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PII:	S1566-0141(19)30010-X
DOI:	https://doi.org/10.1016/j.ememar.2020.100679
Reference:	EMEMAR 100679
To appear in:	Emerging Markets Review
Received date:	4 January 2019
Revised date:	16 January 2020
Accepted date:	11 February 2020

Please cite this article as: J. Luo and Q. Liu, Corporate social responsibility disclosure in China: Do managerial professional connections and social attention matter?, *Emerging Markets Review*(2019), https://doi.org/10.1016/j.ememar.2020.100679

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Corporate social responsibility disclosure in China: do managerial professional connections

and social attention matter?

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Qigui Liu thanks to the financial support from the National Natural Science Foundation of China (Project No.: 71702163) and the Fundamental Research Funds for the Central Universities, Jinbo Luo thanks to the financial support from the National Natural Science Foundation of China (Project No.: 71762014).

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Abstract

We examine the effect of managerial professional connections and social attention on corporate social responsibility disclosure. Using a unique sample of Chinese listed firms that includes 7,462 firm-year observations from 2009 to 2017, we hypothesize and provide supporting evidence that in emerging markets such as China, firms whose top managers have professional connections are more incentivized to improve corporate social responsibility disclosure. This is particularly the case when firms face significant public and media attention. At dita nal analysis shows that firms with professional connections tend to be more conservative view choosing accounting policies to maintain their professional reputations. Professional connections are valued by external investors, have greater job security, and are better compensated. Our results are robust to a series of endogeneity tests and perform well in various robustness tests. Over all, our study suggests that corporate social responsibility decisions are shaped by manager in dissonant characteristics and external institutions.

Keywords: Corporate social responsibility; disclosure quality; managerial professional connections; social attention; reputation damage

JEL codes: L21, M12, M14

Abbreviations: CSR: Co pointe social responsibility; DID: Difference-in-Differences; PSM:

Propensity score matching

1. INTRODUCTION

Over recent decades, one of the most significant trends in business studies has been the growth in academic research on CSR. Among studies in this line of enquiry, one stream of the literature has focused on the determinants of firms' CSR reporting. Numerous theoretical studies have attempted to develop a theoretical framework that explains the underlying determinants of CSR from different perspectives such as agency theory, legitimacy theory, stakeholder theory, and the resource-based view. Empirical studies have sought direct evidence to either support or reject these theoretical arguments. Such studies suggest that firm,' CSR disclosure varies across companies, industries, and time (Gray et al., 1995, 2001) and that firms' CSR disclosure is importantly and systematically determined by a variety of firm and industry characteristics that influence the relative benefits or costs that firms may realize from their CSR disclosure (the characteristics include firm size and age, firm ar sial performance, corporate governance, ownership structure, culture, media exposure, political influence, political beliefs, the nature of the industry, and geographical proximity. See, for example, Roberts, 1992; Hackston and Milne, 1996; Cormier and Magnan, 2003; Curmier et al., 2005; Haniffa and Cooke, 2005; Reverte, 2009; Barnea and Rubin, 2010; Li and Chang, 2010; Khan et al., 2013; Marquis and Qian, 2013; Gupta et al., 2017; and Zamir and Saeed, 2018).

The importance of managerial personal characteristics has been widely documented in the corporate finance literature. For instance, studies show that managerial political connections, professional connections, social networks, and other dynamics arising from managerial working experiences all play an important role in shaping corporate financial decisions and, thus, influence corporate financial performance (see, for example, Agrawal and Knoeber, 2001; Khwaja and Mian, 2005; Adhikari et al., 2006; Faccio, 2006; Faccio et al., 2006; Claessens et al., 2008; Le and Nguyen, 2009; Liu et al., 2013; Engelberg et al., 2013; Haselmann et al., 2013;

Custodio and Metzger, 2014; EI-Khatib et al., 2015; Liu et al., 2016). With regard to the effect of managerial characteristics on CSR-related decisions, few studies focus on the effect of a director's gender or the personal value of a director on corporate CSR (see for example, Willams, 2003; Adams et al., 2011). Thus, there remains a lack of evidence about whether and how managerial personal characteristics, such as professional connections, influence firms' CSR decisions. This study aims to fill this gap in the literature by investigating the effect of managerial professional connections on CSR disclosure using a unique dataset for Chinese firms. In particular, we focus on two fundamental research questions: (1) How do managerial professional connections on CSR disclosure? (2) Is the effect of manageria professional connections on CSR strengthened or weakened by social attention? We propose our main hypotheses based on prospect theory whereby professionally connected maragers should care be more concerned with CSR because they have more to lose as a result of their socially irresponsible behaviors. By magnifying the potential loss for socially are ponsible behaviors, social attention strengthens the positive relation between professional connections and CSR.

Our study makes the following contributions to the existing literature. First, we elucidate the implications of managerial idios meratic characteristics for corporate non-financial decisions. It has been well documented the managerial characteristics play an important role in shaping corporate financial decisions. Studies on CSR-related decisions show that managerial gender and personal value do have a significant impact on corporate philanthropy and CSR decisions (Willams, 2003; Adams et al., 2011). We complement these studies by providing empirical evidence that managerial idiosyncratic characteristics, that is, professional connections, have a positive impact on important non-financial decisions such as those related to corporate CSR.

In addition, we contribute to the literature on the impact of external institutions on CSR disclosure. Prior studies document that CSR disclosure is influenced by media exposure (Campbell, 2007; Marquis and Qian, 2014). Most recently, Hales et al. (2018) find that employee

postings on social media matters to corporate financial disclosures. We complement these studies by showing that public and media attention matter to CSR by increasing firms' visibility and the potential value loss from socially irresponsible practices, and they particularly strengthen the positive relationship between managerial professional connections and CSR. We reveal the strong external monitoring role of external institutions through public and media attention.

Finally, we add value to the literature that explains the determinants of corporate CSR. Existing studies attempt to explain the reason why firms engage in CSR based on different theories including agency theory, legitimacy theory, stakeholder theory, and the resource-based theory. Additionally, various factors such as firm size and ag, financial performance, corporate governance, ownership structure, culture, media exposure, and the nature of the industry have been found to have an impact on corporate CSR performance. By introducing the prospect theory into the CSR literature, this study offers an algorithm. The way to explain the determinants of corporate CSR decisions.

The remainder of the paper is organized as follows. Section 2 provides institutional background, theoretical framework and by pothesis development. Section 3 describes the research design and methodology. The after, Sections 4 and 5 provide the empirical results and discussions. Section 6 concludes the paper.

2. INSTITUTIONAL BACKGROUND, THEORETICAL FRAMEWORK, AND HYPOTHESIS DEVELOPMENT

2.1 Institutional Background

Although China has achieved economic success in the decades since 1978, Chinese firms and the Chinese government have been criticized for developing the Chinese economy at a high social cost in terms of air pollution, food contamination, a lack of worker protections, and so on. (Lin,

2010). In recent years, the conflict between firms and local communities has become severe and has attracted much public attention. For instance, in 2014, a popular documentary on air pollution called "*Under the Dome*" (regarded by some as the Chinese version of "An Inconvenient Truth"), sparked debate among hundreds of millions of Chinese on how to save China from an environmental catastrophe. This debate has further challenged corporations regarding their lack of responsibility for the social effects of their activities. Under public pressure, some Chinese firms have begun to place greater emphasis on their social investments and performance.

However, little is known about whether and to what extent such public attention can influence the CSR decisions made by managers with or without violassional connections. Our study provides evidence on this issue. In addition, in contrast to western countries, the Chinese government plays a vital role in guiding firms' CSR disclosures through laws and regulations, government instructions, and guidelines. In the eline introductional settings, we consider it necessary to examine whether Chinese firms engage in CSR activities simply to follow the instructions of the government or whether they engage in CSR strategically based on their own motivation. Therefore, the Chinese institutional en ironment provides a unique setting in which to conduct our study.

2.2 Theoretical Framewo. 4

Despite the large number of studies on CSR, a comprehensive theoretical framework of the underlying determinants of CSR remains elusive. Numerous studies have attempted to explain from different theoretical perspectives—such as agency theory, legitimacy theory, stakeholder theory, and resource-based theory, among others — why CSR disclosure varies among firms.²

Note that the various theories of firms' CSR performance identified above are based on distinct perspectives on the same issue. Therefore, the different theories outlined should not be seen as

² See, for example, Gray et al. (1996); Hooghiemstra (2000); Brammer and Millington (2008); Branco and Rodrigues (2006); McWilliams and Siegel (2011); Khan et al. (2012).

competing perspectives but as alternative ways of understanding organizational CSR decisions (Reverte, 2009). Although the main arguments of these theories differ, they all share the notion that the top manager of a firm plays an important role in CSR decision making. In particular, it is the top manager who is responsible for making CSR decisions although the motivation for these decisions varies. Top managers may make CSR decisions to maximize their private benefits (agency theory), mitigate the legitimacy gap (legitimacy theory), manage powerful stakeholders (stakeholder theory), or obtain valuable resources (resource-based theory). Given the importance of corporate managers in the CSR decision-making process, this study attempts to explore the effect of managerial idiosyncratic characteristics—profestoral connections—on firms' CSR disclosure.

