

Nonlocal CEOs and Corporate Financial Fraud: Evidence from Chinese Listed Firms

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Abstract

This study examines whether firms' financial fraudulent behavior varies when local firms are led by nonlocal CEOs. Building on the social identity theory, we argue that nonlocal CEOs, due to their different location-based social identities, are perceived as outgroup leaders and face intergroup bias from stakeholders within local firms. Therefore, nonlocal CEOs are more likely to conform to laws and regulations and reduce corporate financial fraud to enhance their legitimacy in leading local firms. Using panel data on Chinese listed firms from 2007 to 2020, we find a significantly negative correlation between nonlocal CEOs and the likelihood of corporate financial fraud. Furthermore, our moderating analysis indicate that the negative effect of nonlocal CEOs on corporate financial fraud is stronger (a) for CEOs who have never

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won awards, (b) in firms with poor financial performance and (c) in regions with tight cultures. Additional mechanism tests indicate that nonlocal CEOs' outgroup identity is more prominent in regions with low regional dialect diversity and local private-owned enterprises. Overall, these findings suggest that choosing a nonlocal CEO warrants attention from the firm's top management teams and stakeholders.

Keywords: corporate financial fraud; social identity theory; nonlocal CEO; legitimacy

Introduction

Fraudulent corporate behavior, which exists universally around the world (Zhou, Zhang, Yang, Su, & An, 2018), which triggers increasing attention in both industry and academia(Conyon & He, 2014; Khanna, Kim, & Lu, 2015; Rijssenbilt & Commandeur, 2013). Association of Certified Fraud Examiner (ACFE) reported 2,690 cases of fraud from 125 countries across 23 industry categories in 2018, with a total loss of over \$7 billion (Denman, 2019). The detrimental impact of corporate financial fraud on the firm's reputation and market value is widely recognized (Hogan, Rezaee, Riley Jr, & Velury, 2008; Huang, Lin, Chiu, & Yen, 2017). Specifically, financial fraud destroy firm value and investor confidence, causes misallocation of capital, increases financial market instability, and undermines the integrity of the entire capital market (Conyon & He, 2014; Khanna et al., 2015).

The substantial negative impact of corporate financial fraud has triggered researchers to investigate the underlying causes. Some studies examine the impact of firm characteristics (e.g. board composition in Jia et al., (2009); ownership structure in Chen et al., (2006); compensation incentives in Conyon and He (2014), and external environment (e.g., hostile environment in Apostolou et al.,(2001)) on committing financial fraud. Other studies examine the “individual level” factors associated with the likelihood of reporting fraud (e.g., (Beasley, Carcello, Hermanson, & Commission, 1999; Herrmann & Datta, 2005; Zahra, Priem, & Rasheed, 2007)), among which extant research particularly focuses on the key influence of CEO characteristics on financial fraud because of the high level of power and privileges inherent in this position (Khanna et al., 2015; Lange, Boivie, & Westphal, 2015; Luo & Wang, 2022; Morse, Nanda, & Seru, 2011; Rijssenbilt & Commandeur, 2013). Although the existing literature has enhanced our understanding of corporate financial fraud motivation, no study to date has examined the effects of CEOs' different social identities and specifically whether local

firms led by nonlocal CEOs are more compliant with laws and regulations and thus reducing corporate financial fraud.

Recent literature has shown that CEOs with different social identities can influence their organizational decision-making greatly (Bertrand, Betschinger, & Moschieri, 2021; Li, Huang, & Li, 2022b). To enhance their trustworthiness, outgroup leaders usually do some beneficial behaviors for firms or societies, such as engaging in more CSR activities and improving corporate ESG performance (Bertrand et al., 2021; Li et al., 2022b). However, corporate financial fraud as a form of illegal actions, we know little about the effect of CEOs' different social identities on it.

Building on the social identity theory, we posit that nonlocal CEOs, due to their distinct location-based social identities, are perceived as outgroup leaders by the local firms' stakeholders and thus suffer from intergroup bias: a tendency to favor ingroup members and show discrimination against outgroup members (Hewstone, Rubin, & Willis, 2002). Compared to local CEOs, nonlocal CEOs lack reputation and legitimacy (Bertrand et al., 2021; Yeung, Lo, & Cheng, 2011). However, they can enhance their personal legitimacy by conforming to laws and regulations and showing their moral character (Elsbach, 1994; Suchman, 1995). To mitigate intergroup bias and enhancer their personal legitimacy in leading local firms, we first propose that firms with nonlocal CEOs are less likely to commit corporate financial fraud compared with local CEOs. Since awards can enhance CEOs' reputation, social recognition, and positive evaluations (Gallus & Frey, 2016; Li et al., 2022b; Love, Lim, & Bednar, 2017), they can mitigate the legitimacy deficit faced by nonlocal CEOs as outgroup leaders. Therefore, we propose that, compared to those who have ever won awards, nonlocal CEOs who have never won any awards are more likely to reduce corporate financial fraud to enhance their legitimacy. Furthermore, we note that moral character is a core factor in personal perception and evaluation (Goodwin, Piazza, & Rozin, 2014; Wojciszke, Bazinska, & Jaworski, 1998),

which can enhance CEOs' personal legitimacy (Elsbach, 1994). We thus propose that nonlocal CEOs are more likely to reduce fraudulent behavior when firms are experiencing poor financial performance. During such challenging times, conforming to laws and regulations becomes even more "rare" (Ravisankar, Ravi, Rao, & Bose, 2011), which effectively improves their morality evaluations and personal legitimacy. Finally, we propose that the negative correlation between nonlocal CEOs and corporate financial fraud is stronger in regions with tight cultures, where there is a greater antipathy towards fraudulent behavior (Weisel & Böhm, 2015), and an emphasis on norm compliance as an important basis for individual legitimacy (Tong, Isik, & Talwar, 2023). Using a sample of Chinese listed companies during the 2007 through 2020 period in CSMAR database, as well as part of the CEOs' birthplace information manually matched on the Internet, we test the relationship between nonlocal CEOs and corporate financial fraud, and find support for our predictions.

Our study makes several contributions to the existing literature. First, our work contributes to corporate financial fraud literature by revealing an important yet underexplored antecedent from the perspective of individual CEOs. While prior studies typically focus on external environment and firm-level characteristics (Baucus & Baucus, 1997; Chen et al., 2006), we show that nonlocal CEOs' different social identities, a CEO-level characteristic, can influence corporate fraudulent behavior. This finding integrates corporate financial fraud research with upper echelons theory and addresses the call for more studies examining CEO characteristics as antecedents of corporate financial fraud (Rijssenbilt & Commandeur, 2013; Troy, Smith, & Domino, 2011).

Second, we add to the emergent research stream in the business literature exploring CEO locality as a factor affecting organizational decision-making (Bertrand et al., 2021; Li et al., 2022b; Ren, Sun, & Tang, 2022). Prior IB research has shown that foreign firms face disadvantages and lack legitimacy relative to local players, namely liability of foreignness

(LOF) (Zaheer, 1995). However, there is limited research that specifically examines the individual liability stemming from different individual localities, particularly with regard to CEOs (Bertrand et al., 2021). Building on social identity theory, we fill this research gap and demonstrate that lacking legitimacy in leading local firms is one of the individual liabilities of nonlocal CEOs.

Third, we also contribute to literatures on social identity theory. Social identity theory describes the sociocognitive processes that explain intergroup behavior, which has been widely studied in the realm of social psychology (Bertrand et al., 2021; Ren et al., 2022). By introducing social identity as a mechanism for nonlocal CEOs' less fraudulent behavior, we extend it into the business literatures. Furthermore, we highlight the significant impacts of location-based social identity on individual behavior in countries with significant regional disparities like China.

Literature Review and Hypothesis Development

Social Identity Theory

Social identity theory has been widely studied in the realm of social psychology (Ren et al., 2022), which describes the sociocognitive processes that address individuals' interactions and behaviors as influenced by the different categories to which they belong (Tajfel, Turner, Austin, & Worchel, 1979). According to social identity theory, individuals tend to categorize themselves and others into groups and define themselves in terms of a social identity (Ashforth & Mael, 1989). This social categorization may lead to intergroup bias and ingroup favoritism, which generally refers to the systematic tendency to show preference for one's own group membership (the ingroup) over the outgroup (Bertrand et al., 2021). Bias can encompass discriminatory behavior, prejudiced attitude, and stereotypical cognition (Hewstone et al., 2002) while favoritism can be expressed in the evaluation of others and in allocation of resources (Aronson, Wilson, & Akert, 2010). For instance, people evaluate ingroup members more

positively (Brewer, 1979; Mullen, Brown, & Smith, 1992), tend to support and collaborate with ingroup members (Chattopadhyay, George, & Shulman, 2008), and reward ingroup members more than outgroup members (Tajfel, Billig, Bundy, & Flament, 1971). In addition, ingroup members have similar norms and values and trust each other more easily (Brewer, 1999; Chen, Crossland, & Huang, 2016). Outgroup members, in contrast, are perceived as less competent, cooperative, or valuable (Tajfel, 1982).

Intergroup bias or discrimination is based on the “level of self-categorization that specifies which individuals are seen as similar to the self (“us”) and which are excluded as being others (“them”)” (Kessler & Mummendey, 2001). The categorization into groups builds on important social categories or readily observable characteristics, like hometown or birthplace , which are mentally represented as prototypes and increase the perception of ingroup similarities (Hogg & Terry, 2000). In countries like China with vast territory and significant regional differences, the location-based social identity of nonlocal individuals becomes more pronounced and will be regarded as outgroup members by the locals (Bertrand et al., 2021). In our context, we consider a CEO as a nonlocal CEO (outgroup CEO) if he or she was not born in the province in which the firm is headquartered. According to the social identity theory in the strategic leadership literature, leaders are judged primarily not on their personal characteristics, but based on their social identity (Hogg, Van Knippenberg, & Rast III, 2012). Therefore, because of their different location-based social identity, nonlocal CEOs will be categorized or perceived by the local firm's stakeholders as outgroup leaders, suffering from more negative intergroup bias (Chattopadhyay et al., 2008), and being seen as lacking legitimacy in leading local firms compared to local CEOs (Bertrand et al., 2021).

Legitimacy refers to a “generalized perception” that “the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995). It has been widely discussed in the literature on social identity.

As L. Dellmuth (2018, p. 51) highlighted, an important source of individual-level legitimacy is the same social identity. Meanwhile, social categorization leads to ingroup favoritism and outgroup bias (Hewstone et al., 2002), resulting in ingroup members being less willing to support and collaborate with outgroup members (Chattopadhyay et al., 2008). Therefore, local firms' stakeholders tend to perceive nonlocal CEOs with outgroup identities as unsuitable leaders who lack legitimacy in guiding local firms (Bertrand et al., 2021), which in turn affects nonlocal CEOs' organizational decision-making greatly (Li et al., 2022b).

This idea has been explored extensively in emergent research stream (Bertrand et al., 2021; Li et al., 2022b). For instance, outgroup members usually do some beneficial behaviors for firms or the society by enhancing their trustworthiness to overcome LOF (liability of foreignness), such as engaging in more CSR activities (Bertrand et al., 2021), improving corporate ESG performance (Li et al., 2022b), and deterring stock price crash risk (Chen, Zhao, Liu, Xu, & Liu, 2022). However, little is known about the relationship between CEOs' social identities and corporate financial fraud, which represents a deliberate and illegal behavior that can lead to substantial loss of legitimacy for the individuals involved. Given this context, we aim to examine the impact of nonlocal CEOs' different social identities on corporate financial fraud.

Corporate Financial Fraud

Fraud is a broad term, which is an act that is committed by a party or an individual to get benefits, avoid obligation, or causing financial or non-financial loss to another party (Ruin, 2009). This study focuses on the corporate financial fraud, as corporate illegal actions against national laws, regulations, and other relevant provisions (Zhou et al., 2018), which usually refers to the deliberate actions taken by management at any level to deceive, swindle, or cheat investors or other key stakeholders (Zahra, Priem, & Rasheed, 2005). It is more severe than

other unethical behavior which involves violations of standards and rules (Rijssenbilt & Commandeur, 2013). Corporate financial fraud can take a variety of forms, such as falsifying financial statements, asset fabrication, providing illegal guarantees, and share price manipulation (Cumming, Fischer, & Peridis, 2015).

Owing to corporate financial fraud may bring about a substantial negative impact on firm's reputation, economic system as well as the market value (Gao & Yang, 2021; Hogan et al., 2008), scholarly attention has begun to focus on corporate financial fraud. Specifically, at the firm level, studies have found that firm's internal control (Huang et al., 2017), the percentage of independent members on the board of directors (Nasir, Ali, & Ahmed, 2019), the percentage of institutional ownership and management ownership (Chen et al., 2006) may affect the occurrence of corporate financial fraud. Moreover, research has also investigated the positive effects of hostile environment (Apostolou et al., 2001) and industry's intense competition (Zahra et al., 2005) on committing financial fraud. At individual level, a large number of studies have explored executives' characteristics (Beasley et al., 1999; Zahra et al., 2007) such as top management teams have more similar backgrounds and longer experience working together are more likely to misreport their financial statements (Zahra et al., 2005).

