

# Corporate Governance and Corporate social Responsibility: New Evidence from China

Ahmed Aboud  
University of Portsmouth

Xinming Yang  
University of Southampton

**Post Print Version**

**Acceptance Date: 25 Jan 2022**

## **Abstract**

This paper examines the impact of corporate governance on CSR performance, paying particular attention to modern Chinese businesses. Particularly, it examines how ownership concentration, boards of directors, and boards of supervisors affect the quality of corporate social responsibility performance. Using a sample from the Shanghai and Shenzhen-based, A-share listed companies between 2014 and 2018, our empirical investigation demonstrates that corporate governance does have a significant effect on CSR. However, various types of corporate governance mechanisms have differing effects on CSR. We find that ownership concentration has a positive impact on CSR performance, whilst the size of a company's board of supervisors has a positive impact on CSR performance. By doing so, we provide practical implications to users, and regulatory authorities to make better decisions.

**Keywords:** Corporate social responsibility performance; corporate governance; stakeholder theory; principal-agent theory

## **Introduction**

Since the development of corporate social responsibility (CSR) as a school of thought, there has been much academic and practical debate about whether it is advantageous for businesses to practice CSR. Traditional theories around corporate governance are focused on advocating for profit maximisation, traditionally seen as the main goal of any business. Consequently, most companies have devoted their resources to achieving this and have not significantly invested in CSR (Gupta et al., 2016). Furthermore, a company's ability to fulfil any commitments it has made to social responsibility depends on its own competitiveness and ability to survive (Arora and Dharwadkar, 2011). Despite this, in recent years pressure has built on companies to focus on CSR, and the law has developed and crystallised around the social responsibilities owed by businesses (Filatotchev and Nakajima, 2014).

In 1916, the US scholar Clark first proposed the theory of corporate social responsibility. More than a century later, the theory has become widely adopted by Western companies, and since the 1980s there has been a growing "corporate citizenship" movement in Europe and the US. The movement aims to promote and shine a light on companies' CSR commitments, and its burgeoning popularity has coincided with better publication of individual companies' CSR information (Beasley, 1996). In the 1990s, as people became more focused on issues around climate change and the environment, more businesses began looking at their own sustainability, which triggered a new wave of publication around CSR (Doh and Guay, 2006). In China, however, publication of CSR information has been less clear and dogged by confusing content, unclear concepts, and variations in the standard of publication (Huafang and Jianguo, 2007). Unlike in the West, the concept of corporate social responsibility is newer and consequently has not had sufficient time to development and mature (Huafang and Jianguo, 2007). Although many companies have started publishing CSR information, including reports into their activities, there are still headline-making stories about poor CSR. Recent examples include the deaths of 55 people after a leaking oil pipeline owned by Qingdao

Sinopec exploded, the discovery of worms in products being produced at a Ferrero Rocher factory, and the use of harmful plastics by several liquor companies (Chen and Jaggi, 2000). The discovery of these problems poses a threat to China's economy by undermining its businesses' global competitiveness.

There has been much academic debate about China's CSR laws, with some scholars stating that both the country's laws and regulations are flawed and that it lacks adequate supervision and disclosure mechanisms. In 2010, in a bid to combat this problem, China's State-owned Assets Supervision and Administration Commission (SASAC) published a list of several core social responsibilities that all centrally listed companies must follow. This was really the first time that CSR was institutionalized and made concrete in China, and SASAC's work served to help standardize how businesses were meeting their CSR objectives. SASAC also helped lay out responsibilities owed by individual stakeholders through standardizing corporate governance guidelines.

Research into CSR, both inside China and beyond, demonstrates that good CSR performance has a strong correlation with successful corporate governance. The twin fields of corporate governance and CSR have been developed in recent years and have been established in stakeholder theories and practice (Jain and Jamali, 2016). Corporate governance holds that it is the responsibility of whoever controls a company to determine its social obligations and how best to fulfil them. Work in this area also holds that a critical step towards improving CSR awareness is to monitor and regulate managerial behavior. Strong corporate governance can serve to stop unscrupulous managers from following their own interests in a way that might prove detrimental to the company (Donnelly and Mulcahy, 2008). Consequently, if a company spends time investing in and improving its corporate governance, it will be to the benefit of all parties within the company as well as assisting with the development of CSR performance (Filatotchev and Nakajima, 2014). Moreover, if a country has strong corporate governance structures, laws, and regulations, it serves to encourage companies to meet their social responsibilities – not least because there is external scrutiny of their actions. This external pressure on businesses can ensure that companies take responsibility for CSR and in turn lead to greater social welfare as a whole (Finkelstein and Mooney, 2003). There is also a clear benefit to businesses as greater corporate governance can help them maximise value that should be appreciated by key stakeholders within an organization.

Although several studies on both corporate governance and CSR, there are not many empirical studies looking at how corporate governance impacts CSR performance in the developing markets (Garcia-Torea et al., 2016). Some researchers have surveyed consumers,

stakeholders, and those involved with corporate governance for their perspectives and used them to study which factors can best influence companies to meet their social responsibilities. The weakness in these studies lies in their specificity as they are usually focused on one specific industry. This means that CSR can only be adequately measured by using a relatively simple superposition model, which might not be able to be modified for the given industry, resulting in a lack of meaningful data and observations (Graf and Stiglbauer, 2009).

In an attempt to rectify this, this paper uses stakeholder and principal-agent theories to analyse the corporate governance impacts on CSR performance. This paper examines the impact of corporate governance on corporate social responsibility performance in China. It will primarily focus its analysis on A-share listed companies based in the Chinese cities of Shanghai and Shenzhen, using data collected from 2014 to 2018 and covers 12 industries. Thus, the main objective is to examine the factors that encourage companies to meet their CSR obligations.

Using a sample from 2014 to 2018, we find that different types of corporate governance had differing impacts on CSR performance. A significant and strong positive relation was found between a company's concentration of ownership and its corporate social responsibility suggesting that a greater concentration of control and ownership increases a business' abilities to meet the full extent of its corporate social responsibilities. In a related way, the size of a company's board of supervisors has a positive impact on allowing it to fulfil its CSR. Broadly speaking, the larger the board is, the greater the chance of the individual company being able to meet its CSR commitments. This paper also shows that companies' asset-liability ratio (LEV) often negatively related with its CSR undertakings. This finding seemed to indicate that companies with particular liabilities are less likely to focus on whether their stakeholders are fulfilling their CSR responsibilities and that debt financing therefore has a negative relationship with companies agreeing to take on CSR commitments.