Traditional economic theory argues that in the presence of risk, people tend to make decisions based on higher expected value or utility (the expected utility theory). However, the traditional theory was recently criticized by empiric, ¹ coservations. For instance, in the seminal work of Kahneman and Tversky (1979), the authors note that when choosing between probabilistic alternatives that involve risk, people alveys make decisions based on the potential value of losses and gains rather than the final encome (the prospect theory). We believe prospect theory is appropriate to explain corporate managers' CSR decisions for the following reasons: (1) CSR decisions are made by top executive managers, and the outcome of the decisions are unknown, which means that the decisions are risky. Prospect theory is an important behavioral economic theory that explains individual decisions where risk is involved, and the probability of different outcomes is unknown. (2) Prospect theory argues that when making decisions, individuals tend to choose the option with potential gain rather than the option with possible loss, and individuals dislike loss more than they like the equivalent gain. In the context of CSR decision making, managers' decisions on whether to engage in CSR would largely depend on the potential loss caused by their socially irresponsible behaviors. Based on this theoretical foundation, we develop

our base argument that corporate executives care more about CSR if they have more to lose from engaging in social irresponsible practices. The rationale is that if corporate executives perceive that their socially irresponsible behaviors will result in greater loss in terms of their personal reputation, they are more likely to protect themselves and engage in socially responsible behavior. Therefore, our main focus is the potential reputational damage and the associated value loss associated with social irresponsible practices, which we discuss in the following section.

2.3 Hypothesis Development

2.3.1 Managerial professional connections and CSR

Although prior studies have documented numerous tactors that influence corporate CSR decisions, the consensus is that firms' CSR decisions are significantly influenced by factors that affect potential losses and gains that firms that the firm CSR information disclosure. Therefore, we build our main hypothesis based on prospect theory, which suggests that people always make decisions based on the potential losses and gains rather than the final outcome.

Our main hypothesis is that managerial professional connections enhance firms' CSR disclosure quality. This is because managerial professional connections are a valuable channel for firms to accumulate social ca_1 : al. Similar to business clubs in western countries, industry associations in China $p_{a}v$ an important role in communication and collaboration between companies within an industry and with other related industries. In particular, professional networks enable members, particularly executive members (as the duties of industry associations are performed by executive members), to build professional reputations and interpersonal trust with stakeholders. Thus, managerial connections have been identified as an important form of social capital for firms (Peng and Luo, 2000; Park and Luo, 2001; Luk et al., 2008; Haselmann et al., 2013; Liu et al., 2016). Managerial professional connections are also valuable to managers' personal interests as they bring personal benefits such as compensation and job security (Lee,

2007). CSR disclosure, on the other hand, is an important way to guard firms' reputations and identities (Hooghiemstra, 2000). Therefore, it is rational to expect that professionally reputable managers should have a strong incentive to engage in CSR activities to maintain good relationships with corporate stakeholders. This is because if their behavior is socially irresponsible, their reputation may become damaged, which will cause both the firm and the manager to lose the benefits brought about by professional connections. Accordingly, we develop our baseline hypothesis as follows:

H1: Managerial professional connections are positively related to turns' CSR disclosure quality.

2.3.2 Social attention, managerial professional connections, and CSR

In this section, we build our moderator hypotheses and provide more direct evidence to our baseline hypothesis H1. Intuitively, a reasonable inference is that professionally connected managers should have a stronger incentive to intervent in CSR when they face higher external monitoring arising from public and media attention. The monitoring role of public and media attention has been documented by Campbell (2007), who proposed that firms are more likely to act in socially responsible ways when octors, such as non-governmental organizations, social movements, and media, monitor their behavior. This study further proposes that as public and media attention increase firms misibility, this places firms and their executive members under a spotlight. Thus, the potential loss from irresponsible practices becomes more imminent. Furthermore, the great power of "mianzi" culture in China magnifies this effect as it makes it more difficult to restore a damaged reputation in China than in western countries. Therefore, we expect that professionally connected managers will care more about CSR when their visibility is greater and thus engage in superior CSR disclosure.

Prior studies have shown that firms' CSR behavior is shaped by external institutions (Campbell, 2007). This study primarily considers media and public attention for the following reasons. Prior studies have shown that the media play an important role in emerging markets (Visser, 2008). As

suggested by Schmidheiny (2006), social issues in developing countries are closely tied to politics, economics, and the media. As in other emerging markets, social media in China plays an even greater role as a result of modern communications technology, particularly the internet. The internet has empowered stakeholders by enabling individuals to communicate with each other and band together. Because of the internet, social media in China today enjoys fast information dissemination and broad reach, which has strengthened the media's role. For instance, in 2014, the popular documentary on air pollution, "*Under the Dome*," was viewed more than 100 million times within 24 hours. Given this institutional setting, we corcide, it of interest to investigate whether the media and public attention influence the CSR decisions of managers with professional connections.

To test this expectation, we first examine whether the effect of professional connections on CSR varies between firms with different levels of public attention; that is, high visibility industries versus low visibility industries. A firm is defined as high visibility if it operates in conditions of extreme air and environmental pollution³ and in the food industry. We hypothesize that:

H2a: The positive effect of mana δ° rial professional connections on CSR is more pronounced in industries with greater visibility.

In addition, we use the *Baidu Media Index*, which indicates the number of news articles on a focal firm in a given year, as a measure of media attention. Provided by Baidu.com (NASDAQ, BIDU), which is the most influential search engine in China, the *Baidu Media Index* has been widely used in prior studies such as Peng et al. (2015) and Chen et al. (2016). We develop the following hypothesis:

H2b: The positive effect of managerial professional connections on CSR is more pronounced in

³ Following the guidelines for environmental information disclosure of listed companies issued by the Ministry of Environmental Protection of China, high air and environmental pollution industries include coal-fired power plants, iron and steel, cement, electrolytic aluminum, coal, chemicals, petrochemicals, building materials, paper, brewing, pharmaceuticals, fermentation, textiles, tanning, and mining.

firms that receive more media attention, as measured by the Baidu Media Index.

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Data Collection and Sample Selection

The sample used in this paper consists of all firms listed on the Shanghai and Shenzhen stock exchanges from 2009 to 2017 — the largest sample we could obtain when conducting our study. Information about firms' CSR disclosures is mainly collected from a CSR dataset provided by RKS.⁴ Like KLD in the US, RKS is an independent rating agency in China. RKS collects relevant information from firms' CSR reports and other firm communications, such as websites and press releases, and provides CSR disclosure scores of individual firms, based on different dimensions. This dataset has been widely used in prior studies, such as Marquis and Qian (2014), Liao et al. (2016) and Lau et al. (2016).⁵ Fir as financial information and information about managers' backgrounds are both collected fr m CSMAR. The former comes from the Chinese Listed Firm Annual Report Database, while the latter comes partly from the Chinese Listed Firm Corporate Governance Database, which discloses the biographical details of all executives, including chairmen, CEOs, all thard members and other senior executives. We combine this information with other manually collected information from public media. Following normal practice, we exclude: (1) firms from the financial industry (banks, insurance companies, etc.) because such firms have unique accounting standards and special financial characteristics that make them non-comparable with other firms; (2) financially distressed firms, such as ST (special treatment) firms or negative-equity firms; (3) delisted firms or newly listed firms; and (4) firms whose relevant information (CSR score or firm-specific information) is not complete or cannot be acquired. We trimmed our sample at 1% on each variable in each tail to minimize the effects of

⁴ For detailed information about the dataset, please visit the RKS website at http://www.Rksratings.com/.

⁵ In our robustness tests, we also use CSR information collected from an alternative dataset provided by the Chinese Stock and Market Accounting Research (CSMAR) database.

outliers. The final sample consists of 7,462 firm-year observations from 2009 to 2017.

3.2 Measurement of Variables

CSR score

The dataset of RKS provides an overall CSR score of individual firms as well as four measures of firms' CSR scores based on the following four dimensions: (1) MACROCOSM (the general quality of the CSR report, including the firm's CSR strategy, governance and stakeholder interest), which accounts for 30 percent of the overall score; (2) CONTENT the content of a CSR report, based on whether firms disclose enough information about CSK, including financial performance, protection of labor, human rights, the environment, the fan ress of its operations, customers, the local community and governance), which accounts for 45 percent of the overall score; (3) TECHNIQUE (the technique of the CSR report, v. bi, h reflects whether the CSR information is balanced, comparable, innovative, credil 'a, transparent, normalized, available and efficient), which accounts for 15 percent of the overall score; and (4) INDUSTRY (the industry-specific content of firms' CSR reports), which ac wunts for 10 percent of the overall score. Based on these CSR scores above, we construct the following variables as measures of firms' CSR disclosure quality: (1) the overall CSR score (CSR_ALL), which is the overall score of a firm's CSR; and (2) the sub-scores, which are the average scores of firms' CSR scores based on MACROCOSM (CSR_M) , CONTENT (CSR_C) and TECHNIQUE (CSR_T) .⁶ The above four variables will be used as key dependent variables in our empirical analysis.