Compared to middle or other senior managers, CEOs play a pivotal leadership role (Lange et al., 2015), and have a significant impact on the corporate culture and ethical climate of the organization (Zahra et al., 2005). As a result, there has been an increasing attention towards CEO personal traits on financial fraud. Research has shown that CEO characteristics, such as overconfidence, narcissism, and a lack of empathy can increase the likelihood of fraudulent behavior (König, Graf-Vlachy, Bundy, & Little, 2020; Rijssenbilt & Commandeur, 2013). Additionally, prior research has also investigated CEOs with foreign experience (Luo & Wang, 2022)(Luo and Wang, 2022), CEO connectedness (Khanna et al., 2015; Morse et al., 2011), and economic incentives (Conyon & He, 2014) on committing financial fraud. Even though it

has been widely documented that the relationship between CEO characteristics and fraudulent behavior, there remains a lack of research that provides direct empirical evidence of the relationship between CEO's different social identity and its impact on corporate financial fraud.

Hypothesis Development

Nonlocal CEO and Corporate Financial Fraud

Corporate financial fraud as a form of illegal actions against national laws, regulations, and other relevant provisions, which induces a significant loss in legitimacy (MacLean & Behnam, 2010; Zhou et al., 2018). Specifically, corporate financial fraud can destroy firm reputation and value, decrease investor confidence, and undermine the integrity of the entire capital market (Conyon & He, 2014). More important, corporate financial fraud can have negative implications for stakeholders' judgments of CEOs. Research has shown that CEOs involved in corporate financial fraud experience penalties such as reduced compensation or an increased likelihood of turnover (Firth, Rui, & Wu, 2011), leading to perceptions of their unsuitability to lead the firm. Thus, engaging in corporate financial fraud significantly undermines the legitimacy of CEOs within the organization.

To better integrate into firms and collaborate successfully with firms' stakeholders, nonlocal CEOs with outgroup identity must overcome the intergroup bias and increase their legitimacy in leading local firms. Previous research has demonstrated that by conforming to institutionalized rules, CEOs are able to build their individual legitimacy (Suchman, 1995; Yeung et al., 2011). Additionally, this process can also build organizations' external legitimacy (Sine, David, & Mitsuhashi, 2007; Staw & Epstein, 2000), which in turn help CEOs obtain credibility inside the organization, leading to personal legitimacy (Yeung et al., 2011). Therefore, we argue that nonlocal CEOs may conform to laws and regulations and reduce corporate financial fraud to enhance their personal legitimacy as local firms' leaders.

Moreover, corporate financial fraud is a form of unethical behavior. There is evidence in the social identity literature that moral character is part of individuals' social identities (Ellemers & van den Bos, 2012), and individuals tend to seek information about morality when accepting outgroup members (Brambilla, Rusconi, Sacchi, & Cherubini, 2011) as moral character is a core factor in personal perception and evaluation (Goodwin et al., 2014; Wojciszke et al., 1998). According to Suchman (1995), personal legitimacy is moral legitimacy that rests on the charisma of an individual organizational leader. Hence, by actively taking on the roles of "moral entrepreneurs" and "principled leaders" (Elsbach, 1994), can be an effective way for nonlocal CEOs to enhance their personal legitimacy.

In contrast, we argue that, *ceteris paribus*, local CEOs as ingroup leaders are subject to ingroup favoritism and do not lack legitimacy. Therefore, compared with local CEOs, nonlocal CEOs may conform to laws and regulations and reduce corporate financial fraud to enhance their legitimacy as outgroup leaders. We therefore state our main hypothesis as follows:

Hypothesis 1: Compared with local CEOs, firms with nonlocal CEOs are less likely to commit corporate financial fraud.

CEO Awards as a Moderator

Awards, as a kind of nonfinancial incentives, are typically granted to honor individuals who exemplify the norms and beliefs upheld by the award givers (Frey & Gallus, 2017), providing feedback to award winners about their competency (Neckermann & Frey, 2013). When CEOs are ranked among the best business leaders of their time by the business media, it is a great recognition of their competencies and accomplishments (Li, Shi, Connelly, Yi, & Qin, 2022a). These awards are organized by media outlets such as Forbes, Fortune, the China Business News and are conferred on CEOs who have made great contributions to the firms (Malmendier & Tate, 2009; Wade, Porac, Pollock, & Graffin, 2006). CEOs who win the "Best Business

Leaders” awards experience a sharp increase in both social recognition and social status (Hayward, Rindova, & Pollock, 2004), and cement their reputations within and beyond their organizations (Ho, Kim, & Reza, 2022), resulting in social distinction (Frey, 2007), which has an important impact on the evaluation of award-winning CEOs (Gallus & Frey, 2016). Meanwhile, CEO award is the signal to highlight CEOs’ quality that can improve their career prospects (Connelly, Certo, Ireland, & Reutzel, 2011). Although CEO award can bring about some benefits and positive effects, recent research has also observed a “dark side” to winning an award. For instance, award winners may become focused on pursuing their own interests after receiving an award because they feel they have earned the right to do as they please (Neckermann & Frey, 2013). Besides, Li et al. (2022a) have demonstrated that CEOs who win the prestigious award increase are more likely to engage in financial fraud because of an increased sense of entitlement.

In our context, compared with local CEOs, nonlocal CEOs with outgroup identities suffer intergroup bias, and will be regarded as inappropriate leaders lacking legitimacy in leading local firms by local firms’ stakeholders (Bertrand et al., 2021). However, we argue that, nonlocal CEOs who win some prestigious awards can enhance their legitimacy. When nonlocal CEOs are ranked among the best business leaders of their time by the business media, their social recognition and prominence are elevated (Hayward et al., 2004). Firms’ stakeholders have more positive evaluations on them and consider them to be more competent (Gallus & Frey, 2016), subsequently reducing the degree to which nonlocal CEOs lack legitimacy as outgroup members. In addition, award winners can enhance both their personal and firms’ reputation (Love et al., 2017). Nonlocal CEOs who win some awards can counteract intergroup bias through their prestigious reputation to gain internal legitimacy within firms (Amankwah-Amoah & Debrah, 2017). In contrast, *ceteris paribus*, nonlocal CEOs who have never won awards, as outgroup members lacking legitimacy in leading local firms. Therefore, compared

with those who win some awards, nonlocal CEOs who have never won awards are required to conform to laws and regulations and reduce corporate financial fraud to enhance their legitimacy and better integrate into local firms. We thus propose the hypothesis:

Hypothesis 2: CEO awards weaken the negative relationship between nonlocal CEOs and corporate financial fraud.

Firm Financial Performance as a Moderator

Prior research has shown that financial distress is an incentive for management to commit financial fraud (Huang, Zhou, & Zhu, 2012; Zhou & Kapoor, 2011). When firms with higher financial performance, CEOs have less incentives to engage in fraudulent activities, making them less likely to commit corporate financial fraud. In this case, firms' stakeholders will take their efforts to avoid financial fraud for granted, which are unable to enhance CEOs' personal legitimacy. In contrast, when firms with poor financial performance, CEOs tend to face more pressure from corporate governance competencies and personal career concerns (Ellemers, De Gilder, & Haslam, 2004), which in turn increase the incentives to commit corporate financial fraud (Ravisankar et al., 2011). Therefore, conforming to laws and regulations and reducing corporate financial fraud when firms are experiencing poor financial performance and financial difficulties leads to more positive moral evaluations for CEOs. Hence, we argue that, nonlocal CEOs with outgroup identities can enhance their legitimacy more effective in leading local firms by committing less corporate financial fraud at lower rather than higher level of firms' financial performance. In contrast, as ingroup leaders, *ceteris paribus*, local CEOs do not lack legitimacy in leading local firms. Therefore, compared with nonlocal CEOs, local CEOs are more likely to commit corporate financial fraud when firms with poor financial performance.

Additionally, according to the social identity theory, individuals tend to support and collaborate with ingroup members due to ingroup favoritism (Chattopadhyay et al., 2008;

Hewstone et al., 2002). In other words, firms' stakeholders are more likely to support local CEOs, and believe that their behavior is beneficial to the firm. Therefore, in our context, we argue that when the firm's financial performance at the lower level, stakeholders are more likely to view corporate financial fraud committed by a local CEO as helping the firm overcome short-term financial difficulties rather than seeking personal gains, resulting in less legitimacy loss for the local CEO. However, nonlocal CEOs will be perceived by firms' stakeholders as outgroup members (Nielsen & Nielsen, 2013; Stoddard & Leibbrandt, 2014), suffering from intergroup bias (Chattopadhyay et al., 2008), resulting in less trustworthy and the willingness to support (Bertrand et al., 2021). Therefore, nonlocal CEOs' corporate financial fraud severely damage their personal legitimacy within firms, which further reducing their likelihood of committing corporate financial fraud. To sum up, we propose the third hypothesis as follows:

Hypothesis 3: The negative relationship between nonlocal CEOs and corporate financial fraud is stronger when firms with poor financial performance.

Cultural Tightness as a Moderator

Cultural tightness refers to the degree to which a society is abided by rules and norms and the extent to which individuals are punished or sanctioned when they deviate from these rules and norms (Chua, Huang, & Jin, 2019). Previous literature has examined the strength of social norms and the degree of sanctioning can affect fraud tolerance. Specifically, researchers found that the level of cultural tightness would shape the way individuals are socialized as well as their expectations towards social behaviors, which in turn affects people attitude towards behaviors that deviate from cultural and social norms, such as fraudulent behavior and their willingness to engage in deceptive behaviors (Zourrig & Park, 2019). Tight cultures tend to set clear norms and consistent enforcement to regulate behaviors (Gelfand et al., 2011), and have lower tolerance and acceptance towards deviant behavior, whereas in societies with loose

cultures, social norms are usually unclear, and society tends to have greater social freedom and be more tolerant of behaviors that deviate from norms (Gelfand, Nishii, & Raver, 2006). Compared with societies with loose cultures, tight cultures pay more attention to compliance with social norms, which directly affects the evaluations and perceptions of individuals (Tong et al., 2023). Thus, we argue that individuals who commit less corporate financial fraud are more effective at enhancing their personal legitimacy in societies where place greater emphasis on laws and social norms (i.e. societies with tight cultures rather than loose cultures). In our study, nonlocal CEOs with outgroup identities will be perceived as outgroup members, suffer from intergroup bias, being seen as lacking legitimacy in leading local firms compared to local CEOs (Bertrand et al., 2021). Therefore, nonlocal CEOs will more abide by laws and regulations and commit less corporate financial fraud in societies with tight cultures. Secondly, nonlocal CEOs as outgroup members may garner antipathy and blames if they do some behaviors that deviate from social norms and regulations (Allport, Clark, & Pettigrew, 1954; Weisel & Böhm, 2015), particularly in societies with tight cultures where have clear and strict norms (Triandis, 2004). Based on this, to avoid further loss of their personal legitimacy, compared with regions with loose cultures, nonlocal CEOs will commit less corporate financial fraud in regions with tight cultures.

Furthermore, cultural tightness and looseness is also associated with self-concept and social identity affiliation. Specifically, interdependent self-concepts were more likely to occur in tight cultures (Carpenter, 2000). What's more, tight cultures have higher cognitive levels of social identities and have a more limited number of social identity affiliations in comparison to loose cultures (Feitosa, Salas, & Salazar, 2012). Therefore, nonlocal CEOs' outgroup identities are more salient in regions with tight cultures, and they will suffer from more bias and discrimination. Wang, Wei, and Zhao (2022) also demonstrated that the higher the tightness in a region, the more challenging it is for outgroup members to gain legitimacy. Hence, in regions

with tight cultures, nonlocal CEOs as outgroup leaders are more likely to conform to laws and regulations and reduce corporate financial fraud to enhance their personal legitimacy in leading local firms. Accordingly, we propose our fourth hypothesis:

Hypothesis 4: The negative relationship between nonlocal CEOs and corporate financial fraud is stronger in regions with tight cultures.

Methodology

Data construction

Our empirical analysis is based on a unique dataset of Chinese listed firms over the period of 2007-2020. China provides an ideal research context for us to examine the relationship between nonlocal CEOs and corporate financial fraud. First, as an emerging market, the Chinese capital market has relatively undeveloped legal and regulatory systems, which provides opportunities for corporate fraudulent behaviors (Ding et al., 2010; Ren, Zhong and Wan, 2022). Second, owing to China's vast territory and significant regional disparities, such as variations in language, culture and customs, the location-based outgroup social identity of nonlocal individuals becomes more pronounced and has significant impacts on their behavior and decision-making (Bertrand et al., 2021; Li, Huang, & Li, 2022). Lastly, China's position as the world's second-largest economy highlights the need for extensive research on corporate financial fraud within this context (li weishi 2022).