This paper contributes to the existing literature by examining the impact of corporate governance on a company's abilities to meet its CSR objectives in china. Much of the empirical studies on this issue are centred on the Western world, notably Western Europe and the United States (Barako et al., 2006). There remains a paucity of academic research with regards to China and, indeed, Asia as a whole. Furthermore, many of the studies looking at corporate governance focus on how it impacts corporate performance; few studies have drawn adequate links with it and corporate social responsibility. This paper therefore fills in the academic gap in this area and add to the existing research in the field. Our paper provides policy suggestions for Chinese businesses, government, and regulatory authorities. Through demonstrating that different corporate governance factors have differing degrees of influence

on a company's CSR performance. One of the most impactful things a company can try and do is to establish a large and decentralized supervisory board that will enable it to both strengthen its reputation and fulfil its corporate social responsibilities.

The paper structured as follow. Section two provides a discussion of the literature review and hypotheses development. Section three presents the methodology and section four the findings. Section five is concluding.

## **2. Literature Review and Hypotheses development**

### **2.1 Ownership Concentration and CSR**

Ownership structure can be arranged in many different ways. In general, however, the term "ownership structure" has two meanings: the first refers to the company's literal ownership structure, for example, the total number of shares of the company held by each distinct shareholder group (Carpenter et al., 2001). The second meaning refers simply to the level of equity concentration. This is a quantitative index, determined by examining the shareholding ratio of all of an enterprise's shareholders (Kilic et al., 2015). Ownership concentration fluctuates depending on the company's specific proportion of shareholders. An enterprise's equity distribution is examined by its degree of equity concentration. This value can also be applied to assess an enterprise's operation stability. The Chinese market is characterized by a number of significant economic upheavals in recent years. Many Chinese companies were created or taken over by the state (Liu and Zhang, 2016). As such, state shareholders are majority owners of many listed companies. The characteristic of "one country is dominant" is also the special performance of China's emerging market. Therefore, the percentage of state-owned shares in the ownership structure of Chinese listed companies is quite prominent (Huafang and Jianguo, 2007). Represent ownership structure in corporate governance structure of the properties, main types have actual controllers (such as the proportion of state-owned shares, institutional ownership), the proportion of tradable shares, the top five shareholders' shareholding, the proportion of legal person share and executive's shareholding (Garcia-Torea et al., 2016).

Ownership structure is one of the most important elements of corporate governance. It determines the operation mode of the company, which, in turn, defines the precise nature of the principal-agent relationship. Many researchers have attempted to identify the optimal

corporate governance mechanisms through studying factors which influence agency cost. Research regarding ownership structure's influence on corporate governance has tended to focus on the ways in which the behaviours and attitudes of major shareholders manifest themselves in an enterprise's everyday business activities and decisions. Amihud et al. (2003) showed that companies in absolute control were more cautious when it came to mergers and acquisitions. Hoskinson et al. (2005), meanwhile, have shown that, as the shareholding ratio of major shareholders increases, so does the company's degree of specialization and the major shareholders exert the most control over the other stakeholders. They can infringe upon the interests of minor shareholders through absolute control of their interests, and larger shareholders also exert more control over the directors and executives of a given enterprise (Adel et al., 2019). La Porta et al. (2000) further asserts that controlling shareholders and executives may violate the interests of minority shareholders using personal information and control advantages.

The concentration of ownership by controlling shareholders has two major effects based on the convergence-of-interests hypothesis and the entrenchment hypothesis. However, a single large controlling shareholder frequently possesses control rights in excess of cash flow rights and enjoys almost total control over managers by using pyramidal control structures and cross-stockholdings (Claessens et al. 2000; La Porta et al. 2000, 2002; Samaha et al.2012). The high level of separation between cash flow rights and voting rights motivates the controlling shareholder to entrench him- or herself at the expense of outside minority shareholders (Claessens et al. 2000; La Porta et al. 2000). Prior studies have found divergence in control rights and cash flow rights to be associated with lower market valuations and firm performance and reduced earnings quality (Fan and Wong 2002; Haw et al. 2004). Regarding the relationship between corporate social responsibility and ownership concentration, Bartkus et al. (2002) found strong evidence for US companies that powerful owners lacked courage and were excessively charitable. Atkinson and Galaskiewicz (1988) and Brammer and Millington (2005) also found a positive correlation between ownership concentration and giving in the United States. That is, with more concentrated ownership, CSR of the firm gets better. Therefore, we expect a positive relationship between CSR and *ownership concentration*.

*H1: There is positive relation between ownership concentration and CSR.*

## **2.2 Board of Director and CSR**

A board of directors is an institutional structure that allows shareholders to influence the day-to-day running of the business. The board meets to monitor the company's actions and vote

on decisions, including those related to CSR. The board of directors exercises a variety of powers: it has decision-making power over the policies and objectives of the enterprise; It employs and supervises managers; It determines executive pay. Within a given company, however, the scope of these powers will depend on the board's ability to effectively oversee its managers. This may be affected by the number and autonomy of the company's independent directors. Yermack's research (1996) points out that expansion tends to have a significant negative influence on performance when the board is composed of 10 or fewer people. However, when the board is made up of 11 or more people, the correlation between size and performance becomes less significant. That's why Yermack suggests that companies keep their boards small. By doing so, he argues, they can retain and improve operational efficiency. However, one view of the board is that they are not the most effective way to protect shareholders' interests. That is to say, different directors have different priorities and serve the interests of different stakeholders. Because of this, a large board may increase corporate governance, which in turn leads to more effective fulfilment of social obligations.

Other studies, such as those conducted by Mallin et al. (2013) found that more stakeholder-oriented board governance mechanism leads to higher corporate environmental performance (CEP) and Zattoni (2010) pointed out that including directors represent the interests of a wide range of stakeholders, prominent engagement between the organization and social and environmental issues increases the link of relevant resources of the company (Hillman et al., 2000). In fact, Dalton et al. (1999) point out that larger boards can represent more types of directors (i.e. non-executive/executive, shareholder/stakeholder representatives), thus increasing the diversity of boards. This allows companies to incorporate social goals that could eventually increase their corporate social performance (CSP) into the decision-making process. In contrast, less diversified companies are more likely to prioritize financial performance issues over social issues.

Board independence increases the scope of strategic key business policies to respond to stakeholder needs (Ullah et al.2019) and enables companies to strengthen relationships with stakeholders and increasing corporate social benefits (Daily, Dalton, & Cannella, 2003; Van Den Berghe and Levrau, 2004). Johnson and Greening (1999) found that the number of external directors is related to the enterprise's social performance. However, Walls et al. (2012) found that when boards are more independent, their ability to monitor environmental performance decreases due to the lack of the expertise and experience of insiders, which are critical to the environmental performance results of a business. In addition, companies should be careful not to include too many outside directors on the board, as they may lack the time,

knowledge and power to make a significant contribution to corporate strategy (Forbes & Milliken, 1999; Ruigrok et al., 2006).