Managerial professional connections

We define a firm as professionally connected if the CEO/chairman of a firm currently serves as an executive member (secretary, associate secretary, chairman, associate chairman, director or

⁶ We do not use the CSR score based on industry (CSR_I) for the following reasons: (1) this score is industry specific and is only provided for some industries, so there are many missing values; (2) the overall score (CSR_O VERALL) is the sum of CSR_M, CSR_C, CSR_T and CSR_I. As the CSR_I score only accounts for 10 percent of the overall CSR score, it is a very small figure compared to the other scores. Therefore, not including this score does not affect our main arguments.

executive director) of a relevant industry association.⁷ Following Liu et al. (2016), of all the industry associations in China, we first select those that are registered in the Chinese Social Organization website, a department of the Ministry of Civil Affairs.⁸ We further search the names of relevant associations, using the Baidu search engine, and visit websites to select 'active' associations in our sample period. An 'active' association means that: (1) the association has an official website; (2) the association has its organization and executive members; and (3) the association has organized at least one related activity during our sample period.

Finally, we obtain a total number of 145 active industry associations in China and establish a dummy variable (*PRO_CON*) that equals to 1 if the CEO/claiman of the firm is professionally connected and 0 otherwise. Following prior studies such as Liu et al. (2016), this study uses whether the executive manager of a firm also serves a_3 executive member of a relevant industry association as proxy for managerial professional convections.⁹

Other variables

With regard to the external institutions, we define the following two variables: (1) a dummy variable (*POLLUT_FOOD*) that graphs 1 if the firm operates in an industry with more media and public attention, for example 1^{+1} firm emits significant air and environmental pollution or is in the food industry, and 0 or verwise; and (2) the *Baidu Media Index* (the amount of media coverage of a focal company in a given year), provided by Baidu.com, the largest search engine in China, as a measure of media attention. The variable is named '*MEDIA*' in our paper.

To measure the heterogeneity of managerial professional connections, we further define the

⁷ In our robustness tests, we use alternative measures of professional connections, and similar results are found.

⁸ The website of the Chinese Social Organization is: http://www.chinanpo.gov.cn/index.html.

⁹ Liu et al. (2016) measure professional connections using whether the executive manager currently serve or have the working experience as director or executive director of an industry association. Different with their study, we focus on the executive manager's current position as director or executive director of an industry association only. This is because: (1) compared to the past working experience, manager's current position in an industry association is more relevant to capture managerial professional connections; (2) our major concern is the potential cost of executive manager's socially irresponsible behavior, compared to managers who have past working experience in an industry association, managers who current serve as director of an industry association have a much high potential cost because they may lose their position in industry association for their irresponsible behaviors. However, for robustness, we also conduct empirical estimation using an alternative definition to include both current position and past working experience as measure of managerial professional connections. And consistent results are found.

following two variables: (1) managerial professional tenure (*TENURE*), which is the number of years a professionally connected manager has served as an executive member of the industry association, and (2) a dummy variable for higher level of managerial professional ties (*HEAD*) that equals 1 if the CEO/chairman of the firm is the general secretary (chairman/director) of a relevant industry association and 0 otherwise.

Control variables

Following previous literature on corporate CSR, this study also includes several other firm specific control variables. Detailed definitions of all variables are given in Appendix A.

3.3 Estimation Model

To examine the effect of managerial professional connections on CSR, we establish the following baseline regression model:

 $CSR_{i,t} = \alpha + \beta_1 \times PRO_CON_{i,t} + \beta_2 \times X_{i,t} + \sqrt{\alpha} \, \text{ar and Industry dummies}$ Eq. (1)

In Eq. (1), the dependent variable (CSK, is a firm's CSR disclosure quality score based on the RKS dataset. In particular, we use the to "owing four variables as proxies for CSR quality: (1) $CSR_OVERALL$, (2) CSR_M , (3) CSL_C , and (4) CSR_T . The key independent variable is managerial professional connectence (PRO_CON), while X is a vector of independent variables. All definitions of variables are given in Appendix A. Year and industry dummies are included in all regression models to control for firm-specific and industry-specific effects. It is worth noting that Eq. (1) is only our baseline model and that moderation variables and interaction terms will be added to our baseline model to capture the moderation effects of managerial professional connections and other factors on CSR.

4. EMPIRICAL RESULTS

4.1 Sample Distribution, Descriptive Analysis, and Correlations

Distribution of CSR score by year and industry

Panel A of Table 1 presents the distribution of CSR scores of Chinese listed firms by year. It should be noted that the RKS dataset provides overall CSR scores from 2009, but the CSR scores based on the different dimensions are from 2010. Thus, one year of sub-scores is missing in our empirical analysis. Panel A shows that the overall CSR scores of Chinese listed firms improve across our sample period. However, the overall improvement is mainly driven by Macrocosm rather than other dimensions.

Our results on the distribution of CSR score and managerial professional connections across industries are reported in panel B of Table 1. In this panel, we observe that firms' CSR scores vary across industries. Mining and construction industries have the best CSR quality (with a CSR score of 44.79 and 43.76), while the four-industry group comprising (1) culture, sports and entertainment, (2) resident service, (3) real estate and (4, agriculture related industries perform the worst in CSR disclosure, receiving scores that are below 35. In addition, the distribution of managerial professional connections also are s across industries, with the highest in real estate industry (12.26 percent) and the lowest in bealth and social service industry (1.33 percent).

Insert Table 1 about here

Summary statistics of variables

Table 2 presents summing statistics for our key estimation variables. The results show that the average CSR score of Chinese listed firms is 39.10, with an M score of 13.34, a C score of 17.48, and a T score of 6.97. In addition, 10.88 percent of our sample firms have professionally connected managers. Financially, the average size, leverage ratio, and ROA of our sample firms are 38 billion Chinese Yuan, 47.7 percent, and 5.7 percent, respectively. The average firm age is 14.62 years, reflecting the fact that Chinese listed firms are relatively young. Institutional shareholders hold only 5.79 percent of total ownership, exhibiting weak external monitoring by external investors. With regard to the board and top executives, we show that CEO duality (29

percent) is quite prevalent among Chinese listed firms. As in other countries, the majority of CEOs in China are male (97 percent), while independent directors account for approximately 39 percent of board members. Finally, 3.4 percent of our sample firms are cross-listed, and 20.3 percent of firms have politically connected top executives.

Insert Table 2 about here

Correlation coefficient

As shown in Table 3, our dependent variables are highly correlated with each other, suggesting that firms with high CSR scores are also highly scored in an CSR dimensions. Consistent with our expectation, managerial professional connections are highly correlated with all our dependent variables. We do not find a strong correlation between independent variables; thus, our results are less likely to suffer from multi-collinearity problems.

'ns ... + Table 3 about here

4.2 The Effect of Managerial Projessional Connections on CSR

We first examine the relationship between managerial professional connections and CSR by running our baseline regression model, as specified in Eq (1). Table 4 reports the estimation results.

Consistent with our hypothesis H1, our results show that managerial professional connections have a significantly positive effect on firms' overall CSR scores (in column 1). This result is robust because we also the significantly positive professional connections – CSR relation is also observed when CSR scores are measured by three dimensions (see the results in columns 2 to 4). For instance, our results show that a 1% increase of professional connections results in a 0.343% increase of firms' overall CSR score. In addition, we find that large firms have better CSR than

small firms, which is consistent with Johnson and Greening (1999), Muller and Kolk (2010), and Li and Zhang (2010). Consistent with Gupta et al. (2016), we find evidence that low levered firms tend to perform better in CSR, while there is not significant relationship between firm performance and CSR. Consistent with Boubakri et al. (2016), cross-listed firms have better CSR performance. Regarding the corporate governance variables, we find that both corporate governance measures (CEO duality, the percentage of independent directors) and other CEO characteristics measures (CEO gender and CEO's political connections status) have no significant impact on CSR.

Insert Table 4 about her.

4.3 Managerial Professional Connections, Socia A.t ntion and CSR

The aim of this section is to provide en birk all evidence regarding whether the effect of managerial professional connections or CSR varies between firms with different levels of public and media attention. Panels A and B i $\sqrt{2}a$, le 5 report the results, each using a different proxy for public and media attention.

As shown in Tables 5, the politive effect that managerial professional connections have on CSR are found to be greater and stronger in industries with higher public visibility and in firms with higher media coverage (the coefficients of the interaction term in both panels A and B are significantly positive in all columns). These results are consistent with our hypotheses H2a and H2b, suggesting that external institutions (public and media attention) play an important role in shaping CSR decisions of firms with professionally connected managers. Particularly, professionally connected managers have stronger motives to improve their CSR disclosure quality due to concerns about potential reputational damage, when they face higher external monitoring through public and media attention.

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Insert Table 5 about here

4.4 The Heterogeneity of Managerial Professional Connections and Their Impact on CSR

Managerial professional connections may not be homogenous, which implies that the effect of managerial professional connections on CSR may vary due to in the variation of professional connections. If, as expected, the positive effect that managerial professional connections have on CSR is due to the potential value cost of professionally connected managers, it is rational to expect that the positive relationship between professional connect. The manager's professional connections are stronger.