Our primary data source is the China Stock Market and the Accounting Research (CSMAR) database (<http://www.gtadata.com/>) provided by GuoTaiAn Information Service (GTA), which is one of the most reliable and comprehensive sources of information on all firms listed in Shanghai and Shenzhen stock exchanges (Li et al., 2022a; Zhu, Pan, Qiu, & Xiao, 2022). The CSMAR database provides information on corporate financial fraud and the personal characteristics of senior managers, as well as information on financial performance and

corporate governance. We start in 2007 to make sure that the accounting information is comparable across years because a new accounting standard became effective in 2007 (Quan, Ke, Qian, & Zhang, 2021). Furthermore, considering that both detection and disclosure of corporate fraud require a significant amount of time, we search for cases of corporate fraud in CSMAR before 2022 but include frauds occurring no later than 2020 to allow sufficient time for detection and disclosure (Khanna et al., 2015).

In order to identify CEO's locality in a focal firm, we collect CEOs' birthplace or hometown information from the CSMAR database. However, since there is no unified requirement for the disclosure of executives' background information in China, only 26% of CEOs' birthplace or hometown information is available in CSMAR. As a supplement, we manually collected the birthplace information of some CEOs from the internet (2.4%). To minimize potential bias arising from CEOs outside the scope of our analysis, we excluded samples of CEOs who are not mainland Chinese, including CEOs from Hong Kong, Macao, Taiwan, and foreigners. By adopting this exclusion criterion, we aimed to focus of our analysis on CEOs specifically within the 31 provinces of China. After further dropping observations with missing values of variables used in this paper, our final sample consists of 1500 distinct firms and 8147 firm-year observations that involve 2034 CEOs, where 44% of them are nonlocal CEOs.

Variable Measurement

Dependent Variables

In China, the China Securities Regulatory Commission (CSRC) is responsible for investigating fraudulent behavior that flouts securities regulations, including reporting inflated profits, asset fabrication, issuing misleading statements, asset embezzlement, insider trading, illegal share buybacks, and stock price manipulation ((Li et al., 2022a; Ren, Zhong, & Wan, 2021). In line with the previous studies ((Li et al., 2022a; Ren et al., 2021; Rijssenbilt & Commandeur, 2013),

we use a dummy variable *Fraud* to measure whether the firm has committed any corporate financial fraud in a given year. In some cases, a fraud may last multiple years, we assign a value of 1 to the *Fraud* for each year of a firm's corporate fraud duration and 0 otherwise.

Furthermore, considering that a firm may commit multiple financial frauds within a year, the number of frauds may serve as a useful indicator of the extent to which it flouts securities regulations. To account for this, we have introduced the *Fraud Number* committed by a firm in a given year as a measure of its non-compliance in the robustness tests. Specifically, we define the *Fraud Number* as the sum of corporate financial fraud instances that a firm committed during the year.

Independent Variable

Our study uses the dummy variable *Nonlocal CEO* to measure whether the CEO of the local firm comes from another province (Ren et al., 2022). If the CEO's birthplace or hometown is different from the province in which the firm is headquartered, then *Nonlocal CEO* = 1, otherwise it is 0.

Moderating Variables

We first consider the moderating effect of CEOs' awards on the relationship between nonlocal CEOs and corporate financial fraud. Following the approach of previous studies (Li et al., 2022a; Zhang, Gong, Jia, & Zhu, 2022), we identify CEO awards granted between 2005 and 2020 by the China Business News ("Best Business Leaders in China"), Forbes ("Best CEOs of Chinese Listed Companies"), and Fortune ("Most Influential Business Leaders in China"). The awards from China Business News and Fortune were established in 2005 and those from Forbes in 2006. We manually collected these datasets from reliable online sources.

Acknowledging that winning awards from multiple influential media can amplify a CEO's reputation and legitimacy, we define *CEO awards* as the count of media outlets from which a CEO has received awards in prior years. For instance, if a CEO won an award from China Business News in 2006 and another from Forbes in 2008, *CEO awards* will be 1 for 2007 and 2008, and subsequently increase to 2 starting from 2009. Considering that the increase of legitimacy resulting from repeated awards within the same influential media is relatively small (Li et al., 2022a), we solely consider the CEO's first award from each influential media.

The second moderator, *ROA*, is measured as the firm earnings before interest and taxes normalized by total assets. *ROA* is a common accounting-based measure of firm financial performance (Venkatraman & Ramanujam, 1986; Wang & Qian, 2011), which is as well as an important metric used by investors and stakeholders to evaluate the overall health of the firm.

Our third moderator, *Cultural Tightness*, refers to the degree to which a society is abided by rules and norms. The data on regional cultural tightness is provided by Chua (Chua et al., 2019), who administered a six-item measure on cultural tightness developed by Gelfand et al. (2011) in all of the 31 provinces in mainland China from 2014 to 2017. Sample items included “There are many social norms that people are supposed to abide by in this province/city” and “In this province/city, if people behave in an inappropriate way, others will strongly disapprove.”, which tap the perception of tightness of social norms in each province (Chua et al., 2019).

Control Variables

Drawing on prior research (Chen et al., 2016; Harris & Bromiley, 2007; Li et al., 2022a; Yiu, Wan, & Xu, 2019; Zhou et al., 2018), we introduce a set of control variables that are associated with the likelihood of corporate financial fraud. To this end, we first control for various firm performance characteristics. Specifically, we include the natural logarithm of total assets at the beginning of the year (*Firm Size*) as a measure of firm size, as Khanna et al. (2015) suggest

that larger firms are more likely to commit fraud. We also control for the *Leverage Ratio* and *Tobin's Q*, as prior studies have shown that firms in financial distress are more prone to financial statement fraud (Bell & Carcello, 2000; Eining, Jones, & Loebbecke, 1997). In addition, we also controlled the average sales growth rate (*Growth*) in the three years prior to the reporting period (Khanna et al., 2015). Next, we include a measure of firm risk, '*Volatility*', using the standard deviation of daily stock returns per year (Conyon & He, 2011, 2012). Besides, stocks annual turnover (*Turnover*) is also controlled, which implies the number of investors (Wang, Winton, & Yu, 2010). Moreover, given that many firms with a record of fraud are more likely to commit similar fraud in the future (Bao, Zhao, Tian, & Li, 2019), and some frauds may last for many years, recent corporate financial fraud records can predict subsequent fraudulent behavior. Thus, we control for the probability of fraud committed by the firm in the past five years (*Pervious Fraud*).

Second, we include a set of board and equity characteristics. Specifically, we control for the number of directors (*Board Size*) and the percentage of independent directors (*Board independence*), as prior studies have found that smaller boards with more independent directors are associated with higher monitoring effectiveness (Raheja, 2005). We also control for the average age of executives (*Average Director Age*), as older executives tend to be more risk-averse and deliberate, which may reduce the probability of corporate fraud (Herrmann & Datta, 2005; Zahra et al., 2007). Moreover, this deliberateness in decision-making may influence executives' attitudes toward nonlocal CEOs as outgroup members. To account for the effect of ownership structure, we include *Ownership Concentration*, which is measured by the Herfindahl index of the ownership held by the ten largest shareholders in a firm (Wu, Johan, & Rui, 2016). Lastly, we include institutional ownership proportion (*Institutional Ownership*), as prior studies have documented the crucial role of institutional investors in shaping corporate governance (Khanna et al., 2015; Kim & Lu, 2011).

Third, drawing on Troy et al.'s (2011) research, which highlights the potential influence of decision-makers' characteristics on corporate fraud, we introduce controls for CEO characteristics. These controls consist of *CEO Age*, *CEO Gender* (1 if the CEO is a man, and 0 otherwise), and *CEO Tenure*, which is measured by the number of years the CEO has been in the current position.

Statistical Methods

To test the effect of CEO locality on the probability of corporate fraud, we estimate the following probit regression model:

$$\begin{aligned} \text{Probit}(\text{Fraud}_{it} = 1) = \phi(& \beta_0 + \beta_1 \text{Nonlocal CEO}_{it} \\ & + \beta_2 \text{Nonlocal CEO}_{it} \times \text{CEO awards}_{it} \\ & + \beta_3 \text{Nonlocal CEO}_{it} \times \text{ROA}_{it} \\ & + \beta_4 \text{Nonlocal CEO}_{it} \times \text{Cultural Tightness}_{it} \\ & + X_{it} + \text{Year}_t + \text{Industry}_c + \text{Province}_j + \varepsilon_{it}) \end{aligned}$$

where i denotes firm and t denotes year, ϕ indicates cumulative distribution function. β_1 is the coefficient of interest that captures the impact of nonlocal CEOs on the probability of corporate fraud compared with local CEOs. β_2 , β_3 and β_4 test Hypothesis 2 - 4 respectively, that is, the moderating effect of CEO awards, firm financial performance and regional cultural tightness. X_{it} contains a set of firm-level control variables as specified above. We further control for year, industry and province fixed effects in our model to exclude the influence of year-specific variation over time and time-invariant unobserved industry and province characteristics that influence corporate fraud. We can control for unobserved heterogeneity through this approach (Xu, Zhou, & Du, 2019). ε_{it} is the error term.

Results

Table 1 presents the descriptive statistics and correlations of all the variables used in the regression analysis. In the original data, the outliers of Leverage ratio, Tobin Q, Growth and Institutional ownership are particularly large. Therefore, we winsorize these four variables at the 1st and 99th percentiles to alleviate the potential effects of outliers. The results of Table 1 show that the range of these variables fell within a reasonable range. The correlation coefficients between Nonlocal CEO and Fraud are significantly negative (corr = -0.024, p<0.05), indicating nonlocal CEOs may commit less corporate financial fraud. All correlation coefficients are within an acceptable range, which suggests that multicollinearity was not a serious issue in our analyses. We further conducted VIF (Variance Inflation Factor) tests on the basic OLS regression model with all variables included. The results revealed VIF scores are all less than 5, with a mean of 1.47 and a maximum of 3.03, indicating the absence of multicollinearity concerns.

Insert Table 1 about here

Insert Table 2 about here

Table 2 presents the results of the probit model regression analysis on the effect of CEO locality on corporate financial fraud. Model 1 is used to test Hypothesis 1 which predicts that firms with nonlocal CEOs are less likely to commit corporate financial fraud. In Model 1, the coefficient of Nonlocal CEO is statistically significant and negative ($\beta_1 = -0.103$, $p = 0.008$), providing support for Hypothesis 1. This result is also economically significant: for firms with a nonlocal CEO, the fraud rate decreases by a substantial 10.3%, which is approximately 50.9% of the sample mean (0.202).

Model 2-4 test Hypotheses 2, 3 and 4. In Model 2, we test Hypothesis 2 by adding the interaction of Nonlocal CEO and CEO awards. The coefficient of interaction term is significantly positive ($\beta_2 = 0.277$, $p = 0.021$), indicating that CEO awards weaken the negative relationship between nonlocal CEOs and corporate financial fraud. Figure 1 illustrates the moderating effect of CEO awards: for CEOs without any award, we observe a negative relationship between nonlocal CEO and financial fraud. However, for CEOs who have ever won an award, the relationship between nonlocal CEO and financial fraud turns positive. Hypothesis 2 is thus supported.

Model 3 includes the interaction between Nonlocal CEO and ROA to test Hypothesis 3. The coefficient of the interaction term is significantly positive ($\beta_3 = 1.537$, $p = 0.001$), indicating that ROA weaken the negative relationship between nonlocal CEOs and corporate financial fraud, supporting Hypothesis 3. Additionally, the result reveals a direct negative impact of Return on Assets (ROA) on corporate financial fraud ($\beta = -1.11$, $p = 0.001$), which supports the previous finding that CEOs are more likely to engage in fraudulent behavior when the company's financial performance is poor (Huang et al., 2012; Ravisankar et al., 2011). Figure 2 illustrates the moderating effect of firm financial performance: when firm's ROA is low (mean – 1 SD), we observe that nonlocal CEOs are less likely to commit corporate financial fraud compared to local CEOs. However, this effect disappears when the firm's ROA is high (mean + 1 SD) as the fraudulent behavior of local CEO also decreases.

Model 4 includes the interaction between Nonlocal CEO and Cultural tightness to test Hypothesis 4, which predicts that the negative relationship between Nonlocal CEOs and corporate financial fraud is stronger when the firm is headquartered in the province with a tight culture. The coefficient of the interaction is significantly negative ($\beta_4 = -0.082$, $p = 0.022$), supporting Hypothesis 4. Figure 3 illustrates the moderating effect of Cultural tightness. Specifically, as the level of cultural tightness where the firm is headquartered increases from a

low level (mean - 1 standard deviation) to a high level (mean + 1 standard deviation), the negative relationship between Nonlocal CEOs and corporate financial fraud gets much steeper. Finally, Model 5 as the full model provides consistent results.

Insert Figure 1-3 about here

Robustness Tests

We have conducted multiple supplementary analyses to show the robustness of our findings.