Ortas et al. (2017) indicate that the independence of a firm's board is positively related to corporate social performance. In addition, the results show that the positive influence of the independence of a firm's board on corporate social performance is greater in companies in codified law countries (Adel et al., 2019). Dalton et al. (1999) found that the combination of a larger board of directors and independence could further improve CSP. In addition, the improvement of the independence of the board of directors is expected to positively regulate the relationship between the size of the board of directors and CSP. This is because larger boards with more independent directors better represent a company's "social contract". Both Chen and Jaggi (2000) and Cheng and Courtenay (2006) report a significant relationship between boards with higher number of independent non-executive directors and disclosure. Board independence is either positively or negatively associated with the volume of corporate social or economic reporting (Farooque and Ahulu, 2017).

In terms of the composition of the board of directors, the theorists believe that the increasing percentage of that will have a positive impact on the enterprise. In other words, a larger proportion of independent directors can ensure the objectivity and autonomy of a company. It can guarantee the benefits of minority shareholders and improve decision-making efficiency. Peasnell et al. (2005) and others looked at Canadian public companies. The empirical test shows that the independent board limits the opportunistic behaviour of senior executives in earnings management. Furthermore, recent research has shown that a greater percentage of independent directors on a company's board tends to correspond with increased fulfillment of social responsibilities (Harjoto and Jo, 2011; Michelon and Parbonetti, 2012). Based on the above reasoning, we will test the following hypothesis:

*H2: There is positive relation between Board Independence and CSR.*

Previous studies have shown that the positions of CEO and chairman of the board, held by different individuals, have a positive impact on the adoption of environmental and social practices (McKendall et al., 1999; Lattemann et al., 2009). For example, McKendall et al. (1999) point out that a non-CEO chairman may be less pressured to produce positive short-term results and better able to argue that non-compliance with environmental laws leads to adverse long-term social and financial liabilities. In companies with independent CEO and chairman positions, the chairman can play an important role in helping the CEO master new ideas and new behaviours related to environmental issues. Some studies have emphasized that CEO



duality generally limits a company's financial performance (Iyengar et al., 2009). Based on empirical studies conducted over the past 13 years, Khelif et al. (2017) show that ownership concentration and management ownership are negatively correlated with voluntary disclosure, and in a low-market development environment, the negative correlation between voluntary disclosure and ownership concentration is greater.

According to the agency theory, the reason behind this evidence is that the power concentration of the chief executive officer limits the control functions of other directors and shareholders. As a result, corporate decisions are not always made with a view to increasing business value and respecting the wealth of stakeholders. In addition, the existence of CEO duality also suggests a negative impact on ESG (environmental, social and government) performance (Naciti, 2019; Shahbaz et al., 2020). Some studies also point to CEO duality as a moderating factor rather than an antecedent. These studies investigated the moderating role of CEO duality in the relationship between ESG scores and financial performance (Majumder et al. 2017). The results show that the positive impact of ESG compliance on financial performance is amplified by the increased power exercised by the CEO (Velte, 2019; Li et al., 2018). Another study Walls and Berrone, (2017) studied the moderating effect of CEO power on the relationship between shareholder activism and environmental performance. Research shows that CEO power has a negative impact on companies (Adel et al., 2019). Therefore, based on agency theory, our study also aims to examine the relationship between CEO duality and ESG performance. Accordingly, we formulated the third hypothesis:

*H3: There is negative relation between CEO duality and CSR.*

### **2.3 The scale of the board of supervisors and CSR**

There is a significant gap between the competence levels of enterprise directors and senior managers. In order to prevent management and the board of directors from violating the rights and interests of other parties, shareholders' meetings establish a supervisory committee to oversee management and the board of directors. The board of supervisors is responsible for ensuring that the financial status of an enterprise remains stable; for supervising the behaviour of directors and management, and, if necessary, to propose the removal of those who do not serve the business well; for proposing and organizing the convention of exceptional shareholder meetings; and for making proposals at these shareholder meetings. Although the board of directors also serves in a supervisory role, the extent and emphasis of this supervision are different from that of the supervisory board. The board of supervisors is different from the board of directors. It is primarily concerned with moderate supervision and

with ensuring that normal business management activities are conducted correctly. The board of supervisors, however, is responsible for ensuring that these enterprise activities are not in violation of any laws or regulations. The board of supervisors exists to supervise and oversee the day-to-day operation of an enterprise.

Because listed companies have many shareholders, each of whom has a differing degree of knowledge and ability, the board of supervisors' works for the interests of these shareholders (Dalton et al., 2003). The board of supervisors' work to prevent managers and boards of directors from misusing their power and negatively impacting the business or its shareholders. It is a legally required institution to supervise and regulate the company's business which is democratically elected by the employees of the enterprise. Guided by the shareholders' meeting and linked with the setting of the board of directors, it is an internal organizational structure exercising supervision over the board of directors and the general manager. The functions and duties of it include examining the financial situation of the board of supervisors, reporting to the board of shareholders or the board of directors, decisions and supervision of the implementation of the company (Majumder et al., 2017). According to the regulations of the company law, a person may not be on the board of supervisors and the board positions both in the organizational structure, but as a result of listed companies in our country law enforcement is not enough, the two organizational structure and the board of directors of the board of supervisors' position cross phenomenon is more prominent. Under the pressure of the board of directors, the independent supervision power of the board of supervisors cannot be well exercised, which leads to the failure of the supervisory board of listed companies in China to play a good role.

The board of supervisors is an important aspect of corporate governance and a control unit within the internal management environment. Members of the board of supervisors represent a wide-ranging variety of interest groups and interest subjects. The size of a board of supervisors impacts the supervision level of corporate governance directly. Existing research has generally taken a board of supervisors' size as its index. Kilic et al. (2015) demonstrated that the scale of a board of supervisors has a direct positive correlation with a company's level of corporate social responsibility. Organizations with influential or sizable boards of supervisors can exercise power over the board of directors and operators, and, in doing so, can defend the interests of the company's stakeholders. In China, a board of supervisors must contain an employee representative. Employee participation is an important function of the board of supervisors, as it helps an enterprise to manage the rights of its stakeholders and ensure the enterprise's healthy long-term development. This leads us to hypothesis:

*H4: There is a positive relation between board of supervisors and CSR.*

### **3. Research Methods**

#### **3.1 Sample and Data**

This paper has selected A-share companies listed in Shanghai and Shenzhen Stock Exchanges from 2014 to 2018 to examine the impact of ownership concentration, boards of directors, and boards of supervisors on CSR. Our initial sample includes 4023 sample observations. However, we exclude all financial insurance enterprises because they have a unique capital structure (i.e. their cash flow accounting methods and social responsibility evaluation systems are distinct from enterprises in other industries). We also removed listed companies that received special treatment or delisting risk warning from the stock market authority<sup>1</sup>. In this way, it aims to overcome the phenomenon of considering outlying financial indicators. After exclusion, our sample was reduced to 3306 samples. The sample distribution by year and industry is shown in Table 1. All relevant data is sourced from CSMAR.