To test this expectation, we further identify (1) the tenure of professionally connected managers as executive members of the relevant industry associations, as it is reasonable to suppose that a longer duration enables a professional y connected manager to establish a better professional reputation; and (2) the strength of managerial professional ties, as measured by whether the manager is the chair/director of an industry association. Being the chair/director of an industry association gives the manager greater centrality within the association and thus establishes stronger professional connections. Our main expectation is that the effect of managerial professional connections on CSR should be stronger when the managers' professional connections matter to corporate CSR performance. Table 6 reports the results.

As expected, our results in panel A of Table 6 show that the significant positive relationship between managerial professional connections and CSR performance is strengthened by the tenure of managerial connections, as measured by the number of years the manager has served as an executive member of the relevant industry association. Similarly, the positive relationship between managerial professional connections and CSR is also strengthened by the strength of managerial professional connections, as seen from the results reported in panel B of Table 6. Insert Table 6 about here

4.5 Endogeneity Issue

One may be concerned that managerial professional connections are likely to be endogenous, so that our results may be influenced by potential endogeneity caused by omitted variable bias. That is, it is possible that factors that incentivize firms to form professional ties are also related to firms' CSR decisions. In this section, we address the endogeneity issue, using the following approaches: (1) the difference-in-differences (DID) approach; (2, the two-step regression model with instrumental variables; and (3) propensity score matching (PSM). These approaches, as suggested by Roberts and Whited (2012), can effectively address endogeneity concerns in corporate finance studies.

The DID approach: the effect of managerial r ro essional connections on CSR after 2011 when the America Embassy in China state(to report on air quality

DID approach is used to recover treatment effects stemming from sharp changes in the economic environment, government policy, or the institutional environment. We adopt the year 2011 as a moment of sharp charge in the institutional environment, as the environmental issue first attracted public and government attention in that year, because *American Embassy in China* started reporting on air quality in Beijing on Twitter in that year, revealing severe environmental issues in China.¹⁰ The consequence was that the Chinese people, both the public and the media, began to appreciate the importance of CSR. More importantly, this event can be considered an exogenous shock to all Chinese firms because it was completely unexpected and was influenced by neither firm-specific factors nor industry-specific factors. We expect that this event should cause firms to improve their CSR disclosure, especially firms with professionally connected

¹⁰ This is a very influential event in China. Before this event, although air pollution in China was very severe, the Chinese government had never admitted it. Also, the government had never issued any report about how bad the air quality in Beijing was. In October 2011, the *American Embassy in China* first started reporting on the air quality through Twitter, and this information spread very quickly through the internet. Under pressure from the public and the media, the Chinese government was forced to put more emphasis on air quality, and firms' CSR was more visible after this event.

managers, due to the increased public attention.

To capture the effect of this event, we create a dummy variable, DUM_11, that equals 1 for the post-2011 period and 0 for the pre-2011 period, and interact this new dummy variable with our dummy variable for managerial professional connections. Table 8 reports the empirical results. As expected, our results show that the interaction of PRO_CON and DUM_11 is significantly positively associated with CSR, suggesting that the positive relationship between managerial professional connections and CSR disclosure is strengthened after 2011, when environment issues first attracted public and government attention.

Insert Table 7 about her.

Ruling out alternative explanations and Hecl main two-step regressions

It is possible that our key independent on abk, i.e., managerial professional connections, is correlated with the error term, so our regression results may suffer from selection bias. What is more, there are possible alternative explanations to our main findings: top executives of firms with desirable financial performance are more likely to become executive members of industry association, thus being executive members of industry associations may capture firm quality instead of managerial processional reputation and experience. In order to address those issues, this study adopts the Heckman two-step regression with instrumental variables to further verify our main findings.

We select the industry experience (IND_EXP), measured by the number of years that the CEO/chairman has worked in the relevant industry, as our instrument.¹¹ Our expectation is that the probability of being an executive member of industry association depends on the manager's

¹¹ If the CEO/chairman has worked in the same industry for more than 1 firm, we take the sum. For firms with professional connections, if the CEO is professionally connected, we take the industry experience of the CEO, and vice versa. For firms without professional connections, we take the longer industry experience of the CEO and chairman. We take the Natural logarithm of the managerial industry experience in our regressions.

industry experience rather than the firm quality. i.e., firm size or financial performance. Thus, our instrument should have significantly positive effect of the probability of being professionally connected. While the managerial industry experience is not likely to have a direct impact on CSR. This instrument satisfies the exogeneity criterion well.

Our empirical results, as reported in Table 8, confirms the significantly positive relationship between the instrumental variable and the probability of having professional connections. The F-value for the weak IV test is 53.16, suggesting that the instrument is not weak. In addition, we do not observe any significant relationship between firm quality (e.g., firm size and profitability) and the probability of the top managers being professional'y connected. Therefore, we confirm that being executive membership of industry association reflects top executives' professional experience instead of firm quality, and successfully rule out the alternative concern.

Next, we report our results, using the predict on volue of managerial professional connections (PRO_CON^) from the first stage as a next independent variable and further examine its impact on CSR. The results, as shown in colurns 3 to 6, confirm that the managerial professional connections still work to enhance $cor_{1}crate$ CSR performance under the two-step regression estimation.

Insert Table 8 about here

The PSM approach

It is possible that both the dependent and independent variables are jointly determined by a confounding variable. Thus, this study additionally adopts the PSM approach to reduce confounding variables bias by comparing corporate CSR in firms with and without managerial professional connections, based on various matching criteria. To ensure the robustness of our results, we match each firm with professional connections to a firm without based on the following matching criteria: firm size in model 1; (2) accounting performance (ROA) in model 2;

number of employees in model 3; product market competition in model 4; firm size, accounting performance (ROA), number of employees, and product market competition in model 5; firm size, accounting performance (ROA), number of employees, market share, and all other control variables, including year and industry, in model 6. We adopt the bootstrap approach and sample without replacement (1,000 times). The results, as presented in Table 9, confirm our main hypothesis that CSR decisions differs significantly between firms with and without managerial professional connections.

Insert Table 9 about here

4.6 Additional Test

Do managerial professional connections *fifect* corporate earnings quality and shareholder value?

In this section, we aim to provide additional evidence to further support our main results discussed above. We first examine the effect of managerial professional connections on aggressive financial behaviors. The rationale for this is that if, as expected, managers with professional connections care more about their reputations, we should observe that firms with professionally connected mangers would be less likely to engage in corporate behaviors that would be harmful to their reputations, for instance, aggressive earnings management and financial re-statement. To provide evidence relevant to this expectation, we create two variables: (1) earnings management (DA), as measured by the performance matched abnormal accruals model of Kothari, Leone, and Wasley (2005); and (2) a dummy variable (DUM_RESTATE) that equals 1 if a firm issues a financial re-statement in a particular year and 0 otherwise. Columns 1 to 2 of Table 10 present the empirical results, with the two new variables used as dependent variables. As predicted, our results show that firms with managerial professional connections engage in less earnings management and are less likely to issue financial re-statements. These

results further support our main argument that managers with professional connections are incentivized to maintain their social reputations.

In addition, given the important role played by managerial professional connections in shaping corporate CSR decisions, another question arises: how is shareholder value affected by professional connections? In order to answer this question, in column 3 of Table 10, we examine the effect of professional connections on shareholder value, as measured by Tobin's Q. Our results support the view that, as a result of better CSR performance, the value of managerial professional connections is acknowledged by external shareholder:

The effect managerial professional connections on CEC unnover and CEO compensation

We have documented that managers with professional connections have strong incentive to engage in CSR activities to maintain their reputations and cocial capital. However, the question of whether professionally connected managers the number of a social capital. However, the question of CSR, remains unanswered. Therefore, in this subsection, we provide additional evidence relevant to this question. In particular, we focus on whether managers with professional connections are less likely to be replaced and whether drep have higher CEO compensation than managers without professional connections, concrolling for other factors. Our results, presented in columns 4 to 5 of Table 10, provide evidence that professionally connected managers have better job security and are better pality by their companies. This result supports the view of Lee (2007) that managerial reputation brings personal benefits, such as compensation and job retention, to managers.

Insert Table 10 about here

Other tests

In addition to the tests reported above, we also conduct the following tests. First, we test whether the effects of managerial professional connections on CSR also vary across different

levels (state, province or city level) of industry association. Our results reveal that the higher is the level of managerial professional connections, the stronger are their effects on CSR. Second, to address potential measurement error in the variables, we replace our measure of corporate CSR with data from the CSMAR database and alter our measure of managerial professional connections to include those of board members and manager's past working experience. Redoing our tests, our main findings remain the same. Third, we run our main regressions, using subsamples of SOEs and non-SOEs separately and find that our results hold both in SOEs and non-SOEs. The empirical results, as discussed in this section, are row reported to save space.