First, we adopt the number of frauds committed by a firm in a given year (*Fraud number*) as proxies for corporate financial fraud. This indicator captures the extent to which a CEO floats securities regulations. Considering that *Fraud number* is a count variable, we employ a poisson model and re-estimate the regression using the same variables as in Table 2. The results are presented in Table A1, which are broadly consistent with our main results.

Second, given the possibility of increased corporate fraud risks during the financial crisis in 2008 and the COVID-19 epidemic in 2020, we restrict our sample period to 2009-2019 and rerun Model 1-5 to mitigate the impact of extreme external environments. Table A2 presents our results, which consistently support our conclusion.

In addition, we distinguish between the nonlocal CEO and CEO's foreign experience, as they are driven by different mechanisms. The experience of studying or working in a different country with different customs and habits has important impacts on the cognitive orientation of managers (Herrmann & Datta, 2005). Through their interaction with foreign entities, which will mainly enhance CEOs' international knowledge, management expertise, as well as general cognitive competencies including creativity, problem solving and leadership (Caligiuri & Tarique, 2009; Carpenter, Sanders, & Gregersen, 2001; Dragoni et al., 2014; Quan et al., 2021). As a further control for the CEO's personal characteristics, we introduce the CEO's foreign experience into Model 1-5, as well as education and financial background. The results,

presented in Table A3, remain consistent with our previous findings. This also shows that CEO's locality and foreign experience affect fraudulent behavior in different mechanism as the inclusion of these controls will not alter the estimated coefficients of nonlocal CEO.

Endogeneity

Despite the introduction of comprehensive control variables and fixed effects for year, industry, and province, endogeneity remains a significant problem in our model. To address this issue, we have taken several initiatives.

First, our sample only includes listed firms that have disclosed CEOs' birthplace or hometown during 2007-2020, and some firms may have chosen to conceal this information for various reasons, leading to potential selection bias in our sample. Therefore, we employed a Heckman two-stage model (Heckman, 1979; Ren et al., 2022). In the first stage, we used a probit model with an exogenous instrumental variable, *Industry disclosure rate of CEOs birthplace*, and all control variables to predict whether a firm disclosed CEOs' birthplace in a given year. The *Industry disclosure rate of CEOs birthplace* was calculated as the mean probability that all firms within the same industry disclosed their CEOs' birthplace or hometown. A higher industry disclosure rate suggests that shareholders or investors within that industry have a stronger inclination to request the disclosure of CEOs' information for the firms. On the other hand, the industry's average disclosure rate is not directly related to a specific firm's corporate financial fraud. The results of the first-stage analysis, presented in column (1) of Table A4, indicating that the *Industry disclosure rate of CEOs birthplace* is a strong predictor of whether a firm discloses its CEOs' birthplace.

Subsequently, we calculated an inverse Mills' ratio (Lambda) based on the results of the first-stage model and introduced it into the second-stage model. As shown in column (2), the coefficient of Lambda was not significant ($\beta = 0.041$, $p = 0.685$), indicating no significant

sample selection bias in our models. Besides, the results of the Heckman two-stage model are consistent with those of the main analyses, proving the robustness of our conclusions.

We also acknowledged the potential issue of reverse causality in our analysis, as corporate fraud may impact certain control variables, such as stock volatility. To address this concern, we applied a lag of one year (i.e., t-1) to all control variables, except for *CEO awards*, *Cultural tightness*, *Previous fraud*, *CEO age*, *CEO gender*, and *CEO tenure*. We did not lag these variables as they are not likely to be influenced by corporate financial fraud in the current year. The results of our analysis with lagged control variables are presented in column (3) of Table A4. These findings are consistent with our main analyses, suggesting that reverse causality is not a significant problem in our study.

Third, considering that our dependent variable is not independent across years, we rerun our data using generalized estimating equations (GEEs) to account for the nonindependent nature of our longitudinal sample. GEEs help account for unobserved differences across CEOs as well as intertemporal correlations among outcome variables (Ren, Sun, and Tang, 2022). In our GEE analysis, we specified a binomial distribution with a probit link function to model the binary nature of our dependent variable. Besides, we specified an exchangeable correlation structure (grouped by CEO), which account for any misspecification in the correlation structure (White, 1980). The results are presented in column (4) of Appendix Table 4, which are still consistent with our previous findings. These models for endogeneity tests strengthen the validity and robustness of our conclusions.

Detect

Another concern in our study is the inherent partial observability problem in any fraud sample. We only observe detected fraud, rather than the entire population of fraudulent behavior, as there may be cases of fraud that have been committed but not yet detected (i.e., those who are

cheating and getting away with it). If CEO locality is related to the likelihood of a firm being detected after corporate financial fraud, neglecting the detection process could introduce bias into our model. To address this issue, we adopt a bivariate probit model with partial observability to test the relationship between nonlocal CEOs and fraud detection. This approach, which has been utilized in previous research (Khanna et al., 2015; Li et al., 2022a; Yiu et al., 2019), allows us to simultaneously estimate two equations: one for fraud commission and another for fraud detection. To do so, we identified two sets of control variables that are not the same following previous research (Khanna et al., 2015; Ren et al., 2022). Specifically, we follow Li et al., (2022a) and introduce stock market performance (*Stock Returns*) and *Firm size* in the equation that estimating fraud detection. Considering that stock volatility (*Volatility*), turnover rate (*Turnover*), independent directors rate (*Independent Directors*) and institutional ownership proportion (*Institutional Ownership*) mainly affect investors, stakeholders and institutions' external monitoring, we removed these four variables from the equation that estimating fraud commission. Furthermore, since the CEO's personal characteristics are unlikely to directly affect fraud detection, we removed *CEO age*, *CEO gender*, and *CEO tenure* from the equation that estimating fraud detection. We leave out year, industry and province dummies because including them would result in model estimation failure (Li et al., 2022a).

The results are shown in Table A5, from which we find that the impact of nonlocal CEOs on fraud commission remains significantly negative ($\beta = -0.139$, $p = 0.045$). However, the impact on fraud detection is not significant ($\beta = -0.073$, $p = 0.142$). This finding indicates that our model is not likely to be biased by unobserved financial fraud and helps exclude the potential bias caused by ignoring the detection process in the model.

Mechanism

As we have discussed in the hypothesis part, nonlocal CEOs are less likely to commit corporate financial fraud, arguably because of their different location-based social identities that will be perceived as outgroup member by the local firm's stakeholders, resulting in intergroup bias and lacking legitimacy in leading local firms (Bertrand et al., 2021). However, this location-based categorization process may be influenced by the external environment (Ren et al., 2022; Todri, Adamopoulos, & Andrews, 2022). For instance, globalization will reduce the salience of the outgroup identity of foreign CEOs (i.e., decategorize), leading to a reduction in inter-group bias against them (Bertrand et al., 2021). To demonstrate that different social identities of nonlocal CEO are the underlying mechanism of our results, we conducted two additional heterogeneity analyses. Specifically, we consider regional dialect diversity and local private-owned enterprises (vs. Nonprivate-owned enterprises), which captures the variation in location-based social identity salience at regional and firm level. By observing the heterogeneous impact of nonlocal CEOs on corporate fraud when social identities are prominent or not, we are able to fully understand the mechanism of our findings.

Regional dialect diversity

Language, being an attribute of culture, significantly influence an individual's beliefs and value systems. Social identity theory suggests that the symbolic meaning attached to a language can shape a unique identity and generate a sharp boundary between groups, affecting the level of awareness and recognition people give to their social identity (Ashforth & Mael, 1989; Ren et al., 2022). Regional dialect diversity reflects the level of cultural heterogeneity in a certain region (Frijns, Dodd, & Cimerova, 2016; Qian, 2013). Whether the regional culture is heterogeneous or homogenous critically determines the level of social identification in the region. In region where fewer dialects are spoken, individuals tend to exhibit a stronger identification with the location-based group they belong to (Scannell & Gifford, 2010). In

contrast, when the region has more diverse dialects, the lack of symbolic coherence will deter the formation of strong social identity (Hogg, Terry, & White, 1995).

Consequently, the outgroup identity of nonlocal CEOs is more prominent in regions with a single dialect or similar dialects. In these regions, stakeholders of local firm exhibit a stronger identification with their location-based group, which leads to a higher level of inter-group bias and discrimination against nonlocal CEOs (Jetten, Postmes, & McAuliffe, 2002; Riek, Mania, & Gaertner, 2006). Therefore, if the lack of legitimacy resulting from different social identity is the underlying mechanism of our results, we would expect to observe that nonlocal CEOs are less likely to commit corporate financial fraud in regions with less diverse dialects. We estimated the heterogeneity effect of nonlocal CEOs on corporate financial fraud in provinces with dialect number =1, dialect number =2 and dialect number >2 respectively, and the results are shown in columns (1)-(3) of Table 3. As anticipated, we find that the negative effect of nonlocal CEOs on corporate fraud is most pronounced and statistically significant in regions with a single dialect ($\beta = -0.161$, $p = 0.014$). As the regional dialect diversity increases, the negative effect weakens and becomes marginally significant in regions with two dialects ($\beta = -0.119$, $p = 0.056$), and becomes statistically insignificant in regions with three dialects or more ($\beta = -.069$, $p = 0.576$).

Insert Table 3 about here

Insert Figure 4 about here

Local Private- vs. Nonprivate-Owned Enterprises

Second, we focus on identifying the factors that influence the salience of social identity at the firm level. To achieve this, we classified all firms into two groups: Local Private-Owned Enterprises and Nonprivate-Owned Enterprises.

Private-owned enterprises (POEs) have emerged in China since the late 1970s, which are typically owned or operated by private investors, shareholders, or groups, and they play a crucial role in the regional economy (Doh, Teegen, & Mudambi, 2004). POEs often build their legitimacy by locating or expanding in local communities (Ahlstrom, Bruton, & Yeh, 2008). They tend to appoint managers who have longstanding relationships or clan ties, and further strengthen their legitimacy through reciprocal relation-building with key individuals in the local region (Peng & Luo, 2000; Xin & Pearce, 1996). Moreover, under local protectionism, regional governments may provide local firms with favorable policies and key resources to promote local economic growth, such as industry entry permission production factors, as well as intangible resources, namely localized knowledge and human resources (Brandt & Li, 2003; Young, 2000). As a result, local private enterprises often demonstrate a higher level of regional specificity due to their close ties with the local community and the support received from local institutions and stakeholders, which exhibit high sense of location-based social identity. In other words, compared with nonprivate-owned enterprises, nonlocal CEOs' outgroup identity will be more pronounced in the POEs, resulting in more intergroup bias and lack of legitimacy. By estimating the heterogeneity effect of nonlocal CEO on corporate financial fraud in POEs and non-POEs respectively, which are presented in columns (4) and (5) of Table 3, we find that the negative impact of nonlocal CEOs on corporate financial fraud is significant in private-owned enterprises ($\beta = -0.126$, $p = 0.028$), but insignificant in nonprivate-owned enterprises ($\beta = -0.063$, $p = 0.329$). This result emphasizes the hypothesis that nonlocal CEOs' different social identities play a significant role in reducing corporate financial fraud.

Figure 4 intuitively shows the estimated coefficients of nonlocal CEO in the above heterogeneity analysis, which provides empirical support for our hypothesized potential mechanism: social identity. Meanwhile, a notable alternative explanation for our results is that

nonlocal CEOs have fewer social network ties both outside and inside the local firms, thus resulting in less opportunities and pressures to commit corporate financial fraud. We consider four factors that may affect social network ties of nonlocal CEOs both outside and inside the local firms, and conduct four tests to rule out the alternative explanation of social network ties.

Graduated locally

We first consider college life as a means of accumulating external social networks. If a CEO graduated from the university in the local province, then he or she would accumulate more external social network ties in this province. We generate a dummy variable "*Graduated locally*", which indicates whether a CEO graduated from the university in the local province. If the lack of social network ties is the reason that nonlocal CEOs commit fewer violations, we would expect to see "*Graduated locally*" reduce the negative impact of nonlocal CEOs on corporate financial fraud. In Column (1) of Table 4, we examined the moderating effect of "*Graduated locally*". However, the coefficient of the interaction term is not significant, thereby rejecting the notion that external social network ties explain the less corporate financial fraud observed among nonlocal CEOs. This finding is consistent with Khanna's (2015) findings that CEO connectedness based on sharing prior education has an insignificant effect on corporate fraud.

Director of other firms

Second, we consider holding directorships in other firms as another means of accumulating external social network ties. CEOs serving on other firms' boards can transmit or share knowledge, information, and ideas between these linked firms, increasing more external social network ties for CEOs (Bose, Ali, Hossain, & Shamsuddin, 2022). We created a count variable, "*Director of other firms*", which indicates the number of other firms' directorships held by the

CEO. In Column (2) of Table 4, we examined the moderating effect of "Director of other firms.". However, since the coefficient of the interaction term was not significant, we can also reject the notion that external social network ties are the mechanism behind our results.