*[Insert Table 1 and 2]*

#### **3.1 Research Model and Measurement**

The main objective of this paper is to examine the impact the impact of ownership concentration, boards of directors, and boards of supervisors on CSR. The following regression model is employed to test the four hypotheses of this paper:

$$CSR = \alpha + \beta_1 GJ + \beta_2 DUAL + \beta_3 INDR + \beta_4 SUP + \beta_5 SL + \beta_6 SIZE + \beta_7 LEV + \beta_8 ROA + v_{i,t}$$

In the model,  $\alpha$  is a constant number while  $\beta_1$  to  $\beta_8$  is the regression system and  $v_{i,t}$  is the error term. Our main independent variable is corporate social responsibility (CSR). This paper adopts RKS Company's corporate social responsibility comprehensive rating of Shanghai and Shenzhen A-share listed companies from 2014 to 2018 to measure corporate social responsibility performance. Rankings (RKS) and Hexun are the two most widely used corporate social responsibility (CSR) ratings in research on CSR in China's capital market (Zhong et al., 2019). These scores are used as a proxy for CSR performance and disclosure quality. However, research is lacking on the validity of measuring CSR performance and disclosure quality, as well as the convergent validity between these scores. The sub-indicator

---

<sup>1</sup> Shanghai and Shenzhen Stock Exchanges in China implemented a new stock listing rule that they would give special treatment (ST) or delisting risk warning to the stocks of the listed companies with abnormal financial conditions or other abnormal conditions in order to indicate the risk of the stock to investors (Zhou 2013)

weights of the RKS system always maintain a high stability, whereas those of the Hexun system suffer from severe fluctuations starting in 2013. Rankins CSR Ratings (RKS) is an independent Chinese CSR rating agency. It is committed to providing unbiased and accurate CSR rating data to investors, consumers, and the general public (Hung et al., 2015; Lau et al., 2014). The CSR in this study was the rating of CSR provided by RKS that we considered satisfying these requirements. Rankins CSR ratings (RKS) found in 2007; this is an authoritative and independent third-party organization providing the public with objective information on corporate responsibility ratings (Sial et al., 2019).

These data are one of the main indicators of corporate social responsibility in China. RKS's CSR score reflects a firm's performance in the CSR field in a given year. The highest score is 100. Because the scoring system provides a comprehensive measure to reflect the problem, it is widely used by scholars (Lau, et al., 2014; McGuinness et al., 2017; Samaha et al. 2012). Our dependent variables are ownership concentration (GJ), boards of directors (DUAL and INDR), and boards of supervisors (SUP). The model also considers a number of other factors which may influence the quality of CSR performance. These factors include Executive compensation (SL) Firm Size (SIZE), Leverage (LEV), and its Profitability (ROA). Table 2 provides a summary of all variables used in this study.

## **4. Research Findings**

### **4.1 Descriptive Analysis**

Table 3 presents the descriptive statistics of all variables. It shows that the lowest CSR value is 17.35, while the highest CSR value is 89, which demonstrates that there is a significant variation within our sample. The average CSR is 41.49, which indicates that the Chinese company has assumed some social responsibilities, but the average CSR level remains relatively low. Looking at the ownership structure, the data shows that ownership concentration of A-listed companies is distributed disproportionately. The minimum value of the holdings of the top ten shareholders (GJ) is 0, while the maximum value is 1.01. Often, the top ten shareholders of some firms hold a very small number of total shares. Share decentralization is an effective method of ensuring all stakeholders can participate in corporate governance, which helps to coordinate interests across stakeholders and ensure the sustained development of the business. An ownership concentration ratio of 1, on the other hand, would represent a "paternalistic" business. In this situation, the top ten shareholders of the company would own the vast majority of shares, which is likely to mean that the interests of the top shareholders are addressed with more urgency than the company's social obligations. The average value for GJ is 0.59, which demonstrates that the equity

concentration degree of the businesses considered in this study remains relatively high. However, the significant difference between the minimum and maximum values for this variable demonstrates that the degree of equity concentration varies greatly across firms.

*[Insert Table 3]*

The Company Law of China states that one-third of a listed company's board members must be independent directors (INDR). However, the data clearly shows that some companies have almost no independent directors on their board. This reflects poorly on the company's management and business administration and must be fixed as soon as possible. However, the average percentage of independent directors is 37.68%, which indicates that most companies do comply with Chinese Company Law. Some companies have gone above and beyond expectations, and this percentage was as high as 80.0% in some cases, although it should be noted that this figure is an extreme example. Furthermore, the minimum value for the size of a company's board of supervisors (SUP) was 0, while the maximum value was 2.48. These values represent boards of supervisors composed of at least one person and as many as 15 people. The Company Law of China states that a joint-stock limited company's board of supervisors must have at least 5 and at most 19 members. The average board of supervisors in the sample data, however, was made up of only 3 people (a value of 1.32). Although there is a large variation in the size of a board of supervisors, it is clear that the average board of supervisors is smaller than what is stipulated by the law.

Regarding the sum of the top three executive compensation (SL) of listed companies varies greatly, ranging from 0 to 18.05, which indicates that the executive compensation of listed companies in China varies greatly. Further, it is also accepted that unmotivated executives are unlikely to prioritize the fulfilment of corporate social responsibilities. The average value of SL, however, is 14.61, a very high average. It can be seen that in order to prevent senior executives from taking advantage of their positions to make behaviours contrary to the interests of the enterprise, a policy of high salary and honesty has been adopted for senior executives, so as to make managers' goals consistent with those of the firms. Finally, the value of LEV ranged between 0.01 and 2.30. The average value, however, was 0.50, suggesting that the overall asset-liability ratio of the listed companies is both moderate and reasonable, albeit with some outlying companies who may rely on borrowing overseas debt to fund their business. A business' creditor's rights ratio should not be ignored when examining the influence of corporate governance on CSR, and so it would be reasonable to view leverage as this paper's control variable.

## 4.2 Correlation Analysis

As reported in Table 4, the correlation analysis indicated that a number of variables had a significant influence on CSR performance at the 1% level. These variables included shares held by the top 10 shareholders (GJ), board characteristics (DUAL), the size of the board of supervisors (SUP), executive compensation (SL), the company size (SIZE), the leverage (LEV) and the profitability (ROA). In addition, the proportion of independent directors (INDR) has an impact at the 5% level. In particular, analysis showed that the number of shares held by the top 10 shareholders (GJ) is negatively correlated to CSR. This demonstrates that high levels of ownership concentration led to decreased fulfilment of corporate social responsibilities. This is the same to the initial hypothesis. A negative correlation was identified between the role of manager and director (DUAL) and CSR, which suggests that both times of manager and director might decrease corporate social responsibility in enterprise. On the other hand, a company's proportion of independent directors (INDR) has a positive correlation with CSR, implying that boards of supervisors with more independent directors have a greater tendency to deliver on corporate social responsibility obligations. Likewise, the size of the board of supervisors (SUP) is also positively correlated with corporate social responsibility. This indicates that larger boards of supervisors lead to more socially responsible businesses. Each of these variables demonstrated a significant correlation of 1% or higher. This confirms that this paper's preliminary hypothesis is legitimate, and regression analysis will be used to further test this paper's hypotheses.