5. DISCUSSION

Why does corporate CSR disclosure vary so rate's among firms? Prior studies have overwhelmingly pursued the idea that firms' CS. engagement largely depends on how much pressure they are under to engage in CSR (Sh.opshire and Hillman, 2007). Based on this view, a number of theories have been suggested to explain corporate CSR behaviors within different theory frameworks. Only recently, the incrature has started to consider corporate CSR decisions as a constellation of volitional cloices that reflect the values of firms' top executives (e.g., Chin et al., 2013). Thus, CSR could be determined by managerial characteristics such as political ideology (Gupta et al., 2017). In line with this view, we propose that CSR decisions are also determined by managerial idiosyncratic characteristics; that is, the professional connections of managers. Particularly, we argue that firms whose managers have professional connections fare better in terms of CSR disclosure because they have more to lose from socially irresponsible behaviors, which is based on prospect theory. Using a unique dataset for Chinese firms provided by RKS that covers the CSR scores of Chinese listed firms from 2009 to 2017, we find strong evidence that managers' professional connections play an important role in CSR decisions.

We also offer an initial framework to better explain why professional connections matter more

or less to their effect on CSR by investigating the moderation effect of social attention on professional connections—the CSR relationship. Specifically, we observe that social attention, as measured by both industry visibility and media attention, enhances the positive relationship between professional connections and CSR. Our result confirms the monitoring role of social attention on corporate behaviors and provides fresh evidence that by magnifying the potential loss of professionally connected managers, severe external monitoring arising from high social attention disciplines the behavior of professionally connected managers more than that of non-professionally connected managers. Furthermore, by investigating the heterogeneity of managerial professional connections and their impact on corporate CSR, we document a more pronounced positive relationship between managerial professional connections and CSR when the managers have stronger professional connection. Finally, it is possible that managerial professional connections and firms' CSR quality are endogenous. We address the endogeneity issue using various approaches including the DID approach, two-step regression with instrumental variables, and the PSM approach. Our main results are robust to all of the tests addressing the endogeneity issue.

Apart from our substantive indings on the effect of professional connections and social attention on CSR, we provide a difficultional evidence that focuses on the behaviors of professionally connected managers. We find that professionally connected managers are less likely to adopt aggressive accounting policies and that external investors tend to value firms with professionally connected managers. Moreover, we show evidence that managers do benefit from their professional connections through higher CEO compensation and longer tenure. The results confirm that professionally connected managers tend to behave more rationally than their non-connected counterparts, and they do benefit from such behaviors.

6. CONCLUSION

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We have introduced the concept that managerial characteristics, as measured by their professional connections, affect CSR. Using a unique sample of Chinese firms, we provide substantive evidence that: (1) firms with professionally connected managers tend to have better CSR disclosure quality; (2) the professional connections—the CSR relation—depends on both external social attention and the strength of managerial professional connections; (3) professionally connected managers bring benefits to both connected firms and managers in that connected firms are more rational in making financial policies and are valued by external investors while connected managers tend to have longer tenure and are better compensated. Our findings have important implications for understanding the cs? decisions in emerging markets. In particular, from the prospect theory framework, we argue that firms' CSR performance in emerging markets is largely determined by managers' evaluation of the potential value losses or gains of their socially irresponsible or responsible mactices. By magnifying the potential value losses of socially irresponsible behaviors, *within al institutions*, such as media and public attention, strengthen the positive role played by many gerial professional connections on CSR disclosure. To conclude, our study suggests that corporate CSR decisions are largely shaped by managerial idiosyncratic characteristics, fo. example, managerial professional connections, and greatly influenced by external institution in emerging markets.

While our paper offers a new perspective on CSR, our study has limitations that represent future research opportunities. First, we build our hypotheses mainly based on prospect theory, which argues that corporate top managers tend to behave more rationally, and they care more about CSR quality if they expect that irrational behaviors will cause more harm to their personal reputation. However, we are unable to exactly measure the value loss from the irrational/socially irresponsible behaviors of managers. Future studies, however, might use surveys and experimental methods to resolve this problem. In addition, our study demonstrates the causal relationship between managerial professional connections and corporate CSR while, in our

moderating hypothesis, we find that social attention is an external factor that plays an important moderating role on professional connections—the CSR relationship. Indeed, there may be more moderations such as corporate governance, managerial personal characteristics, and culture. We encourage future researchers to develop research designs to explicitly probe additional moderations and their relative influence on professional connections—the CSR relationship.

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Sample distribution

Panel A The distribution of CSR scores based on year

Note that the RKS dataset provides overall CSR scores from 2009, but the CSR scores based on the different dimensions are reported from 2010.

	2009	2010	2011	2012	2013	2014	2015	2016	2017
CSR_ALL	29.87	35.06	36.78	37.28	38.53	40.15	42.61	42.47	43.25
CSR_M	N/A	8.01	10.20	10.83	12.40	14.13	15.00	15.18	15.17
CSR_C	N/A	16.94	15.05	16.14	16.57	17.21	18.25	17.32	17.53
CSR_T	N/A	6.13	6.84	6.13	6.06	6.20	6.91	7.58	8.13

Panel B The distribution of CSR scores and managerial professional connections based on industry

	CSR_ALL	CSR_M	CSR_C	CSR_T	PRO_CON
Agriculture, forestry, animal husbandry and fishery	33.89	12.52	14.06	6.12	6.89
Mining	44.79	14.55	20.36	7.76	4.48
Manufacturing	37.09	12., 1	16.99	6.54	5.25
Electricity, heat, gas and water industries	42.09	1.22	18.19	7.23	3.48
Construction	43.76	5.53	19.49	7.47	9.65
Wholesale and retail	38.97	13.46	17.39	7.04	4.86
Transportation	41 07	13.74	18.36	7.21	4.55
accommodation and catering	42 21	14.08	19.13	5.99	6.47
Information technology	3~.35	13.33	15.49	6.56	4.48
Real estate	35.26	12.48	15.43	6.51	12.26
Leasing and business service	4 J.61	13.80	17.33	8.56	4.86
Scientific research and technical service	37.98	12.29	16.92	6.83	3.92
Water conservancy, environment and public facilities me ager ent	41.68	14.09	18.92	6.91	6.47
Resident service	23.53	6.78	9.79	6.97	5.81
Education	42.10	12.96	16.23	6.40	3.06
Health and social work	38.75	14.39	14.92	6.73	1.33
Culture, sports and entertainment	34.89	11.95	13.35	6.43	4.48
Others	30.24	9.84	14.46	6.82	7.68

Table 2

Summary Statistics						
variable	IN	MEAN	MEDIAN	STDEV	MIN	MAX
CSR_ALL	7, 147	39.10	36.15	13.06	11.69	89.30
CSR_M	7, `12	13.34	12.89	4.66	2.28	28.22
CSR_C	,012	17.48	16.41	6.04	2.64	40.65
CSR_T	7,012	6.97	6.47	2.07	0.56	22.36
PRO_CON(%)	7,462	10.88	0	1.503	0	1
Size(Million Yen)	7,462	38,032	31,459	10.577	16,183	284,087
LEV	7,462	0.477	0.426	1.591	0.02	0.967
ROA	7,462	0.057	0.038	0.19	0.01	0.36
AGE (In years)	7,462	14.62	12	5.16	1	31
INS (%)	7,462	5.79	3.27	2.145	0.08	9.82
DUAL	7,462	0.29	0	0.137	0	1
OPCASH (%)	7,462	4.23	4.27	0.336	0.024	6.28
LISTCROSS	7,462	0.034	0	0.03	0	1
GENDER	7,462	0.97	1	0.10	0	1
INDIRECTOR (%)	7,462	38.52	34.17	1.134	0.01	0.56
PC	7,462	0.203	0	0.402	0	1

Correlation coefficients between main dependent and independent variables

	CSR_ALL	CSR_M	CSR_C	CSR_T	PRO_CON	SIZE	LEV	ROA	AGE	INS	DUAL	OPCASH	LISTCROSS	GENDER	INDIRECTOR	PC
CSR_ALL	1															
CSR_M	0.913***	1														
CSR_C	0.923***	0.39***	1													
CSR_T	0.823***	0.49***	0.33***	1												
PRO_CON	0.097**	0.086***	0.096***	0.086***	1											
SIZE	0.407**	0.331**	0.38***	0.343***	0.032**	1										
LEV	0.11****	0.079***	0.124***	0.093	-0.014**	-0.061***	1									
ROA	0.02**	-0.017***	0.017	0.018	-0.003	-0.04***	0.43*	1								
AGE	0.037***	0.038	0.045**	-0.006	0.031***	0.128***	-0.00	-0.008	1							
INS	0.08***	-0.115***	0.017	-0.028**	0.056***	0.316***	0.023**	-0.003	0.04*	1						
DUAL	-0.102*	-0.133***	-0.038**	-0.04**	-0.005	0.173 **	0.615**	-0.001	0.024*	0.12**	1					
OPCASH	0.264**	0.222***	0.26*	0.253***	0.017**	0.052 ***	0.002	-0.004	-0.007	-0.014**	-0.014**	1				
LISTCROSS	0.017	-0.063***	0.109***	0.074***	-0.003	0.083**	0.018**	-0.001	-0.006*	0.039**	-0.043***	0.079***	1			
GENDER	-0.058***	-0.059***	-0.011	-0.038**	7.6 R	0.019***	0.018***	-0.002	-0.08*	0.053***	0.037***	0.004	0.017***	1		
INDIRECTOR	-0.273**	-0.39**	-0.059***	-0.03-、**	-′ .018***	0.437***	0.051***	0.09*	0.022*	0.267***	0.404***	0.000	0.162***	0.113***	1	
PC	-0.058	-0.085***	-0.003	-0.0 13* *	0.091***	0.142***	0.005	0.01	0.057*	0.092***	0.196***	-0.009*	0.023***	0.03***	0.184***	1

Note: ***, **, and * indicate significance at the 1%, 5%, and 10% level.