Tenure

When considering the firm's internal social network ties, we first focus on CEO tenure, which is measured by the number of years the CEO has served in office. The longer nonlocal CEOs' tenure, the more opportunities they have to develop and strengthen social network ties within the firm. If nonlocal CEOs are less likely to commit corporate fraud because of the lack of internal social network ties, we should observe tenure increases the likelihood of corporate financial fraud for nonlocal CEOs. In Column (3) of Table 4, we examined the moderating effect of "CEO Tenure". However, the coefficient of the interaction term was not significant, thereby rejecting the notion that internal social network ties are the mechanism behind our results. This finding is consistent with Uzun, Szewczyk and Varma's (2004) study, which also found that the tenure of the CEO on the board was not a significant factor in explaining the likelihood of corporate fraud.

Dual chair CEO

Another factor that affects the CEO's internal social network ties within the firm is whether the CEO holds the position of the chairman. Serving as the chairman makes the nonlocal CEO have more power to develop the internal social network ties. Moreover, if the CEO is also the chairman of the board of directors, the effect of social network ties becomes significantly stronger (Cao, Dhaliwal, Li, & Yang, 2015). In Column (3) of Table 5, we examined the moderating effect of "Dual chair CEO", which equals to 1 if the CEO simultaneously holds the position of the chairman and CEO. However, the coefficient of the interaction term was not

significant, which provided further evidence that lack of internal social network ties was not the cause of nonlocal CEOs law compliance.

Insert Table 4 about here

Discussion

Our findings reveal that compared to local CEOs, firms with nonlocal CEOs are less likely to commit corporate financial fraud. This effect can be attributed to the lack of legitimacy resulting from the location-based outgroup identity of nonlocal CEOs. Our further moderating analysis show that the negative relationship between nonlocal CEO and corporate financial fraud is stronger for CEOs who have never won awards, in firms with poor financial performance and in the regions with tight cultures. Finally, we conducted additional analyses to rule out alternative explanations and found that nonlocal CEOs exhibit a greater reduction in fraudulent behavior in regions with low dialect diversity and in local private-owned enterprises, where the outgroup identity of nonlocal CEOs is more prominent.

Theoretical Contributions

Our study has important implications for corporate financial fraud research and social identity theory. First, our study contributes to the literature on corporate financial fraud by highlighting the role of CEOs' location-based social identity in shaping the commitment of corporate financial fraud. While previous research has extensively examined various CEO-related factors as antecedents of corporate financial fraud, such as demographic factors (Troy et al., 2011), personality traits (Rijssenbilt & Commandeur, 2013), and compensation structures (Conyon & He, 2012; O'Connor Jr, Priem, Coombs, & Gilley, 2006), CEOs' social identity associated with birthplace or hometown has been largely neglected. Our study, however, consider whether a local firm is led by a nonlocal CEO as a significant antecedent, as CEOs' social identity has a

substantial impact on their strategic decision-making (Ren et al., 2022). Building on social identity perspective, we propose that nonlocal CEOs lack legitimacy in leading local firms, which can be seen as a manifestation of their personal liabilities as outgroup members. Consequently, they are more likely to reduce corporate financial fraud and showing their moral character to enhance their personal legitimacy. This finding contributes to new ideas regarding misbehavior among the managerial elite.

Furthermore, we have identified three moderators: CEO awards, firm financial performance and cultural tightness, which address the need for investigations into the interaction between CEOs' characteristics and contextual factors in influencing organizational decision-making (Liu, Fisher, & Chen, 2018). The first moderator corresponds to recent research by Li (2022a), which suggests that CEOs' feelings of psychological entitlement can be elevated after receiving awards. Thus, in turn, increases the likelihood of financial misconduct. Our study provides a new perspective to explain the impact of CEO awards on increasing corporate financial fraud by highlighting their role in enhancing personal legitimacy. The second moderator corresponds to Bertrand et al. (2021), which finds that foreign CEOs engage in more corporate social responsibility (CSR) when their firms are experiencing poor financial performance. This is because, during such times, carrying out CSR activities is perceived as a greater "sacrifice". Similarly, our study reveals that when firms are facing poor financial performance, conforming to laws and regulations becomes even more "rare" (Ravisankar et al., 2011), leading to a more effective enhancement of moral evaluations and personal legitimacy. Finally, we integrate cultural factors into the evaluation of outgroup members by considering that regions with tight cultures place greater emphasis on norm compliance as a foundation for the individual legitimacy of outgroup members (Tong et al., 2023). This finding also contributes to exploring the role of cultural tightness in the literature on social identity theory and cooperate financial fraud.

Last, our study adds to social identity theory, which is increasingly applied to explain organizational decision-making in recent research stream (Bertrand et al., 2021; Li et al., 2022b; Ren et al., 2022). Given that categorization into groups is based on important social categories or readily observable characteristics, previous studies often view foreignness as a basis for assessing social identity (Bertrand et al., 2021; Hogg & Terry, 2000). However, our empirical evidence suggests that even across provinces, location-based social identity has a significant impact on individual behavior in countries with significant regional disparities, such as China. Moreover, our mechanism testing has confirmed that location-based social identity is more pronounced in regions with low dialect diversity and local private-owned enterprises. This finding is consistent with the research by Ren et al. (2022) and Todri, Adamopoulos, and Andrews (2022), which suggests that the categorization process based on social identity can be influenced by the external environment. These findings provide new insights into when the salience of outgroup identity diminishes (i.e., decategorization) in certain contexts.

Managerial Implications

Our findings have managerial implications for firms' decisions when appointing CEOs and preventing fraudulent behavior. Traditional views suggest that individuals exhibit intergroup bias and discrimination towards outgroup members and may not trust outgroup leaders (Bertrand et al., 2021). However, our findings prove that nonlocal CEOs are less likely to commit corporate financial fraud compared with local CEOs, which corresponds to the idea that new blood may revitalize the top executive team and the board, making positive contributions to the firms' future development (Goldstein, Edmans, & Zhu, 2013). Additionally, it is important to take into account the specific context when making informed decisions regarding CEO selection. We suggest that appointing a nonlocal CEO can be highly effective for firms facing poor financial performance to avoid corporate financial fraud. This action can

also serve as a signal of change to investors, similar to the phenomenon of "glass cliffs" (Reinwald, Zaia, & Kunze, 2023). Furthermore, when firms aim to address fraud issues by appointing a nonlocal CEO, key decision-makers should carefully consider the regional dialect diversity and the ownership nature of the firm. In regions or firms where the location-based social identity is not pronounced, choosing a nonlocal CEO may be less effective in reducing corporate financial fraud.

Limitations and Future Research

There are some limitations in our study that may provide guides for future research. First, it would be naive to assume that our results hold universally across different settings. Regional bias and discrimination may be stronger in China, given its vast territory and significant cultural differences between provinces, as well as the emphasis that Chinese people place on hometown identities (Ren et al., 2022). Therefore, although the adoption of Chinese samples enhances the explanation and prediction of frauds in Chinese firms, the extension of our conclusions to other research contexts may be limited. Certainly, considering the cultural uniqueness of different regions, individuals' social identity may play different roles across different cultures and institutional settings. We thus call for future research to validate and extend our findings by conducting studies in diverse countries and cultural contexts. Future research can also further examine different boundary conditions that CEO locality has on firms' decision-making processes.

Secondly, this study examines the correlation between nonlocal CEOs and corporate financial fraud, with CEOs' birthplace serving as an indicator of their location-based social identity. However, due to the limited availability of information regarding CEOs' birthplace in Chinese listed firms, our sample size is restricted. Consequently, our measurements should be refined by future research. To improve the validity of our findings, future research can consider

multiple methods to expand the dataset, as well as using questionnaires to specifically measure CEOs' social identities and their legitimacy. For instance, questionnaires could be designed to inquire about the locals' attitudes towards nonlocal CEOs and their birthplaces more broadly to better measure nonlocal CEOs' different social identity.

Third, despite our adoption of the bivariate probit model in the robustness check to mitigate the potential impact of nonlocal CEOs on fraud detection, thereby mitigating the issue of partial observability. It is important to acknowledge that our study, similar to other studies on corporate fraud, remains unable to fully address the challenge of fraud disclosure opacity in China (Jian & Wong, 2010; Yiu et al., 2019). Nevertheless, the bivariate probit model has already brought us a step forward to gain a more precise understanding of fraud commission and fraud detection. Future research can employ multiple research methods, such as Difference-in-Differences (DiD) analysis in conjunction with the implementation of new regulatory policy, to better identify the causal effects associated with fraud detection.