*[Insert Table 4]*

Moreover, the correlation matrix suggested that there is no serious multicollinearity problems are present to influence the regression analysis. As such, we can reasonably assume that our multiple regression analysis based on our independent variables will deliver unbiased results.

## 4.3 Main Analysis

The regression analysis is presented in Table 5. The regression model fitting degree is reasonable and consist with previous studies (22 %) in Table 5. The R squared is 0.22 showing that the abilities of variables to explain the social responsibility of listed companies is 22.7%. Consistent with H1, the coefficient of Equity concentration (GJ) is positive and significant at the 1% level, indicating that there exists a positive correlation between GJ and CSR, which confirms the first hypothesis. These findings indicate that equity concentration has a considerable positive influence on corporate social responsibility score. Ownership structure is among the core premises of corporate governance and determines its composition and

effective operation. At present, in China, enterprises have not generally accepted the concept of fulfilling social responsibility. Some enterprises still aim at maximizing their own profits and ignore the rights of relevant stakeholders. In order to pursue profits, corporate control will be concentrated with the increase of ownership concentration. If the concentration of equity in a listed company is higher, those large shareholders are more likely to combine to cause harm to other shareholders and other stakeholders (Zahra et al., 1993). The high concentration of equity will have an impact on the corporate social responsibility. The more concentrated the equity is, the interests of the minority will become the majority of the company's interests, and the company will be unable to take into account other stakeholders, not to mention being responsible for the corporate social responsibility. The high ownership concentration indicates that the control right of the enterprise is concentrated, and the major shareholders directly participate in the operation and management of the company, which solves the problems such as information asymmetry and agency cost between the shareholders and the management. At the same time, major shareholders tend to pay more attention to the long-term operation status of enterprises to pursue long-term interests. In order to maintain a good reputation, they are more willing to invest in activities related to social responsibility to maximize their economic, social and environmental benefits. Table 5 shows that corporate social responsibility is positively associated with ownership concentration, and it is significant at the 1 % level, indicating that the more concentrated ownership is, the better social responsibility enterprises undertake.

*[Insert Table 5]*

For H2, the coefficient of proportion of independent directors (INDR) on CSR score is not significant which is against our prediction. According to the agency theory, the existence of outsiders in the board of directors who are independent of the management enhances the effectiveness of the board of directors by actively monitoring the management's own interests and protecting the interests of shareholders from the influence of shareholders (Arora and Dharwadkar, 2011; Finkelstein and Mooney, 2003; Tihanyi et al., 2003). Zattoni and Cuomo (2010) report that almost all corporate governance norms recommend that companies appoint independent non-executive directors to their boards. This is also considered important, as independent board members have been shown to be more likely to protect the interests of non-shareholder stakeholder groups by proposing and adopting socially and environmentally feasible strategies (Filatotchev and Nakajima, 2014; Tihanyi et al., 2003). Due to limited corporate resources, insiders/executives are not inclined to use these resources for strategies such as corporate social responsibility, because these strategies, while promoting long-term profit maximization, have a negative impact on short-term profitability in measuring management performance and compensation (Carpenter et al., 2001). The literature

acknowledges that it is important to pay attention to the attributes of the board of directors to understand the development of organizational strategies related to enterprise resource allocation, because different types of boards of directors bring different knowledge, expertise, insights and access to resources to the board of directors (Hillman et al., 2000). Board composition has also been shown to have a significant impact on CSR engagement (Gupta et al., 2016). Board independence is positively correlated with the practice of disclosure (Beasley, 1996; Chen and Jaggi, 2000; Donnelly & Mulcahy, 2008; HuaFang & Jianguo, 2007). However, Eng and Mak (2003) also have contrary evidence. They examined a sample of 158 Singapore-listed companies and found that an increase in external directors would reduce voluntary disclosure as they are a good substitute for supervisory organization managers. However, despite the growing economic relevance of firms in emerging economies (Chapple and Moon, 2005; Doh and Guay, 2006; Wright et al., 2005), and the awareness of the importance of corporate social responsibility to these emerging economies, lack of empirical evidence on the impact of director attributes on CSR in emerging economies (Banalieva et al., 2014; Devinney and Hohberger, 2016). Combined with descriptive statistical results, it can be seen that part of the set of independent directors of listed companies in China more is to meet the purpose of the CSRC on the independent director for at least a third of the regulation (Liu and Zhang, 2016), in addition, independent directors in part due to limited time and energy, limiting its investment in enterprise management, also weaken the supervision role (Garcia-Torea et al., 2016), therefore doing alone to perform the social responsibility of the enterprise does not have substantial push and monitor effect (Ntim and Soobaroyen T, 2013).

For H3, the coefficient of duality (DUAL) on CSR score is negative and significant suggesting that there is a negative relationship between CEO duality and CSR. Lipton and Lorsch (1992) carefully pointed out that multiple directors may have a negative impact on corporate governance, because directors are often distracted by the affairs of other organizations, which affects their performance in the supervisory role. Forker (1992) and Gul and Leung (2004) have previously reported a negative correlation between CEO duality and voluntary disclosure. Haniffa and Cooke (2002) and Barako et al. (2006) found no evidence of a link between dual leadership and voluntary disclosure. Research reports examining the relationship between dual leadership and corporate social responsibility disclosure are either negatively correlated or not correlated (Said et al., 2009; Ntim and Soobaroyen, 2013).

For H4, the influence coefficient of the size of the board of supervisors (SUP) on the CSR fulfilment is positive and significant at the 1%. This is also consistent with the predictions made earlier in the paper and reinforces hypothesis H4. As such, it can be assumed that H4 is true and that the size of a company's board of supervisors is positively correlated with that company's CSR performance. The board of supervisors is the legal supervisory organ of



China's joint-stock companies. It is set up in parallel with the board of directors. Its main function is to conduct internal supervision over the board of directors and the management (Jain and Jamali, 2016). The board of supervisors is an important part of the corporate governance structure. According to the stakeholder theory, the board of supervisors exercises the power of supervision on behalf of all stakeholders. The establishment of the Board of supervisors can form checks and balances on the power of directors and management, which is conducive to improving the efficiency of corporate governance and encouraging enterprises to perform CSR. From the perspective of agency theory, the increase of conflicts of interest and coordination problems is related to the excessive number of board members, which in turn will affect the efficiency of corporate governance (McConnell and Servaes, 1990). In the case of free-riders, large boards can lead to flawed incentives. As the number of board members increases, the decision-making process becomes less flexible and dynamic. A lack of critical self-reflection and a lower level of process discussion can be observed, resulting in higher agency costs (Lipton and Lorsch, 1992). In addition, management monitoring requirements within the Board of Auditors have increased, requiring additional time and expert resources at the level of the Board (Graf and Stiglbauer, 2009). As studies on the impact of board size on performance become more and more concentrated, empirical studies establishing a positive relationship initially involve board level (Siregar and Bachtiar, 2010; Liao et al., 2015).