VARIABLES	(1)	(2)	(3)	(4)
	CSR ALL	CSR M	CSR C	CSR T
PCO_CON	0.343***	0.120***		 0.503***
	(5.323)	(5.122)	(4.789)	(4.696)
SIZE	4.044***	1.250***	1.922***	0.538***
	(4.395)	(3.245)	(3.706)	(3.146)
LEV	-6.508***	-2.337***	-3.077***	-1.137***
	(-8.607)	(-8.493)	(-8.009)	(-9.007)
ROA	1.462	0.296	0.747	0.217
	(1.283)	(0.728)	(1.313)	(1.164)
AGE	0.497***	0.169***	0` 0***	0.672***
	(5.809)	(5.559)	(v. ² 60,	(4.815)
INS	-0.107	-0.645	07,57	-0.316
	(-0.886)	(-1.507)	-0.430)	(-1.609)
DUAL	-0.245	-0.106	0.347	-0.247*
	(-0.334)	(-0.360)	(0.008)	(-1.826)
OPCASH	2.258	-1.002*	1.910**	0.440
	(1.423)	(-1/02)	(2.319)	(1.628)
LISTCROSS	2.961***	C 734 ***	2.341***	0.840***
	(3.531)	(2.0.6)	(4.604)	(5.033)
CEOGENDER	0.501	0.360	0.117	-0.690*
	(0.298)	(0.437)	(0.102)	(-1.828)
INDIRECT	-2.303	-0.810	-0.583	0.111
	(-0.642)	(-0.562)	(-0.290)	(0.167)
PC	-0.10	0.0457	0.733	-0.552
	(-0 ^0)	(0.194)	(0.022)	(-0.511)
Constant	-0.62.`***	-0.193**	-0.275***	-0.605***
	(-4.199)	(-2.117)	(-2.519)	(-3.767)
YEAR	רסי rolled	CONTROLLED	CONTROLLED	CONTROLLED
INDUSTRY	(ONTROLLED	CONTROLLED	CONTROLLED	CONTROLLED
Observations	7,462	7,012	7,012	7,012
Adjusted R-squared	0.340	0.401	0.262	0.245
F	110.7	139.2	74.33	67.94

Table	4	
Lanc	_	

The effect of managerial professional connections on CSR disclosure

Note: The dependent variables are proxies for corporate CSR scores. CSR_ALL is firm's overall CSR score, CSR_M, CSR_C and CSR_T are firm's CSR scores based on Macrocosm, Content and Technique respectively. PRO_CON is a dummy variable for managerial professional connections. The sample size is smaller for columns 2 to 4 because CSR_ALL covers the period from 2009 to 2017, while CSR_M, CSR_C and CSR_T just cover the period from 2010 to 2017, as shown in Panel A of Table 1. Detailed definitions for all variables are reported in Appendix. The sample is trimmed at 1% on each variable in each tail. T-statistics are reported in brackets below the coefficients. Standard errors are clustered by company. ***, **, and * indicate significance at the 1%, 5%, and 10% level.

Managerial professional connections, social attention and CSR

<u> </u>		01		
	(1)	(2)	(3)	(4)
VARIABLES	CSR_ALL	CSR_M	CSR_C	CSR_T
PCO_CON	0.206***	0.345**	0.174*	0.0417***
	(3.128)	(2.107)	(1.890)	(2.743)
POLLUT_FOOD	-0.930*	-0.725**	-0.818*	-0.604***
	(-1.807)	(-2.016)	(-1.923)	(-3.427)
PCO_CON*	0.725*	0.616**	0.108***	0.219**
POLLUT_FOOD	(1.823)	(2.114)	(2.974)	(2.137)
Control variables	SIZE, LEV, ROA,	AGE, INS, DUAL, C	PCASH, CEOGENI	DER, LISTCROSS,
		INDIRE	ECT, PC	
YEAR	CONTROLLED	CONTROLLED	CO1 ROLLED	CONTROLLED
INDUSTRY	CONTROLLED	CONTROLLED	COUTRULLED	CONTROLLED
P-value for interaction	P<0.05	P<0.05	P. 9.01	P<0.01
Observations	7,462	7,012	7,12	7,012
Adjusted R-squared	0.325	0.283	0204	0.316
F	90.05	112.48	<u>93.53</u>	115.21.

Panel A Managerial professional connections, high public visible industries and CSR

Panel B Managerial professional connections, media cove age and CSR

	(1)	(2)	(3)	(4)
VARIABLES	CSR_ALL	CSRIA	CSR_C	CSR_T
PCO_CON	0.4951***	C 25 ***	0.295***	0.282***
	(4.609)	(?, ',26)	(4.236)	(3.843)
MEDIA	0.471**	0.5c ^ *	0.507***	0.555***
	(2.362)	(1.973)	(3.345)	(2.973)
MEDIA*PCO_CON	0.408***	0.137**	0.269***	0.382***
	(3.816)	(2.177)	(2.811)	(2.405)
Control variables	SIZF L	EV, ROA, AGE, INS, DI	UAL, OPCASH, CEOGE	ENDER, LISTCROSS,
		I	NDIRECT, PC	
INDUSTRY	CONTROL ED	CONTROLLED	CONTROLLED	CONTROLLED
YEAR	CONTRUTIO	CONTROLLED	CONTROLLED	CONTROLLED
P-value of interaction	P<0. `1	P<0.01	P<0.01	P<0.05
Observations	4.7,7	3,278	3,278	3,278
Adjusted R-squared).306	0.387	0.350	0.417
F	135.18	112.90	73.45	94.18

Note: In both panels, the dependent variables are proxies for corporate CSR scores. CSR_ALL is firm's overall CSR score, CSR_M, CSR_C and CSR_T are firm's CSR scores based on Macrocosm, Content and Technique respectively. PRO_CON is a dummy variable for managerial professional connections. The sample size is smaller for columns 2 to 4 because CSR_ALL covers the period from 2009 to 2017, while CSR_M, CSR_C and CSR_T just cover the period from 2010 to 2017, as shown in Panel A of Table 1. In panel A, POLLUT_FOOD is a dummy variable that equals to 1 for firms from high air and environment pollution or food industry and 0 otherwise. In panel B, MEDIA is the BAIDU media index provided by Baidu.com (NASDAQ, BIDU). Detailed definitions for all variables are reported in Appendix. Coefficients for control variables are not reported to save space. The sample is trimmed at 1% on each variable in each tail. T-statistics are reported in brackets below the coefficients. Standard errors are clustered by company.***, **, and * indicate significance at the 1%, 5%, and 10% level.

The heterogeneity of managerial professional connections and its impact on CSR *Panel A. The duration of managerial professional connections and CSR*

	(1)	(2)	(3)	(4)
VARIABLES	CSR_ALL	CSR_M	CSR_C	CSR_T
PCO_CON	0.348***	0.329	0.381***	0.299***
	(2.898)	(2.868)	(3.169)	(3.447)
TENURE	0.179	0.193	0.238	0.212
	(1.573)	(1.120)	(1.106)	(1.407)
PCO_CON *TENURE	0.035***	0.069*	0.018***	0.040**
	(3.257)	(1.786)	(:. ² 09)	(2.266)
Control variables	SIZE, LEV, R	OA, AGE, INS, DUA	L, OPCA CE, CEUGEN	DER, LISTCROSS,
		IND	DIRECT 1	
YEAR	CONTROLLED	CONTROLLED	(ON'1 ROLLED	CONTROLLED
INDUSTRY	CONTROLLED	CONTROLLED	CULTROLLED	CONTROLLED
P-value for interaction	P<0.01	P<0.05	F 9.01	P<0.01
Observations	7,462	7,012	7,012	7,012
Adjusted R-squared	0.278	0.326	0.305	0.239
F	80.43	76.56	92.15	106.40