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Figures and Tables

Figure 1
Moderating Effect of CEO awards

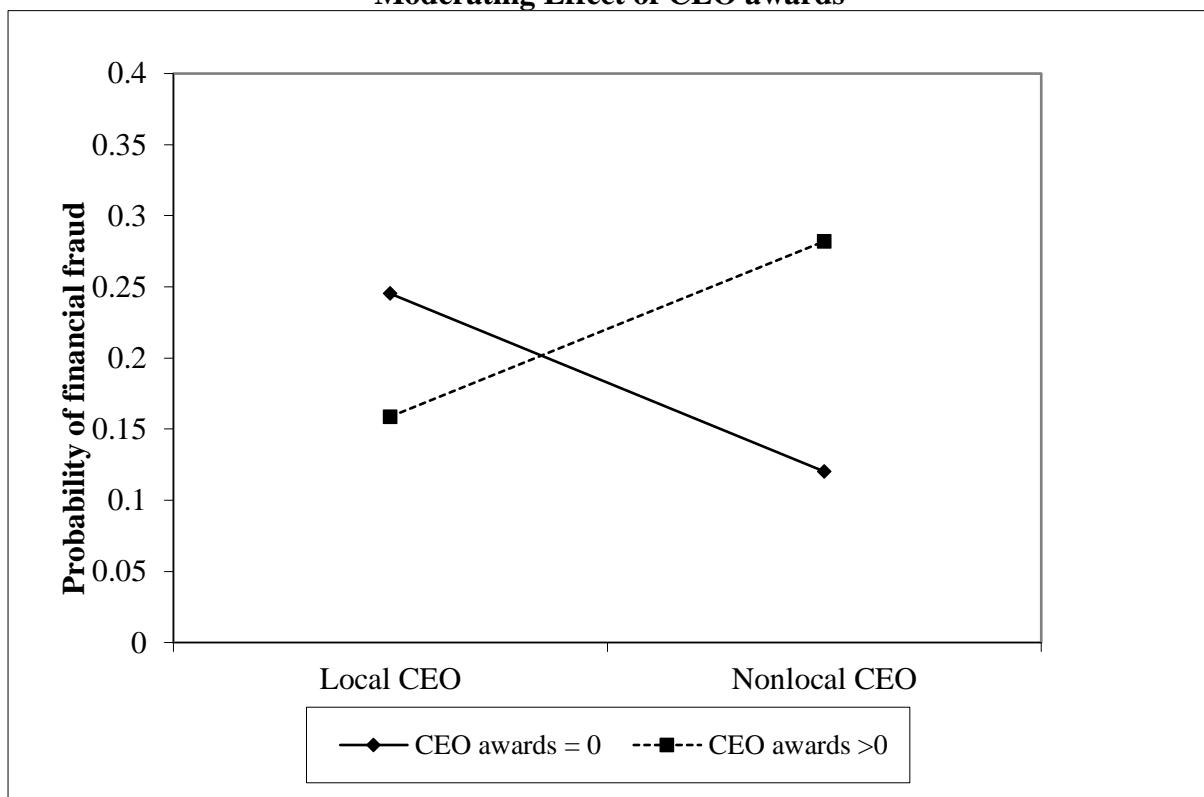


Figure 2
Moderating Effect of ROA

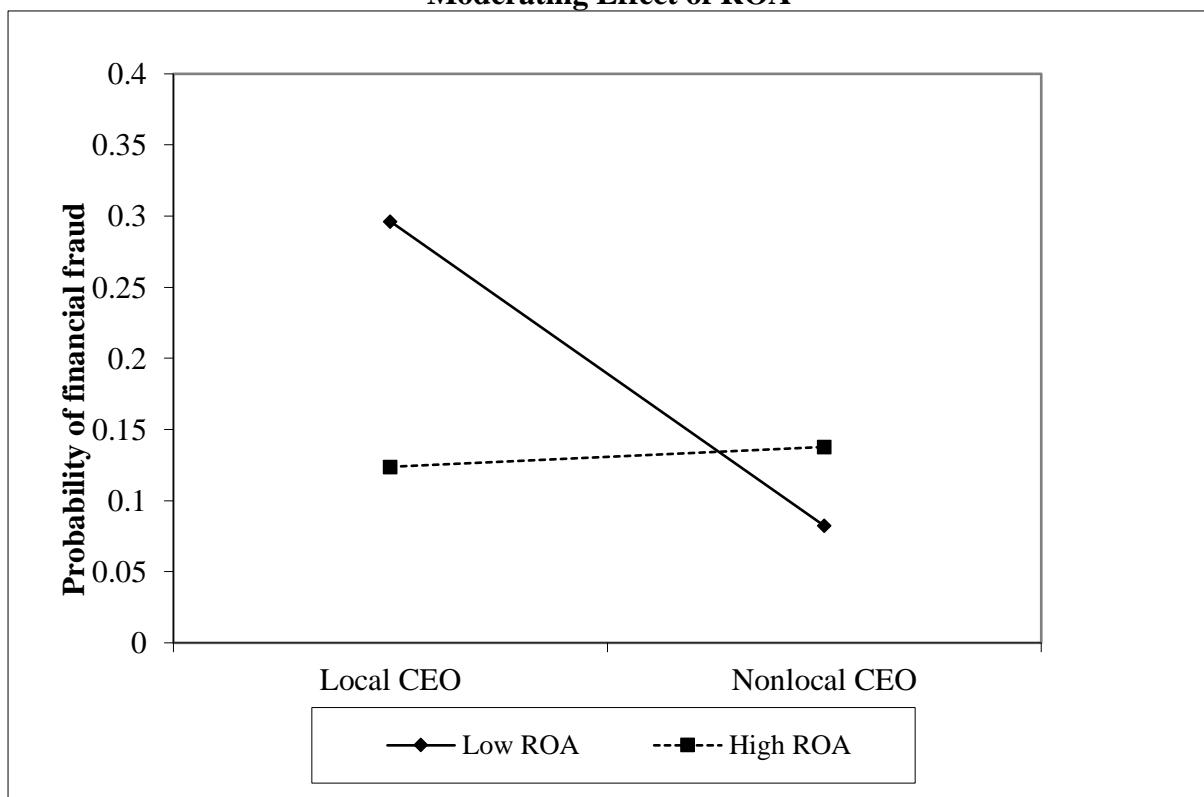


Figure 3
Moderating Effect of Cultural tightness

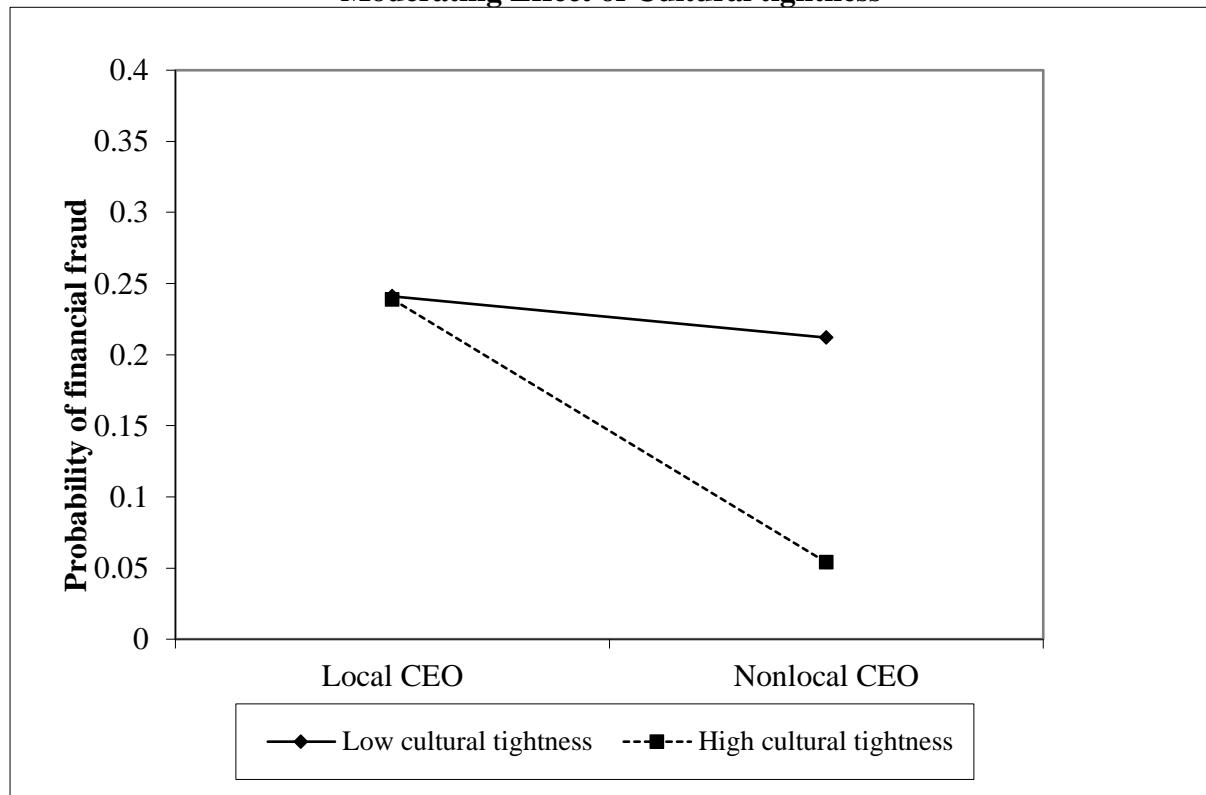


Figure 4
Heterogeneity effects of CEO Locality on Corporate Financial Fraud

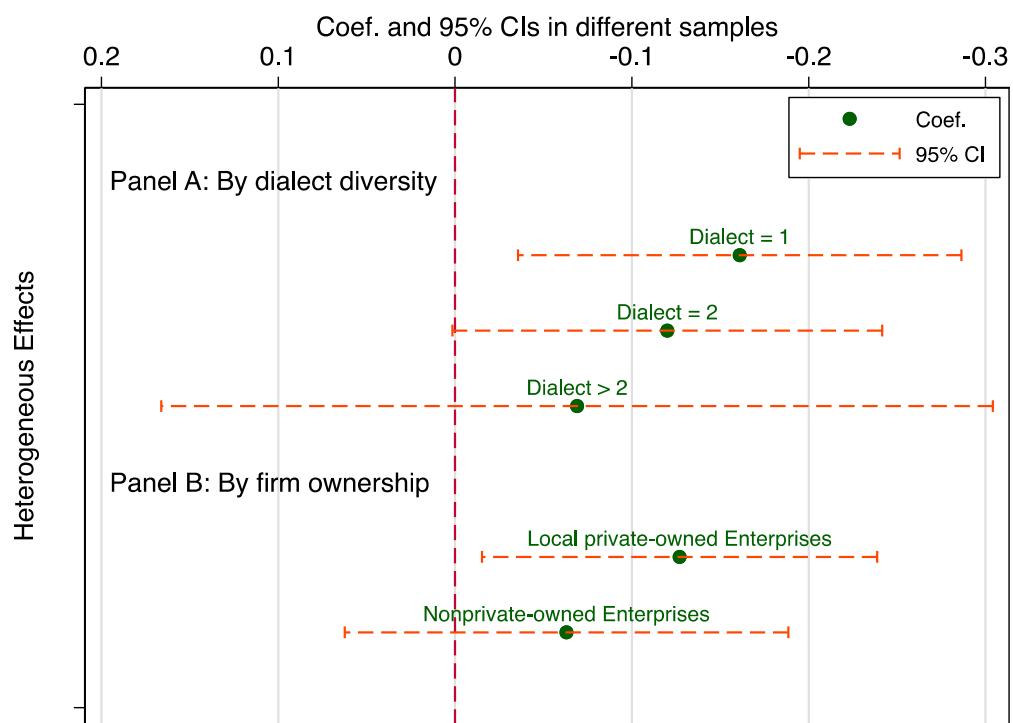


Table 1 Descriptive Statistics and Correlation

Variable	Mean	Sd	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1 Fraud	0.202	0.402	0.000	1.000	1.000															
2 Nonlocal CEO	0.398	0.490	0.000	1.000	-0.024	1.000														
3 CEO awards	0.067	0.290	0.000	3.000	0.023	0.032	1.000													
4 ROA	0.042	0.077	-1.55	0.655	-0.080	-0.048	0.039	1.000												
5 Cultural tightness	3.816	1.034	0.850	5.000	-0.039	0.050	0.107	0.041	1.000											
6 Firm size (logged)	22.461	1.757	16.704	30.826	-0.059	0.160	0.182	0.025	0.100	1.000										
7 Leverage ratio	0.466	0.218	0.056	0.929	0.060	0.105	0.066	-0.288	-0.037	0.530	1.000									
8 Tobin's Q	2.042	1.387	0.860	9.024	0.040	0.024	-0.007	0.095	-0.062	-0.410	-0.289	1.000								
9 Growth	0.261	0.584	-0.304	4.679	0.032	0.073	-0.022	0.110	-0.004	0.023	0.089	-0.008	1.000							
10 Volatility	9.075	5.555	0.115	37.928	0.035	-0.020	-0.052	-0.016	-0.019	-0.268	-0.055	0.221	0.039	1.000						
11 Turnover	6.126	4.929	0.029	49.736	0.033	-0.048	-0.089	0.007	-0.010	-0.391	-0.190	0.142	0.005	0.557	1.000					
12 Pervious fraud	0.152	0.254	0.000	1.000	0.390	0.008	0.012	-0.128	-0.088	-0.046	0.118	0.065	0.016	-0.024	-0.034	1.000				
13 Board size	8.948	2.119	4.000	20.000	-0.039	0.025	0.017	0.005	-0.031	0.411	0.240	-0.165	-0.015	-0.091	-0.174	-0.060	1.000			
14 Board independence	0.375	0.059	0.091	0.800	-0.006	0.062	0.018	-0.010	0.031	0.049	0.000	0.037	-0.019	-0.038	-0.015	0.011	-0.381	1.000		
15 Average director age	48.999	3.359	36.320	60.857	-0.047	0.019	0.035	-0.041	-0.004	0.490	0.202	-0.165	-0.101	-0.212	-0.277	0.005	0.266	-0.022	1.000	
16 Ownership concentration	0.582	0.160	0.013	1.000	-0.109	0.067	-0.048	0.167	0.108	0.254	-0.044	-0.167	0.121	-0.072	-0.072	-0.179	0.064	0.040	0.069	
17 Institutional ownership	0.400	0.240	0.000	0.905	-0.086	0.075	0.066	0.111	-0.014	0.455	0.204	-0.001	-0.008	-0.213	-0.488	-0.057	0.206	-0.001	0.301	
18 CEO age	50.127	6.773	24.000	80.000	0.033	-0.006	0.069	-0.024	0.041	0.158	0.011	-0.028	-0.076	-0.118	-0.098	0.086	0.047	0.021	0.375	
19 CEO gender	0.950	0.217	0.000	1.000	-0.028	0.026	-0.058	-0.020	0.003	0.021	-0.009	-0.029	0.001	0.014	0.008	-0.025	0.076	-0.049	0.042	
20 CEO tenure	4.195	3.025	1.000	14.000	0.063	-0.076	0.254	-0.011	0.112	0.089	-0.045	0.060	-0.111	-0.145	-0.157	0.119	-0.082	0.070	0.193	

Notes. N=8,147

Table 2 Probit Regression Results of CEO Locality and Corporate Financial Fraud

	Dependent Variable = Fraud				
	M1	M2	M3	M4	M5
Nonlocal CEO	-0.103*** (0.039)	-0.106*** (0.039)	-0.094** (0.039)	-0.108*** (0.039)	-0.101*** (0.039)
Nonlocal CEO * CEO awards		0.277** (0.120)			0.296** (0.122)
Nonlocal CEO * ROA			1.537*** (0.456)		1.542*** (0.457)
Nonlocal CEO * Cultural tightness				-0.082** (0.036)	-0.097*** (0.036)
CEO awards	0.074 (0.064)	-0.087 (0.096)	0.071 (0.064)	0.082 (0.065)	-0.093 (0.097)
ROA	-0.487* (0.249)	-0.497** (0.250)	-1.113*** (0.338)	-0.476* (0.249)	-1.114*** (0.338)
Cultural tightness	-0.042 (0.095)	-0.043 (0.095)	-0.040 (0.095)	-0.000 (0.096)	0.009 (0.096)
Firm size	-0.012 (0.021)	-0.011 (0.021)	-0.011 (0.021)	-0.010 (0.021)	-0.009 (0.021)
Leverage ratio	0.262** (0.117)	0.258** (0.117)	0.258** (0.118)	0.266** (0.117)	0.259** (0.118)
Tobin Q	0.002 (0.017)	0.002 (0.017)	0.004 (0.017)	0.003 (0.017)	0.005 (0.017)
Growth	0.073** (0.029)	0.075*** (0.029)	0.073** (0.029)	0.070** (0.029)	0.071** (0.029)
Volatility	0.019*** (0.007)	0.019*** (0.007)	0.018*** (0.007)	0.019*** (0.007)	0.018*** (0.007)
Turnover	-0.004 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.002 (0.006)
Pervious fraud	0.354*** (0.013)	0.355*** (0.013)	0.356*** (0.013)	0.354*** (0.013)	0.356*** (0.013)
Board size	0.008 (0.011)	0.009 (0.011)	0.009 (0.011)	0.008 (0.011)	0.010 (0.011)
Board independence	-0.284 (0.349)	-0.292 (0.349)	-0.246 (0.349)	-0.298 (0.349)	-0.272 (0.349)
Average director age	-0.017** (0.007)	-0.017** (0.007)	-0.018*** (0.007)	-0.017** (0.007)	-0.017** (0.007)
Ownership concentration	-0.118 (0.129)	-0.122 (0.129)	-0.107 (0.129)	-0.111 (0.129)	-0.103 (0.129)
Institutional ownership	-0.350*** (0.101)	-0.351*** (0.101)	-0.353*** (0.101)	-0.352*** (0.101)	-0.355*** (0.101)
CEO age	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)	0.005 (0.003)	0.004 (0.003)
CEO gender	-0.127* (0.075)	-0.122 (0.075)	-0.132* (0.075)	-0.131* (0.075)	-0.132* (0.075)
CEO tenure	0.006 (0.007)	0.007 (0.007)	0.006 (0.007)	0.006 (0.007)	0.007 (0.007)
Year fixed	Yes	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes	Yes
Constant	-0.198 (0.640)	-0.197 (0.640)	-0.185 (0.640)	-0.407 (0.649)	-0.431 (0.649)
Observation	8147	8147	8147	8147	8147

