4,384	3,665	3,687	3,162
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of Firms	334	322	370	315	343	336
Adjusted R^2	0.36	0.21	0.50	0.24	0.31	0.30

Table 8: Social relation Channel

This table presents one of the mechanisms by which the CEO hometown identity affects corporate pollution discharge: the social relationship channel.The dependent variable in Column (1) and (2) is *LnGovE* (the natural logarithm of environmental government subsidies) . The dependent variable in Column (3) and (4) is *LnGovT* (the natural logarithm of total government subsidies) .The independent variables are *CEO_HI* (taken as one of the firm's CEO's hometown and the firm's location are the same, and zero otherwise) and *DIR_HI* (taken as one of the firm's director's hometown and the firm's location are the same and zero otherwise). Detailed definitions of all variables are reported in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	LnGovE		*LnGovT*	
	(1)	(2)	(3)	(4)
	CEO	*Director*	*CEO*	*Director*
CEO_HI	0.023*		1.558**	
	(1.75)		(2.37)	
DIR_HI		0.029		0.239
		(1.28)		(0.49)
Size	0.038***	0.040***	2.693***	1.054
	(6.99)	(8.87)	(2.63)	(1.43)
Lev	0.072**	0.057**	1.417	1.168
	(2.58)	(2.40)	(0.32)	(0.44)
ROA	-0.036	0.026	-9.410*	-2.829
	(-0.54)	(0.54)	(-1.86)	(-0.91)
Growth	0.001*	0.001***	0.004	0.049
	(1.91)	(2.91)	(0.07)	(1.01)
TobinQ	0.000	0.002	0.320	-0.127
	(0.15)	(0.54)	(1.56)	(-0.63)
Top1	0.037	-0.012	5.403	2.598
	(0.92)	(-0.33)	(1.14)	(0.74)
Bonus	0.017***	0.004	-0.315	-0.159*
	(3.17)	(1.46)	(-1.00)	(-1.69)
Age	0.001	0.000	0.027	-0.004
	(1.12)	(1.26)	(1.21)	(-0.33)
Male	-0.018	-0.002	-0.182	0.800**
	(-1.47)	(-0.18)	(-0.41)	(2.09)
Edu	0.007	0.006	0.302	-0.038
	(0.90)	(0.99)	(0.99)	(-0.15)
Obs	3,793	3,626	3,811	3,412
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of Firms	341	323	356	345
Adjusted R^2	0.48	0.39	0.56	0.54

Table 9: CEO Long-termism Channel

This table presents one of the mechanisms by which the CEO hometown identity affects corporate pollution discharge: the CEO's long-termism channel.The dependent variable in Column (1) and (2) is *Retire* (takes the value of one if the CEO's age is above 58, and zero otherwise) . The dependent variable in Column (3) and (4) is *ESG* (the natural logarithm of corporate ESG indicators published by the Hong Kong Stock Exchange) .The independent variables are *CEO_HI* (taken as one of the firm's CEO's hometown and the firm's location are the same, and zero otherwise) and *DIR_HI* (taken as one of the firm's director's hometown and the firm's location are the same and zero otherwise). Detailed definitions of all variables are reported in Table 1. The robust t-statistics clustered by the firm are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Retire		*ESG*	
	(1) *CEO*	(2) *Director*	(3) *CEO*	(4) *Director*
CEO_HI	0.057***		0.290*	
	(3.12)		(1.81)	
DIR_HI		0.032		0.554
		(0.86)		(1.66)
Size	-0.002	-0.028	-1.054	-2.507
	(-0.49)	(-1.02)	(-0.18)	(-0.46)
Lev	-0.008	0.002	9.107	16.673
	(-0.67)	(0.02)	(0.54)	(1.00)
ROA	0.010	-0.144*	5.247	-1.079
	(0.84)	(-1.93)	(0.31)	(-0.07)
Growth	-0.000**	0.001**	-1.913	-0.178
	(-2.52)	(2.56)	(-0.53)	(-0.07)
TobinQ	0.001	-0.012	-0.760	-0.999
	(0.41)	(-1.40)	(-0.41)	(-0.49)
Top1	-0.025	0.010	-25.123	-14.737
	(-1.00)	(0.10)	(-0.88)	(-0.48)
Bonus	-0.032***	-0.019***	0.095	-0.010
	(-15.73)	(-2.72)	(0.51)	(-0.05)
Age	0.030***	0.037***	-0.027	-0.069
	(67.06)	(26.14)	(-1.10)	(-1.57)
Male	-0.006	0.041	2.215***	0.193
	(-1.11)	(1.02)	(2.95)	(0.51)
Edu	-0.023***	-0.057**	0.095	-1.209
	(-4.95)	(-2.12)	(0.45)	(-1.19)
Obs	4,786	4,512	3,371	3,214
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Number of Firms	429	409	336	332
Adjusted R^2	0.51	0.73	0.90	0.86