Panel B. The strengthen of managerial professional connections and corporate CSR

VARIABLES	(1)	(2)	(3)	(4)
	CSR_ALL	CSR_M	CSR_C	CSR_T
PRO_CON	0.647***	0.419*	0.318***	0.362***
	(2.745)	(1.809)	(2.895)	(2.450)
DUM_HEAD	0.428	0.806	0.526	0.524
	(1.475)	(1.182)	(0.438)	(1.015)
PRO_CON*HEAD	0.2? ***	0.884***	0.476*	0.645**
	(2.521)	(2.659)	(1.769)	(2.156)
Control variables	T'ZE LEV, RO	DA, AGE, INS, DUAL	L, OPCASH, CEOGEN	IDER, LISTCROSS,
		IND	IRECT, PC	
YEAR	COLTROLLED	CONTROLLED	CONTROLLED	CONTROLLED
INDUSTRY	CC NTROLLED	CONTROLLED	CONTROLLED	CONTROLLED
P-value for interaction	P<0.01	P<0.01	P<0.05	P<0.10
Observations	7,462	7,012	7,012	7,012
Adjusted R-squared	0.326	0.358	0.317	0.295
F	52.38	96.19	63.80	92.46

Note: The dependent variables are proxies for corporate CSR quality. CSR_ALL is firm's overall CSR score, CSR_M, CSR_C and CSR_T are firm's CSR scores based on Macrocosm, Content and Technique respectively. PRO_CON is a dummy variable for man agerial professional connections. The sample size is smaller for columns 2 to 4 because CSR_ALL covers the period from 2009 to 2017, while CSR_M, CSR_C and CSR_T just cover the period from 2010 to 2017, as shown in Panel A of Table 1. TENURE in panel A is the number of years the firm's CEO/chairman serve as executive member of a relevant industry association. HEAD in panel B is a dummy that equals to 1 if the connected manager is the general secretary (chair/director) of a relevant industry association, and 0 otherwise. Detailed definitions for all variables are reported in Appendix. Coefficients for control variables are not reported to save space. The sample is trimmed at 1% on each variable in each tail. T-statistics are reported in brackets below the coefficients. Standard errors are clustered by company. ***, **, and * indicate significance at the 1%, 5%, and 10% level.

The effect of managerial professional connections on CSR after 2011 when the America Embassy in china started to report the air quality in Beijing

	(1)	(2)	(3)	(4)
VARIABLES	CSR_ALL	CSR_M	CSR_C	CSR_T
PRO_CON	0.808**	0.129	0.463***	0.576***
	(2.006)	(2.091)	(5.842)	(3.816)
DUM_11	0.692	0.940	0.780	0.568
	(0.367)	(1.266)	(1.187)	(1.039)
PRO_CON	0.600***	0.217***	0*/***	0.142***
	(3.179)	(2.688)	(2.165)	(4.516)
Control variables	SIZE, LEV, R	OA, AGE, INS, DUAL,	OPCASE CE' GEND	ER, LISTCROSS,
		INDIR	RECT PC	
INDUSTRY	CONTROLLED	CONTROLLED	CONTROLLED	CONTROLLED
P-value for	P=0.026	P=0.038	P=0.015	P=0.048
Observations	7,462	7,012	7,012	7,012
Adj- R2	0.341	0.402	0.263	0.247
F	108.1	135 ,	72.59	66.76

Note: The dependent variables are proxies for comparat CSR quality. CSR_ALL is firm's overall CSR score, CSR_M, CSR_C and CSR_T are firm's CSR scores ased on Macrocosm, Content and Technique respectively. PRO_CON is a dummy variable for managerial p. f.ssional connections. DUM_11 is a dummy equal to 1 for the post-2011 period and 0 for pre-2011 period. The sample size is smaller for columns 2 to 4 because CSR_ALL covers the period from 2009 to 2017, while C.P_M, CSR_C and CSR_T just cover the period from 2010 to 2017, as shown in Panel A of Table 1. Detailed definitions for all variables are reported in Appendix A. Coefficients for control variables are not reported to save strate. The sample is trimmed at1% on each variable in each tail. T-statistics are reported in brackets below: the coefficients. Standard errors are clustered by company. **, and * indicate significance at the 5%, and 10 6 level.

Table	8
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Two-step regression results

VARIABLES	PRO_CON	PRO_CON	CSR_ALL	CSR_M	CSR_C	CSR_T
PRO_CON^			0.382**	0.780**	0.169***	0.102***
			(2.029)	(2.011)	(2.567)	(2.881)
IND_EXP	0.184*	0.325***				
	(2.925)	(2.728)				
SIZE		0.253*	0.404***	0.250***	0.422***	0.538**
		(1.937)	(4.418)	(3.256)	(3.728)	(2.187)
ROA		0.570	0.495	0.234	0.307	0.134
		(1.243)	(1.594)	(0.485)	(1.201)	(0.937)
LEV		-0.372	-0.554***	-0.313***	-0.773***	-0.230*
		(-1.528)	(-2.664)	(-2. '69)	(-2.361)	(-1.932)
AGE		0.214	-0.496	-0 169	-0.270	-0.0671
		(1.028)	(-0.801)	(560	(-0.364)	(-0.820)
INS		0.329	0.106	L 537	0.244	0.310
		(1.474)	(0.878)	(1,490)	(0.409)	(1.580)
DUAL		0.12	0.259**	0.104***	0.656**	0.246*
		(1.895)	(2.15 ')	(3.353)	(2.016)	(1.815)
OPCASH		0.129*	0.28 3	0.326	0.866	0.420
		(1.518)	(1 430)	(1.342)	(2.267)	(1.555)
PC		0.412	21.08	0.620	0.340	0.427
		(1.24)	(1.175)	(1.263)	(1.104)	(0.396)
INDIRECTIVE		0.7.3	0.753***	0.420***	0.547**	0.409***
		(1.409)	(2.488)	(3.290)	(2.027)	(2.616)
DUM_LISTCROSS		0.1.7*	0.182***	0.838**	0.512***	0.720***
		(1.203)	(3.785)	(2.291)	(4.916)	(5.490)
CEOGENDER		-0.236**	-0.557	-0.381	-0.152	-0.674*
		(-2.124)	(-1.332)	(-1.463)	(-1.132)	(-1.788)
Constant	0.185**	0.427**	0.210**	0.127**	0.274***	0.240***
	(2.147)	(2.103)	(2.155)	(2.111)	(2.514)	(3.761)
Indus	C mi lled	Controlled	Controlled	Controlled	Controlled	Controlled
Year	Cuntro led	Controlled	Controlled	Controlled	Controlled	Controlled
Observations	7,462	7,462	7,462	7,012	7,012	7,012
Adj-R2	0.450	0.395	0.341	0.402	0.263	0.247
Weak IV F Statistics	53.61					
Hansen's J Statistics	0.025					
F	92.38	85.35	108.1	135.5	72.59	66.76

We choose managerial industry experience (IND_EXP) as instrumental variable. PRO_CON^ is the predicted value of managerial professional connections estimated from the first stage regression. Detailed definitions for all variables are reported in Appendix A. The sample size is smaller for columns 3 to 6 because CSR_ALL covers the period from 2009 to 2014, while CSR_M, CSR_C and CSR_T just cover the period from 2010 to 2014, as shown in Panel A of Table 1. Coefficients for control variables are not reported to save space. The sample is trimmed at 1% on each variable in each tail. T-statistics are reported in brackets below the coefficients. Standard errors are clustered by company. ***, **, and * indicate significance at the 1%, 5%, and 10% level.

Table	9				
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propensity score matching (PSM) to ac	ddress the endogeneity issue
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	Model 1	M odel 2	Model 3	M odel 4	Model 5	M odel 6
Coefficient	0.246***	0.215***	0.323*	0.225***	0.310***	0. 294***
Bootstrapstandard	0.026	0.041	0.056	0.037	0.028	0.026
Z-value	2.472	3.120	1.899	4.143	2.907	3.526
P-value	0.002	0.001	0.036	0.001	0.001	0.001

Note: We use the PSM approach to match each firm with professional connections to a firm without. The match criteria are: firm size for model 1; firm accounting performance (ROA) for model 2; number of employees for model 3; product market competition for model 4; firm size, accounting performance (ROA), number of employees, and product market competition for model 5; firm size, accounting performance (ROA), number of employees, market share and all other control variables including year and industry in regressions for model 6. The bootstrap and sampling without replacement (1000 times) method is used. Bootstrap standard errors, Z-value and P-value are reported below the coefficients for all models. ** indicate significance at 5% level.

Table 10 The effect of managerial professional connections on corporate light or and shareholder value					
VARIABLES	DA	DUM_RESTATE	TOBIN'Q	CEO_TURNOVER	CEOCOMP
PRO_CON	-0.593**	-0.691*	0.346** *	-0.359**	0.273***
	(-2.018)	(-1.856)	(3,155)	(-2.128)	(2.744)
Control variables	SIZE, LEV,	ROA, AGE, INS, D	UAL, OF 'ASF , CEO	GENDER, LISTCROSS	, INDIRECT, PC
YEAR	CONTROL	CONTROLLED	LO` √ TROLLED	CONTROLLED	CONTROLLED
INDUSTRY	CONTROL	CONTROLLED	C ``'''''''''''''''''''''''''''''''''''	CONTROLLED	CONTROLLED
Observations	7,462	7,462	7,462	7,462	7,462
Adj-R2(Pseudo R2)	0.369	0.425	0.273	0.36	0.320
F	65.17	52.84	80.35	44.76	73.51

Note: The dependent variables: DA is corporate earlings management measured by discretionary accruals, and DUM_RESTATE is a dummy variable that equals to 1 if the firm ha fir a. ial restatement in a particular year and 0 otherwise. TOBIN'Q is market value scaled by replacement value. CEO_TURNC /F λ is a dummy equal to 1 if the firm changes its CEO/chairman in a particular year and 0 otherwise. CEOCOMP is the ... tural logarithm of the total compensation of CEO and chairman. PRO_CON is a dummy variable for managerial profes ion.' connections. The regression coefficient of control variables is not reported to save space. Detailed definitions for all varia.'es are reported in Appendix A. The sample is trimmed at 1% on each variable in each tail. T-statistics are reported in brack.'s below the coefficients. Standard errors are clustered by company. ***, **, and * indicate significance at the 1%, 5%, and '0% level.