Wald Chi2	1206.07***	1214.46***	1210.37***	1212.36***	1227.24***
Pseudo R2	0.166	0.166	0.167	0.166	0.169

Notes. This table presents the results of probit model estimating the effect of CEO locality on corporate financial fraud. All interaction terms are mean-centered to avoid multicollinearity. All specifications include year, industry and province-fixed effects. Robust standard errors are reported in the parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 Heterogeneity effects of CEO Locality on Corporate Financial Fraud

	Dependent Variable = Fraud				
	(1)	(2)	(3)	(4)	(5)
	Dialect =1	Dialect =2	Dialect >2	POEs	Non-POEs
Nonlocal CEO	-0.161** (0.065)	-0.119* (0.062)	-0.069 (0.124)	-0.126** (0.057)	-0.063 (0.065)
CEO awards	0.213* (0.116)	0.082 (0.089)	-0.249 (0.201)	0.048 (0.089)	0.139 (0.126)
ROA	-1.017** (0.441)	-0.259 (0.330)	0.189 (0.892)	-0.952*** (0.323)	0.369 (0.522)
Cultural tightness	-0.312** (0.150)	0.065 (0.252)	-1.580 (0.963)	-0.011 (0.128)	-0.052 (0.153)
Firm size	-0.009 (0.032)	-0.026 (0.034)	-0.019 (0.058)	0.009 (0.034)	0.007 (0.034)
Leverage ratio	0.192 (0.190)	0.413** (0.175)	-0.105 (0.377)	0.427*** (0.162)	0.187 (0.209)
Tobin Q	-0.021 (0.031)	0.002 (0.026)	-0.002 (0.043)	-0.027 (0.023)	0.011 (0.035)
Growth	0.006 (0.045)	0.088** (0.045)	0.216*** (0.077)	0.042 (0.038)	0.086 (0.056)
Volatility	0.022** (0.010)	0.006 (0.011)	0.067*** (0.020)	0.021** (0.009)	0.019 (0.012)
Turnover	-0.012 (0.009)	0.011 (0.009)	-0.046** (0.021)	-0.008 (0.007)	0.012 (0.012)
Pervious fraud	1.743*** (0.104)	1.765*** (0.103)	1.667*** (0.223)	1.687*** (0.097)	1.880*** (0.110)
Board size	-0.002 (0.019)	0.021 (0.018)	-0.021 (0.027)	0.014 (0.019)	0.027* (0.016)
Board independence	-0.618 (0.571)	-0.183 (0.533)	-0.830 (1.120)	0.234 (0.539)	-0.600 (0.549)
Average director age	-0.022** (0.011)	-0.012 (0.010)	-0.012 (0.022)	-0.017* (0.009)	-0.009 (0.013)
Ownership concentration	0.001 (0.214)	0.067 (0.198)	-1.487*** (0.425)	-0.409** (0.189)	0.238 (0.247)
Institutional ownership	-0.417*** (0.157)	-0.322** (0.158)	-0.056 (0.311)	-0.176 (0.132)	-0.428** (0.204)
CEO age	0.002 (0.005)	0.007 (0.004)	0.016* (0.008)	0.005 (0.004)	-0.002 (0.006)
CEO gender	-0.296** (0.129)	-0.023 (0.109)	0.214 (0.248)	-0.082 (0.101)	-0.168 (0.137)
CEO tenure	0.002 (0.011)	0.007 (0.011)	-0.013 (0.022)	0.002 (0.010)	-0.004 (0.013)
Year fixed	Yes	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes	Yes
Constant	2.017* (1.148)	-0.783 (1.189)	2.829 (2.904)	-0.730 (0.992)	-1.207 (1.101)
Observation	3315	3500	1215	4047	3515
Wald Chi2	565.68***	520.11***	261.68***	646.16***	581.70***
Pseudo R2	0.187	0.159	0.261	0.168	0.209

Notes. This table presents the heterogeneity effects CEO locality on corporate financial fraud across different regional dialect diversity and firm ownership. All specifications include year,

industry and province-fixed effects. Robust standard errors are reported in the parentheses. *
p < 0.1, ** p < 0.05, *** p < 0.01.

Table 4 Moderating Analysis for Social Network Ties

	Dependent Variable = Fraud			
	(1)	(2)	(3)	(4)
Nonlocal CEO	-0.095** (0.040)	-0.103*** (0.039)	-0.104*** (0.039)	-0.097* (0.050)
Nonlocal CEO * Graduated locally	-0.268 (0.164)			
Nonlocal CEO * Director of other firms		-0.001 (0.008)		
Nonlocal CEO * CEO tenure			-0.011 (0.012)	
Nonlocal CEO * Dual chair CEO				-0.007 (0.074)
Graduated locally	-0.041 (0.096)			
Director of other firms		0.005 (0.005)		
Dual chair CEO				0.081* (0.049)
CEO awards	0.073 (0.065)	0.068 (0.065)	0.077 (0.064)	0.064 (0.064)
ROA	-0.487* (0.250)	-0.478* (0.250)	-0.480* (0.250)	-0.483* (0.250)
Cultural tightness	-0.039 (0.095)	-0.044 (0.094)	-0.042 (0.095)	-0.047 (0.094)
Firm size	-0.011 (0.021)	-0.013 (0.021)	-0.013 (0.021)	-0.011 (0.021)
Leverage ratio	0.255** (0.117)	0.260** (0.117)	0.262** (0.117)	0.274** (0.117)
Tobin Q	0.002 (0.017)	0.002 (0.017)	0.002 (0.017)	0.001 (0.017)
Growth	0.072** (0.029)	0.072** (0.029)	0.072** (0.029)	0.071** (0.029)
Volatility	0.020*** (0.007)	0.019*** (0.007)	0.019*** (0.007)	0.019*** (0.007)
Turnover	-0.004 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.004 (0.006)
Pervious fraud	1.770*** (0.067)	1.770*** (0.067)	1.773*** (0.067)	1.771*** (0.067)
Board size	0.008 (0.011)	0.008 (0.011)	0.008 (0.011)	0.010 (0.011)
Board independence	-0.292 (0.349)	-0.283 (0.349)	-0.281 (0.349)	-0.305 (0.349)
Average director age	-0.016** (0.007)	-0.016** (0.007)	-0.017** (0.007)	-0.014** (0.007)
Ownership concentration	-0.103 (0.129)	-0.129 (0.130)	-0.116 (0.129)	-0.144 (0.130)
Institutional ownership	-0.356*** (0.101)	-0.350*** (0.101)	-0.350*** (0.101)	-0.327*** (0.102)
CEO age	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)	0.003 (0.003)
CEO gender	-0.129* (0.129)	-0.125* (0.125)	-0.128* (0.128)	-0.142* (0.142)

	(0.075)	(0.075)	(0.075)	(0.075)
CEO tenure	0.006 (0.007)	0.006 (0.007)	0.010 (0.008)	0.005 (0.007)
Constant	-0.251 (0.640)	-0.193 (0.640)	-0.218 (0.639)	-0.257 (0.640)
Observation	8147	8147	8147	8147
Wald Chi2	1220.08***	1207.86***	1207.02***	1208.32***
Pseudo R2	0.166	0.166	0.166	0.166

Notes. This table presents the moderating effects of factors related to social network ties of nonlocal CEO. Graduated locally is a dummy variable equals to 1 if the CEO is graduated from a university in the local province, and 0 otherwise. Director of other firms is a count variable indicating the number of other companies' directorships held by the CEO. CEO tenure is measured by the number of years the CEO has served in office. Dual chair CEO is a dummy variable equals to 1 if the CEO simultaneously holds the positions of the chairman and CEO, and 0 otherwise. All interaction terms are mean-centered to avoid multicollinearity. All specifications include year, industry and province-fixed effects. Robust standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Appendix

Table A1 Poisson Regression Results of CEO Locality and Fraud Number

	Dependent Variable = Fraud Number				
	(1)	(2)	(3)	(4)	(5)
Nonlocal CEO	-0.122** (0.061)	-0.133** (0.061)	-0.087 (0.060)	-0.120** (0.061)	-0.097 (0.060)
Nonlocal CEO * CEO awards		0.346* (0.186)			0.376** (0.185)
Nonlocal CEO * ROA			1.403** (0.570)		1.356** (0.562)
Nonlocal CEO * Cultural tightness				-0.088* (0.051)	-0.109** (0.051)
CEO awards	0.028 (0.101)	-0.168 (0.143)	0.023 (0.100)	0.029 (0.101)	-0.185 (0.142)
ROA	-1.504*** (0.293)	-1.520*** (0.293)	-1.923*** (0.351)	-1.500*** (0.289)	-1.920*** (0.348)
Cultural tightness	-0.109 (0.151)	-0.106 (0.152)	-0.101 (0.151)	-0.060 (0.152)	-0.038 (0.151)
Firm size	0.027 (0.031)	0.027 (0.032)	0.025 (0.031)	0.030 (0.032)	0.028 (0.032)
Leverage ratio	0.430** (0.175)	0.436** (0.175)	0.446** (0.177)	0.431** (0.174)	0.453*** (0.176)
Tobin Q	-0.019 (0.025)	-0.020 (0.025)	-0.018 (0.024)	-0.018 (0.024)	-0.017 (0.024)
Growth	0.109*** (0.040)	0.110*** (0.040)	0.110*** (0.040)	0.107*** (0.040)	0.108*** (0.040)
Volatility	0.040*** (0.010)	0.040*** (0.010)	0.039*** (0.010)	0.040*** (0.010)	0.039*** (0.010)
Turnover	-0.009 (0.009)	-0.008 (0.009)	-0.009 (0.009)	-0.008 (0.009)	-0.008 (0.009)
Pervious fraud	0.425*** (0.015)	0.427*** (0.015)	0.426*** (0.015)	0.425*** (0.015)	0.427*** (0.015)
Board size	-0.008 (0.019)	-0.006 (0.019)	-0.007 (0.019)	-0.008 (0.019)	-0.006 (0.019)
Board independence	-1.569*** (0.562)	-1.590*** (0.561)	-1.545*** (0.561)	-1.565*** (0.560)	-1.561*** (0.560)
Average director age	-0.025** (0.010)	-0.025** (0.010)	-0.026** (0.010)	-0.025** (0.010)	-0.025** (0.010)
Ownership concentration	-0.101 (0.196)	-0.096 (0.196)	-0.113 (0.196)	-0.098 (0.195)	-0.104 (0.196)
Institutional ownership	-0.581*** (0.154)	-0.579*** (0.153)	-0.592*** (0.153)	-0.585*** (0.154)	-0.595*** (0.153)
CEO age	0.002 (0.005)	0.002 (0.005)	0.002 (0.005)	0.003 (0.005)	0.002 (0.005)
CEO gender	-0.118 (0.115)	-0.096 (0.110)	-0.120 (0.116)	-0.118 (0.116)	-0.097 (0.113)
CEO tenure	0.019* (0.010)	0.021** (0.010)	0.018* (0.010)	0.019* (0.010)	0.019** (0.010)
Year fixed	Yes	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes	Yes
Constant	-0.551 (0.970)	-0.495 (0.972)	-0.520 (0.967)	-0.845 (0.984)	-0.827 (0.984)

Observation	8147	8147	8147	8147	8147
Wald Chi2	2057.43***	2058.89***	2094.29***	2065.39***	2103.47***
Pseudo R2	0.192	0.192	0.193	0.192	0.194

Notes. This table presents the results of poisson model estimating the effect of CEO locality on fraud number. All interaction terms are mean-centered to avoid multicollinearity. All specifications include year, industry and province-fixed effects. Robust standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A2 Probit Regression Results of CEO Locality and Fraud from 2009 to 2019