In terms of control variables, company size (SIZE) is positive and significant at the 1% level. This indicates that a significant positive correlation exists between SIZE and CSR. That is to say, the larger the SIZE of a company, the greater the fulfilment of its corporate responsibilities. In contrast, Leverage ratio (LEV) is negative and significant at the 1% level indicating a significant negative correlation between LEV and CSR, that is, the larger LEV is, the smaller CSR will be. Finally, the estimated coefficient of ROA is not significant, indicating that there is not enough evidence to prove that ROA has a statistically significant impact on CSR. The reason may be that the ROA fluctuation range of sample companies is too small, resulting in a small effect.

## **5. Conclusion**

This paper examines the impact of corporate governance on corporate social responsibility performance. Its primary aim is to study corporate governance and its impact on CSR performance. In particular, we address the influences of ownership concentration, CEO duality, the number of independent directors a company has, and the size of its board of supervisors. Generally speaking, it is clear that many Chinese enterprises are cautious and apprehensive

about satisfying their social obligations. There is a widespread concern that fulfilling these responsibilities will mean that their financial performance would suffer. However, this paper's research shows that companies may improve their fulfillment of these responsibilities through effective corporate governance. Effective corporate governance can work to further the interests of every stakeholder involved in the business. This makes the company more attractive and is likely to be able to obtain more resources that companies can develop the relationship between companies and stakeholders better. In this regard, it can fulfill corporate social responsibility and produce better CSR performance.

Most of the studies into corporate governance are primarily concerned with its relationship to corporate performance and few of those arguably have linked corporate governance to corporate social responsibility. As such, this study represents a complementary in this field.

Using a sample from 2014 to 2018, we find that different types of corporate governance had differing impacts on CSR performance. A particularly significant and strong positive relation was found between a company's concentration of ownership and its corporate social responsibility suggesting that a greater concentration of control and ownership increases a business' abilities to meet the full extent of its corporate social responsibilities. In a related way, the size of a company's board of supervisors has a positive impact on allowing it to fulfil its CSR. Broadly speaking, the larger the board is, the greater the chance of the individual company being able to meet its CSR commitments.

Although this paper attempts to examine which factors of corporate governance have an impact on CSR performance and supplement the existing CSR literature in China, there are still some limitations. Although the sample data is relatively up-to-date, it does not contain any data from the recent two years. A further limitation of this paper is that it only considers four corporate governance variables in its examination of corporate governance and its impact on CSR performance. However, some other characteristics of corporate governance may also be a certain influence on the corporate social responsibility performance. Therefore, the characteristics of the future research should introduce more variables to perform comprehensive study.

## References

Adel, C., Hussain, M.M., Mohamed, E.K.A. and Basuony, M.A.K. (2019), "Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? *International Journal of Accounting & Information Management*, Vol. 27 No. 2, pp. 301-332.

Amihud, Y., Hauser, S., & Kirsh, A. (2003). Allocations, adverse selection, and cascades in IPOs: Evidence from the Tel Aviv Stock Exchange. *Journal of Financial Economics*, 68(1), 137-158.

Arora, P., Dharwadkar, R., (2011). Corporate governance and corporate social responsibility (CSR): the moderating roles of attainment discrepancy and organization slack. *Corp. Govern.* 19 (2), 136–152.

Atkinson, L., & Galaskiewicz, J. (1988). Stock ownership and company contributions to charity. *Administrative science quarterly*, 82-100.

Banalieva, E.R., Eddleston, K.A., Zellweger, T.M., (2014). When do family firms have an advantage in transitioning economies? Towards a dynamic institution-based view. *Strateg. Manag. J.* <https://doi.org/10.1002/smj.2288>.

Barako, D.G., Hancock, P. and Izan, H.Y. (2006), "Factors influencing voluntary corporate disclosures by Kenyan companies", *Corporate Governance: An International Review*, Vol. 14 No. 2, pp. 107-125.

Bartkus, B. R., Morris, S. A., & Seifert, B. (2002). Governance and corporate philanthropy: restraining Robin Hood?. *Business & Society*, 41(3), 319-344.

Beasley, MS (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71(4): 443–465.

Brammer, S., & Millington, A. (2005). Profit maximisation vs. agency: An analysis of charitable giving by UK firms. *Cambridge Journal of Economics*, 29(4), 517-534.

Carpenter, M.A., Sanders, W.G., Gregersen, H.B., (2001). Bundling human capital with organizational context: the impact of international assignment experience on multinational firm performance and CEO pay. *Acad. Manag. J.* 44 (3), 493–511.

- Chapple, W., Moon, J., (2005). Corporate social responsibility (CSR) in Asia: a seven-country study of CSR web site reporting. *Bus. Soc.* 44 (4), 415–441.
- Chen, C.J.P. and Jaggi, B. (2000), “Association between independent non-executive directors, family control and financial disclosures in Hong Kong”, *Journal of Accounting and Public Policy*, Vol. 19 Nos 4/5, pp. 285-310.
- Cheng, E.C.M. and Courtenay, S.M. (2006), “Board composition, regulatory regime and voluntary disclosure”, *The International Journal of Accounting*, Vol. 41 No. 3, pp. 262-289.
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of financial Economics*, 58(1-2), 81-112.
- Daily, C. M., Dalton, D. R., & Cannella Jr, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of management review*, 28(3), 371-382.
- Dalton, D. R., Daily, C. M., Certo, S. T., & Roengpitya, R. (2003). Meta-analyses of financial performance and equity: fusion or confusion?. *Academy of Management Journal*, 46(1), 13-26.
- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management journal*, 42(6), 674-686.
- Devinney, T.M., Hohberger, J., (2016). The past is prologue: moving on from culture’s consequences. *J. Int. Bus. Stud.* 1–15.
- Doh, J.P., Guay, T.R., (2006). Corporate social responsibility, public policy, and NGO activism in Europe and the United States: an institutional-stakeholder perspective. *J. Manag. Stud.* 43 (1), 47–73.
- Donnelly, R, & Mulcahy, M (2008). Board structure, ownership, and voluntary disclosure in Ireland. *Corporate Governance: An International Review*, 16(5): 416–429.
- Eng, LL, & Mak, YT (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22(4): 325–345.
- Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of accounting and economics*, 33(3), 401-425.
- Farooque, O.A., and Ahlu, H. (2017), “Determinants of social and economic reporting: evidence from Australia, the UK, and South African multinational enterprises”, *International Journal of Accounting and Information Management*, Vol. 25 No. 2, pp. 177-200.
- Filatotchev, I., Nakajima, C., (2014). Corporate governance, responsible managerial behavior, and CSR: organizational efficiency versus organizational legitimacy? *Acad. Manag. Perspect.* 26 (3), 289–306 amp. 2014.0014.
- Finkelstein, S., Mooney, A.C., (2003). Not the usual suspects: how to use board process to make boards better. *Acad. Manag. Exec.* 17 (2), 101–113.
- Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of management review*, 24(3), 489-505.