APPENDIX DEFINITION OF VARIABLES

Dependent variables CSR_ALL The overall CSR score from the RKS CSR database. CSR_M The CSR score based on the general quality, including information regarding the firm's CSR strategy, governance and stakeholder's interest. CSR_C enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. The CSR score based on the technique of the CSR report, which reflects whether the CSR CSR_T DA Earnings management measured by the absolute value of ostal discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial restar ment in a particular year. TOBINQ Matter value/replacement value. CEO_TURNOVER A dummy variable equals to 1 if the firm thanges its CPO*c than in a particular year and 0 otherwise. CEOCOMP Natural logarithm of the total compensation of CC* and chairman. Independent variables A dummy variable equal to 1 if the CEO/chr ma. of the firms currently serve as an executive director) of an relevant industry as social, and 0 otherwise. POLLLUT_FOOD (including the coal-fired pow, olant, iron and steel, Cement, Electrolytic aluminum, Coal, Chemical, Petrochemic.' Building material, paper making. Brawing Pharmaceutical, Fermentation. Textle: 10 ving, and Mining industries) or food industry and 0 otherwise. MEDIA The BAIDU media inde - rowided by Baidu.com (NASDAQ, BIDU).	Variable name	Detailed definition
CSR_ALL The overall CSR score from the RKS CSR database. CSR_M The CSR score based on the general quality, including information regarding the firm's CSR strategy, governance and stakeholder's interest. The CSR score based on the content of CSR report, which is based on whether firms disclose enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. CSR_C enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. DA Earnings management measured by the absolute value of 'otal discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial resta ment in a particular year. TOBINQ Market value/eplacement value. A dummy quals to 1 if the firm changes its CPOrtani, can in a particular year and 0 otherwise. CEOCOMP Natural logarithm of the total compensation of CED and chairman. Independent variables A dummy variable equal to 1 if the CEO/chuima, associate chairman, director or executive director) of an relevant industry as ociation, and 0 otherwise. PRO_CON member (secretary, associate secretary, aritima, associate chairman, director or executive director) of an relevant industry association, and 0 otherwise. MEDIA The BAIDU media inde toriovided by Baidu.com (NASDAQ, BIDU). TENURE	Dependent variables	
CSR_M The CSR score based on the general quality, including information regarding the firm's CSR strategy, governance and stakeholder's interest. CSR_M The CSR score based on the content of CSR report, which is based on whether firms disclose enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. CSR_C enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. DA Earnings management measured by the absolute value of total discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial restarement in a particular year. TOBINQ Market value/replacement value. A dummy variable equals to 1 if the firm changes its CPO/cm_mann. Independent variables A dummy variable equal to 1 if the CEO/ch_mman of the firms currently serve as an executive processor of an relevant industry associate secretar equation, and 0 otherwise. PRO_CON member (secretary, associate secretar equation, and 0 otherwise. POLLUT_FOOD Chemical, Petrochemical, Building material, paper making, Brewing, Pharmaceutical, Fermentation, Texitle is a sing, and Mining industries) or food industry and 0 otherwise. MEDIA The BAID umedia inde - royoided by Baidu.com (NASDAQ, BIDU). The number of is are form firm Sere as executive member of a relevant industry associati	CSR ALL	The overall CSR score from the RKS CSR database.
CSR_M Strategy, governance and stakeholder's interest. The CSR score based on the content of CSR report, which is based on whether firms disclose CSR_C enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. The CSR score based on the technique of the CSR report, which reflects whether the CSR factor based on the technique of the CSR report, which reflects whether the CSR and efficient. DA Earnings management measured by the absolute value of total discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial resta ment in a particular year. TOBINQ Market value/replacement value. CEO_TURNOVER A dummy quals to 1 if the firm changes its CPOstor and in a particular year and 0 otherwise. CEOCOMP Natural logarithm of the total compensation of CL Pand chairman. Independent variables A dummy variable equal to 1 if the CEO(chrimm, associate chairman, director or executive director) of an relevant industry as ocial, a, and 0 otherwise. PRO_CON member (secretary, associate secretar, a crimm, associate chairman, director or executive director) of an relevant industry as ocial, and 0 otherwise. MEDIA The BAIDU media inde r rovided by Baidu.com (NASDAQ, BIDU). TENURE The number of pars the firm's CEO/chairman serve as executive member of a relevant industry association, and 0 otherwise. <td></td> <td>The CSR score based on the general quality, including information regarding the firm's CSR</td>		The CSR score based on the general quality, including information regarding the firm's CSR
Three Ji governmet was Materiated in material. The CSR score based on the content of CSR report, which is based on whether firms disclose enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. The CSR score based on the technique of the CSR report, which reflects whether the CSR CSR_T information is balanced, comparable, innovative, credible, transparent, normalize, available and efficient. DA Earnings management measured by the absolute value of 'otal discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial restac ment in a particular year. TOBINQ Market value/replacement value. CEO_TURNOVER A dummy equals to 1 if the firm changes its CFO 'on,' man in a particular year and 0 otherwise. CEOCOMP Natural logarithm of the total compensation of CL 'o and chairman. Independent variables A dummy variable equal to 1 if the CEO/chr 'ma_of the firms currently serve as an executive member (secretary, associate secretar, 'o irms, and 0 otherwise. PRO_CON member (secretary, associate secretar, 'o irms, and o therwise. A dummy variable that ee als to 1 for firms from high air and environment pollution (including the coal-fired pow, plant, iron and steel, Cement, Electrolytic aluminum, Coal, Chemical, Petrochemic, 'B uilding material, paper making. Brewing Pharmaceutical, Fermentation, Textile, is 'ing, and Mining industries) or fod industry and 0 otherwise.	CSR_M	strategy governance and stakeholder's interest
CSR_C enough information about CSR, including financial performance, protection of labour, human rights, environment, fair operation, customers, local community and governance. The CSR score based on the technique of the CSR report, which reflects whether the CSR and efficient. DA Earnings management measured by the absolute value of total discretionary accruals. DUM_RESTATE A dummy variable equals to 1 if the firm has financial resta, ment in a particular year. TOBINQ Market value/replacement value. A dummy equals to 1 if the firm changes its CFO ₂ , and in a particular year and 0 otherwise. CEOCOMP Natural logarithm of the total compensation of CL ³ and chairman. Independent variables A dummy variable equals to 1 if the CEO/chuma. of the firms currently serve as an executive director) of an relevant industry as ocia, and 0 otherwise. A dummy variable equal to 1 if the CEO/chuma. of the firms currently serve as an executive director) of an relevant industry as ocia, and 0 otherwise. A dummy variable there also 0 1 of firms from high air and environment pollution (including the coal-fired pow, olant, iron and steel, Cement, Electrolytic aluminum, Coal, Chemical, Petrochemic.' Building material, paper making. Brewing. Pharmaceutical, Fermentation, Textle, ta sing, and Mining industries) or food industry and 0 otherwise. MEDIA The BAIDU media inder revolded by Baidu.com (NASDAQ, BIDU). The number of stars the firm's CEO/chairman serve as executive member of a relevant industry association, and 0 otherwise. DUM_111 A sing, serve in udustry association, and 0 otherwise. EEV Total det to total assets. ROA Total net carrings to total assets. CEOGENDER A dummy that equals to 1 if the CEO and chairman is the same person. OPCASH Total operating cash flow to total assets. CEOGENDER A dummy that equals to 1 if the CEO and chairman is the same person. OPCASH Total operating cash flow to total asset		The CSP score based on the content of CSP report, which is based on whether firms disclose
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Author statement

The corresponding author (Qigui Liu) is responsible for ensuring that the descriptions are accurate and agreed by all authors.

Author contributions

Qigui Liu (corresponding author): Conceptualization; Methodology; Validation; Resources; Writing - Original Draft; Writing - Review & Editing; Visualization; Supervision; Project administration; Funding acquisition

Jinbo Luo: Software; Formal analysis; Investigation; Data Curation.

Highlights

- A sample of Chinese firms shows that managerial professional connections affect CSR.
- Professionally connected managers tend to have better CSR disclosure quality.
- Connected firms are more rational in making financial policies.
- Connected managers tend to have longer tenure and are better compensated.
- Managerial connections are influenced by external institutions in emerging markets.