	Dependent Variable = Fraud				
	(1)	(2)	(3)	(4)	(5)
Nonlocal CEO	-0.081*	-0.085**	-0.074*	-0.086**	-0.083*
	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)
Nonlocal CEO * CEO awards		0.295**			0.323**
		(0.132)			(0.134)
Nonlocal CEO * ROA			1.153**		1.141**
			(0.530)		(0.532)
Nonlocal CEO * Cultural tightness				-0.097**	-0.113***
				(0.039)	(0.040)
CEO awards	0.060	-0.113	0.058	0.070	-0.122
	(0.071)	(0.106)	(0.071)	(0.071)	(0.107)
ROA	-0.531*	-0.544*	-0.967**	-0.527*	-0.972**
	(0.294)	(0.295)	(0.381)	(0.294)	(0.381)
Cultural tightness	-0.079	-0.079	-0.077	-0.025	-0.017
	(0.099)	(0.099)	(0.100)	(0.102)	(0.102)
Firm size	-0.012	-0.011	-0.011	-0.010	-0.007
	(0.023)	(0.023)	(0.023)	(0.023)	(0.023)
Leverage ratio	0.268**	0.261**	0.266**	0.271**	0.265**
	(0.130)	(0.130)	(0.130)	(0.130)	(0.130)
Tobin Q	0.007	0.007	0.008	0.008	0.010
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Growth	0.094***	0.096***	0.094***	0.090***	0.091***
	(0.031)	(0.031)	(0.031)	(0.031)	(0.032)
Volatility	0.019**	0.019**	0.018**	0.019**	0.018**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Turnover	-0.001	-0.001	-0.001	-0.001	-0.000
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Pervious fraud	0.351***	0.351***	0.352***	0.351***	0.353***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Board size	0.011	0.012	0.012	0.012	0.013
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Board independence	-0.222	-0.231	-0.194	-0.239	-0.225
	(0.382)	(0.382)	(0.382)	(0.382)	(0.383)
Average director age	-0.018**	-0.017**	-0.018**	-0.018**	-0.018**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Ownership concentration	-0.115	-0.118	-0.112	-0.106	-0.104
	(0.143)	(0.143)	(0.143)	(0.143)	(0.143)
Institutional ownership	-0.372***	-0.373***	-0.372***	-0.375***	-0.376***
	(0.111)	(0.111)	(0.111)	(0.111)	(0.111)
CEO age	0.005	0.005	0.005	0.005*	0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
CEO gender	-0.184**	-0.179**	-0.185**	-0.187**	-0.184**
	(0.082)	(0.082)	(0.082)	(0.082)	(0.082)
CEO tenure	0.010	0.011	0.010	0.009	0.010
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Year fixed	Yes	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes	Yes
Constant	0.220	0.213	0.238	-0.051	-0.080
	(0.692)	(0.692)	(0.692)	(0.705)	(0.706)
Observation	6571	6571	6571	6571	6571

Wald Chi2	984.76***	994.33***	985.34***	989.21***	1000.47***
Pseudo R2	0.163	0.164	0.164	0.164	0.166

Notes. This table presents the results of probit model estimating the effect of CEO locality on corporate financial fraud with sample period from 2009 to 2019. All interaction terms are mean-centered to avoid multicollinearity. All specifications include year, industry and province-fixed effects. Robust standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A3 Probit Regression Results with More Controls

	Dependent Variable = Fraud				
	(1)	(2)	(3)	(4)	(5)
Nonlocal CEO	-0.102*** (0.039)	-0.104 *** (0.039)	-0.092 ** (0.039)	-0.106 *** (0.039)	-0.100 ** (0.039)
Nonlocal CEO * CEO awards		0.271 ** (0.121)			0.290 ** (0.122)
Nonlocal CEO * ROA			1.553 *** (0.457)		1.558 *** (0.458)
Nonlocal CEO * Cultural tightness				-0.082 ** (0.036)	-0.097 *** (0.036)
Foreign experience	-0.049 (0.068)	-0.041 (0.068)	-0.046 (0.068)	-0.054 (0.068)	-0.044 (0.069)
Finance background	0.042 (0.075)	0.042 (0.075)	0.046 (0.075)	0.042 (0.075)	0.046 (0.075)
Education	-0.032 (0.026)	-0.031 (0.027)	-0.035 (0.026)	-0.031 (0.026)	-0.032 (0.027)
CEO awards	0.073 (0.064)	-0.085 (0.096)	0.069 (0.064)	0.080 (0.065)	-0.091 (0.098)
ROA	-0.489 ** (0.250)	-0.500 ** (0.250)	-1.122 *** (0.339)	-0.478 * (0.249)	-1.122 *** (0.339)
Cultural tightness	-0.041 (0.095)	-0.041 (0.095)	-0.038 (0.095)	0.001 (0.096)	0.010 (0.096)
Firm size	-0.010 (0.021)	-0.010 (0.021)	-0.010 (0.021)	-0.009 (0.021)	-0.007 (0.021)
Leverage ratio	0.269 ** (0.117)	0.265 ** (0.117)	0.266 ** (0.118)	0.272 ** (0.117)	0.266 ** (0.118)
Tobin Q	0.002 (0.017)	0.002 (0.017)	0.004 (0.017)	0.003 (0.017)	0.006 (0.017)
Growth	0.072 ** (0.029)	0.073 ** (0.029)	0.071 ** (0.029)	0.069 ** (0.029)	0.069 ** (0.029)
Volatility	0.019 *** (0.007)	0.019 *** (0.007)	0.018 *** (0.007)	0.019 *** (0.007)	0.018 *** (0.007)
Turnover	-0.004 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.002 (0.006)
Pervious fraud	0.354 *** (0.013)	0.354 *** (0.013)	0.355 *** (0.013)	0.354 *** (0.013)	0.356 *** (0.013)
Board size	0.008 (0.011)	0.008 (0.011)	0.009 (0.011)	0.008 (0.011)	0.010 (0.011)
Board independence	-0.283 (0.348)	-0.291 (0.348)	-0.245 (0.348)	-0.297 (0.348)	-0.270 (0.349)
Average director age	-0.016 ** (0.007)	-0.016 ** (0.007)	-0.017 ** (0.007)	-0.016 ** (0.007)	-0.017 ** (0.007)
Ownership concentration	-0.122 (0.129)	-0.126 (0.130)	-0.112 (0.130)	-0.115 (0.129)	-0.107 (0.130)
Institutional ownership	-0.350 *** (0.101)	-0.350 *** (0.101)	-0.352 *** (0.101)	-0.352 *** (0.101)	-0.354 *** (0.101)
CEO age	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)
CEO gender	-0.129 * (0.075)	-0.124 * (0.075)	-0.133 * (0.075)	-0.133 * (0.075)	-0.134 * (0.075)
CEO tenure	0.006 (0.007)	0.007 (0.007)	0.006 (0.007)	0.005 (0.007)	0.006 (0.007)

Year fixed	Yes	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes	Yes
Constant	-0.277 (0.643)	-0.273 (0.644)	-0.268 (0.644)	-0.487 (0.653)	-0.510 (0.653)
Observation	8147	8147	8147	8147	8147
Wald Chi2	1209.36***	1218.13***	1214.27***	1215.29***	1231.06***
Pseudo R2	0.166	0.167	0.167	0.166	0.169

Notes. This table presents the results of probit model estimating the effect of CEO locality on corporate financial fraud with controlling Foreign experience, Finance background and Education. Foreign experience is a dummy variable equals to 1 if the CEO has studied or worked overseas, and 0 otherwise. Finance background is a dummy variable equals to 1 if the CEO has a finance background, and 0 otherwise. Education refers to the CEO's educational background and is measured by four levels: 1 for junior high school, 2 for high school, 3 for university, and 4 for a master's degree or higher. All interaction terms are mean-centered to avoid multicollinearity. All specifications include year, industry and province-fixed effects. Robust standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A4 Results for endogeneity tests

	DV = disclosure of CEOs birthplace	DV = Fraud		
	(1)	(2)	(3)	(4)
	First-stage regression	Second-stage regression	Lag one year	GEE
Industry disclosure rate of CEOs birthplace	3.342*** (0.116)			
Nonlocal CEO		-0.104 *** (0.039)	-0.091 ** (0.041)	-0.095 ** (0.045)
CEO awards	0.289*** (0.037)	0.081 (0.066)	0.099 (0.064)	0.059 (0.069)
ROA	0.046 (0.041)	-0.485 * (0.250)	-0.646 ** (0.265)	-0.484 ** (0.239)
Cultural tightness	-0.113*** (0.039)	-0.044 (0.095)	-0.060 (0.099)	-0.079 (0.107)
Firm size	0.157*** (0.009)	-0.007 (0.024)	-0.022 (0.021)	-0.011 (0.023)
Leverage ratio	-0.376*** (0.042)	0.250 ** (0.121)	0.075 (0.106)	0.285 ** (0.122)
Tobin Q	0.004 * (0.002)	0.002 (0.017)	-0.004 (0.015)	0.002 (0.017)
Growth	-0.040*** (0.007)	0.072 ** (0.029)	0.001 (0.002)	0.064 ** (0.029)
Volatility	-0.006 ** (0.003)	0.019 *** (0.007)	0.005 (0.007)	0.019 *** (0.007)
Turnover	0.008*** (0.002)	-0.003 (0.006)	0.005 (0.006)	-0.006 (0.006)
Pervious fraud	0.758*** (0.039)	1.792 *** (0.085)	1.780 *** (0.069)	1.374 *** (0.070)
Board size	-0.007 (0.005)	0.008 (0.011)	0.006 (0.011)	0.006 (0.012)
Board independence	0.748*** (0.160)	-0.264 (0.353)	0.071 (0.356)	-0.345 (0.372)
Average director age	-0.022*** (0.003)	-0.017 ** (0.007)	-0.012 * (0.007)	-0.020 *** (0.007)
Ownership concentration	0.265*** (0.061)	-0.109 (0.131)	-0.078 (0.134)	-0.157 (0.147)
Institutional ownership	-0.014 (0.046)	-0.352 *** (0.101)	-0.159 (0.106)	-0.354 *** (0.109)
CEO age	0.016*** (0.001)	0.005 (0.003)	0.004 (0.003)	0.005 (0.003)
CEO gender	0.166*** (0.035)	-0.122 (0.076)	-0.131 * (0.077)	-0.123 (0.087)
CEO tenure	0.068*** (0.003)	0.008 (0.008)	0.005 (0.007)	0.008 (0.007)
Lambda		0.041 (0.102)		
Year fixed	Yes	Yes	Yes	Yes
Industry fixed	Yes	Yes	Yes	Yes
Province fixed	Yes	Yes	Yes	Yes
Constant	-4.503***	-0.348	-0.123	0.193

	(0.291)	(0.744)	(0.652)	(0.732)
Observation	32755	8174	7379	8147
Wald Chi2	3362.11***	1206.77***	1092.33***	760.17***
Pseudo R2	0.108	0.166	0.163	

Notes. This table presents the models for endogeneity tests. Industry disclosure rate of CEOs birthplace is measured by the mean disclosure rate of CEOs' birthplace of all firms within each industry. Disclosure of CEOs birthplace is a dummy variable equals to 1 if the firm disclose its CEOs' birthplace, and 0 otherwise. Lambda is the inverse Mills' ratio. In column (3), all control variables are lagged by one year except for CEO awards, Cultural tightness, Previous fraud, CEO age, CEO gender, and CEO tenure. Column (4) presents the results of GEE model. Robust standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.

Table A5 Biprobit Regression Results

	(1)	(2)
	DV = Fraud	DV = Detect Fraud
Nonlocal CEO	-0.139** (0.069)	-0.073 (0.050)
CEO awards	0.003 (0.116)	
ROA	0.362 (0.502)	
Cultural tightness	-0.114** (0.047)	
Stock returns		-0.065* (0.036)
Firm size		-0.020 (0.023)
Leverage ratio	0.366* (0.190)	0.253** (0.128)
Tobin Q	0.009 (0.029)	0.015 (0.020)
Growth	0.067 (0.061)	0.033 (0.035)
Volatility		0.014** (0.006)
Turnover		0.008 (0.008)
Pervious fraud	20.684 (9261.184)	1.173*** (0.100)
Board size	-0.028 (0.023)	0.018 (0.015)
Independent directors		-0.008 (0.009)
Average director age	-0.032** (0.014)	-0.770 (0.474)
H10	-0.424 (0.323)	0.171 (0.203)
Institutional ownership	-0.093 (0.280)	-0.485*** (0.164)
CEO age	0.010* (0.006)	
CEO gender	-0.085 (0.170)	
CEO tenure	0.012 (0.014)	
Constant	0.646	0.008

	(0.925)	(0.622)
Observation	8043	8043
Wald Chi2		256.67***

Notes. This table presents the results of biprobit model. The dependent variables of Column (1) is the dummy variable Fraud and the dependent variables of Column (2) is the likelihood of detection given fraud. Standard errors are reported in the parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01.