Forker, J.J. (1992), "Corporate governance and disclosure quality", *Accounting and Business Research*, Vol. 22 No. 86, pp. 111-124.

Garcia-Torea, N., Fernandez-Feijoo, B., & de la Cuesta, M. (2016). Board of director's effectiveness and the stakeholder perspective of corporate governance: Do effective boards promote the interests of shareholders and stakeholders?. *BRQ Business Research Quarterly*, 19(4), 246-260.

Graf, A.; Stiglbauer, M. (2009). Board size and firm operating performance: Evidence from Germany. *Corp. Board* 2009, 5, 37–46.

Gul, F.A. and Leung, S. (2004), "Board leadership, outside directors' expertise and voluntary corporate disclosures", *Journal of Accounting and Public Policy*, Vol. 23 No. 5, pp. 351-379.

Gupta, A., Briscoe, F., Hambrick, D.C., (2016). Red, blue, and purple firms: organizational political ideology and corporate social responsibility. *Strateg. Manag. J.* 38 (5), 1018–1040.

Haniffa, R.M. and Cooke, T.E. (2002), "Culture, corporate governance and disclosure in Malaysian corporations", *Abacus*, Vol. 38 No. 3, pp. 317-349.

Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of business ethics*, 100(1), 45-67.

Haw, I. M., Hu, B., Hwang, L. S., & Wu, W. (2004). Ultimate ownership, income management, and legal and extra-legal institutions. *Journal of accounting research*, 42(2), 423-462.

Hillman, A.J., Cannella, A.A., Paetzold, R.L., 2000. The resource dependence role of corporate directors: strategic adaptation of board composition in response to environmental change. *J. Manag. Stud.* 37 (2), 235–256.

Hoskisson, R. E., Johnson, R. A., Tihanyi, L., & White, R. E. (2005). Diversified business groups and corporate refocusing in emerging economies. *Journal of Management*, 31(6), 941-965.

Huafang, X, & Jianguo, Y (2007). Ownership structure, board composition and corporate voluntary disclosure: Evidence from listed companies in China. *Managerial Auditing Journal*, 22(6): 604–619.

Iyengar, R. J., & Zampelli, E. M. (2009). Self-selection, endogeneity, and the relationship between CEO duality and firm performance. *Strategic Management Journal*, 30(10), 1092-1112.

Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate governance: an international review*, 24(3), 253-273.

Johnson, R. A., & Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of management journal*, 42(5), 564-576.

Kiliç , M., Kuzey, C., & Uyar, A. (2015). The impact of ownership and board structure on Corporate Social Responsibility (CSR) reporting in the Turkish banking industry. *Corporate governance*.

- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). Government ownership of banks. *The Journal of Finance*, 57(1), 265-301.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of financial economics*, 58(1-2), 3-27.
- Lattemann, C., Fetscherin, M., Alon, I., Li, S., & Schneider, A. M. (2009). CSR communication intensity in Chinese and Indian multinational companies. *Corporate Governance: An International Review*, 17(4), 426-442.
- Li, H., Hang, Y., Shah, S. G. M., Akram, A., & Ozturk, I. (2020). Demonstrating the impact of cognitive CEO on firms' performance and CSR activity. *Frontiers in psychology*, 11, 278.
- Liao, L.; Luo, L.; Tang, (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *Br. Account. Rev.* 2015, 47, 409–424. [CrossRef]
- Lipton, M.; Lorsch, J.W. (1992). A modest proposal for improved corporate governance. *Bus. Lawyer* 1992, 48, 59–77.
- Liu and Zhang. Corporate Governance Social Responsibility Information Disclosure and Enterprise Value in China. *Journal of Cleaner Production*, 2016, 142, 1075-1084.
- Ma Zhong & Rong Xu & Xinyi Liao & Shuangli Zhang (2019). Do CSR Ratings Converge in China? A Comparison Between RKS and Hexun Scores," *Sustainability*, MDPI, vol. 11(14), pages 1-20, July.
- Majumder, M.T.H., Akter, A. and Li, X. (2017), "Corporate governance and corporate social disclosures: a meta-analytical review", *International Journal of Accounting and Information Management*, Vol. 25 No. 4, pp. 434-458.
- Mallin, C., Michelon, G., & Raggi, D. (2013). Monitoring intensity and stakeholders' orientation: how does governance affect social and environmental disclosure?. *Journal of business ethics*, 114(1), 29-43.
- McConnell, J.J.; Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *J. Financ. Econ.* 1990, 27, 595–612. [CrossRef]
- McKendall, M., Sánchez, C., & Sicilian, P. (1999). Corporate governance and corporate illegality: The effects of board structure on environmental violations. *The International Journal of Organizational Analysis*.
- Michelon, G., & Parbonetti, A. (2012). The effect of corporate governance on sustainability disclosure. *Journal of management & governance*, 16(3), 477-509.
- Naciti, V. (2019). Corporate governance and board of directors: The effect of a board composition on firm sustainability performance. *Journal of Cleaner Production*, 237, 117727.
- Ntim, C and Soobaroyen T. (2013). Corporate Governance and Performance in Socially Responsible Corporations: New Empirical Insights from a Neo-institutional Framework. *Corporate Governance: An International Review*, 2013, 21(5):468-494.
- Ortas, E., Álvarez, I., & Zubeltzu, E. (2017). Firms' board independence and corporate social performance: a meta-analysis. *Sustainability*, 9(6), 1006.

Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: do outside directors influence abnormal accruals?. *Journal of Business Finance & Accounting*, 32(7-8), 1311-1346.

Ruigrok, W., Peck, S. I., & Keller, H. (2006). Board characteristics and involvement in strategic decision making: Evidence from Swiss companies. *Journal of management Studies*, 43(5), 1201-1226.

Said, R., Zainuddin, Y.Hj. and Haron, H. (2009), "The relationship between corporate social responsibility disclosures and corporate governance characteristics in Malaysian public listed companies", *Social Responsibility Journal*, Vol. 5 No. 2, pp. 212-226.

Samaha, K., Dahawy, K., Abdel-Meguid, A., & Abdallah, S. (2012). Propensity and comprehensiveness of corporate internet reporting in Egypt: do board composition and ownership structure matter?. *International Journal of Accounting & Information Management*.

Shahbaz, M., Raghutla, C., Song, M., Zameer, H., & Jiao, Z. (2020). Public-private partnerships investment in energy as new determinant of CO2 emissions: the role of technological innovations in China. *Energy Economics*, 86, 104664.

Sial, M.S., Chunmei, Z., and Khuong, N.V. (2019), "Do female and independent directors explain the two-way relationship between corporate social responsibility and earnings management of Chinese listed firms?", *International Journal of Accounting & Information Management*, Vol. 27 No. 3, pp. 442-460.

Siregar, S.V.; Bachtiar, Y. (2010). Corporate social reporting: Empirical evidence from Indonesia Stock Exchange. *Int. J. Islam. Middle East. Financ. Manag.* 2010, 3, 241–252. [CrossRef]

Tihanyi, L., Johnson, R.A., Hoskisson, R.E., Hitt, M.A. (2003). Institutional ownership differences and international diversification: the effects of boards of directors and technological opportunity. *Acad. Manag. J.* 46 (2), 195–211.

Ullah, M.S., Muttakin, M.B. and Khan, A. (2019), Corporate governance and corporate social responsibility disclosures in insurance companies. *International Journal of Accounting & Information Management*, Vol. 27 No. 2, pp. 284-300.

Van den Berghe, L. A., & Levrau, A. (2004). Evaluating boards of directors: what constitutes a good corporate board?. *Corporate Governance: an international review*, 12(4), 461-478.

Velte, P. (2019). Do CEO incentives and characteristics influence corporate social responsibility (CSR) and vice versa? A literature review. *Social Responsibility Journal*.

Walls, J. L., & Berrone, P. (2017). The power of one to make a difference: How informal and formal CEO power affect environmental sustainability. *Journal of Business Ethics*, 145(2), 293-308.

Walls, J. L., Berrone, P., & Phan, P. H. (2012). Corporate governance and environmental performance: Is there really a link?. *Strategic management journal*, 33(8), 885-913.

Wright, M., Filatotchev, I., Hoskisson, R.E., Peng, M.W. (2005). Strategy research in emerging economies: challenging the conventional wisdom. *J. Manag. Stud.* 42 (1), 1–33.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of financial economics*, 40(2), 185-211.

Zahra, S.A., Oviatt, B.M., & Minyard, K. (1993). Efforts of Corporate Ownership and Board Structure on Corporate Social Responsibility and Financial Performance. *Academy of Management Best Paper Proceedings*

Zattoni, A., Cuomo, F., (2010). How independent, competent and incentivized should non-executive directors be? An empirical investigation of good governance codes. *Br. J. Manag.* 21 (1), 63–79.

**Table 1: Samples distribution across industry-years**

Year/Industry	A	B	C	D	E	F	G	H	I	K	L	M	Total
2014	9	30	358	36	20	34	37	1	30	41	7	0	603
2015	10	31	373	36	22	36	36	1	34	43	8	0	630
2016	9	33	381	38	23	39	37	1	41	44	8	1	655
2017	10	33	392	40	24	40	41	1	48	48	9	1	687
2018	9	33	419	44	25	45	44	2	49	49	11	1	731
Total	47	160	1923	194	114	194	195	6	202	225	43	3	3306

*Note: The industry classification in the table is classified according to guidelines on Industry Classification of Listed Companies issued by the China Securities Regulatory Commission. A refers to agriculture, forestry, animal husbandry and fishery, B to the extraction industry, C to the manufacturing industry, D to the production and supply of electricity, gas and water, E to construction, F to wholesale and retail, G to transportation, warehousing and postal services, H to accommodation and catering, I to information transmission, software, and information technology services, K to real estate, L to leasing and business services, and M to Integrated services.*

**Table 2: Variable measurements**

Variable	Definition	Source
CSR	Rankins CSR Ratings (RKS) range from zero to 100.	Rankins CSR Ratings (RKS)- CSMAR
Ownership Concentration (GJ)	<i>The sum of the shares held by the top 10 shareholders</i>	CSMAR
Duality (DUAL)	The presence of CEO duality is measured by a dummy variable coded 1 if the CEO is also the Chairman of the board and 0 otherwise.	CSMAR



Board Independence (INDR)	The proportion of independent directors on the board relative to the total number of directors	CSMAR
Board of Supervision (SUP)	The natural logarithm of <i>the total number of members on board of supervisor</i>	CSMAR
Executive compensation	<i>The natural logarithm of total compensation of the top three executives</i>	CSMAR
Firm Size	<i>The natural logarithm of total assets</i>	CSMAR
Leverage	<i>Average total liabilities/Average total assets</i>	CSMAR
Profitability	<i>Net profit/average total assets</i>	CSMAR

**Table 3: Descriptive Statistics**

Variable	N	Minimum	Maximum	Mean	Std. Deviation
CSR	3306	17.35	89	41.49	11.67
GJ	3306	0	1.01	0.59	0.16
DUAL	3306	0	1	0.19	0.39
INDR	3306	0.23	0.8	0.38	0.06
SUP	3306	0	2.48	1.32	0.30
SL	3306	0	18.05	14.61	1.03
SIZE	3306	18.57	28.51	23.24	1.46
LEV	3306	0.01	2.3	0.50	0.21
ROA	3306	-1.08	0.6	0.04	0.07

**Table 4: Correlation Analysis**

	CSR	GJ	DUAL	INDR	SUP	SL	SIZE
CSR	1						
GJ	0.270***	1					
DUAL	-0.102***	-0.0480**	1				
INDR	0.0377*	0.0668***	0.0922***	1			
SUP	0.190***	0.142***	-0.160***	-0.104***	1		
SL	0.125***	0.0214	0.0699***	0.0390*	0.014	1	
SIZE	0.476***	0.350***	-0.122***	0.122***	0.263***	0.268***	1
LEV	0.145***	0.0756***	-0.0920***	0.0525**	0.151***	0.0684***	0.514***
ROA	0.0563**	0.130***	0.0624***	-0.00989	-0.0194	0.138***	-0.0133

**Table 5: The relationship between Corporate Governance and CSR.**

	1.CSR	2.CSR	3.CSR
<b>GJ</b>	7.5264*** (4.8)	7.8158*** (5.01)	8.0766*** (5.29)
<b>DUAL</b>	-1.6904*** (-3.40)	-1.7216*** (-3.47)	-1.3853*** (-2.82)
<b>INDR</b>	-3.5305 (-1.01)	-3.817 (-1.09)	-3.5454 (-1.00)
<b>SUP</b>	2.8708*** -3.79	2.9564*** -3.91	2.4157*** -3.19
<b>SL</b>	-0.0713	-0.133	-0.078

	(-0.21)	(-0.39)	(-0.22)
<b>SIZE</b>	3.6050***	3.5575***	3.6277***
	-17.15	-16.86	-16.88
<b>LEV</b>	-5.4206***	-5.1231***	-3.9372***
	(-4.54)	(-4.28)	(-3.23)
<b>ROA</b>	-0.7763	-0.3096	1.0154
	(-0.28)	(-0.11)	-0.36
<b>constant</b>	-45.1073***	-44.8585***	-50.2978***
	(-8.12)	(-8.05)	(-9.07)
<b>Year fixed</b>	N	Y	Y
<b>Industry fixed</b>	N	N	Y
<b>R-squared</b>	0.2274	0.2323	0.2483
<b>Observations</b>	3306	3306	3306