The effect of ultimate owner and regulation policy on corporate social responsibility information disclosure: Evidence from China

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In the process of economic development, how to achieve the goal of harmonious development between society and companies is an important issue for the government. In China, the government ultimately owns more than half of the listed companies. Thus, the government plays a critical role in firms’ disclosure of social responsibility information. Although, the Chinese government enacted such disclosure policies in 2006, there are some slight differences in the details between the Shenzhen Stock Exchange and the Shanghai Stock Exchange. It provides us with a unique context to test the effectiveness of explicit regulation policy. Thus, this paper investigated the impact of ultimate owner and regulation policy on the social responsibility reporting of publicly listed companies. Using the sample of 446 listed companies that disclosed the social responsibility and ultimate owner information in Shanghai and Shenzhen Stock Exchange, this paper found that firms under the two stock exchanges do report differently on social responsibility. Besides, compared with voluntary disclosure firms, those under mandatory disclosure requirements do provide more social responsibility information. In addition, it was found that state ownership and voting rights have a positive effect on the disclosure of social responsibility information.

Key words: Regulation policy, ultimate owner, social responsibility, information disclosure.

INTRODUCTION

With the problem of environmental pollution and the intensification of resource exhaustion, governments and international organizations have already been rethinking about what kind of role firms should play in the process of social development. As the important component of society, companies have caused numerous problems through the occupation and consumption process of social resource. Therefore, companies should not only operate in the pursuit of profits, but also undertake social responsibilities by serving relative stakeholders such as the government, community, customers and employees and paying attention to the safety of product.

In China, events like Melamine poison (Milk-adulteration Scandal) and Wenchuan earthquake donation have caused serious public consideration on the companies’ social responsibility. The public has the right to know about the social responsibility performance of the companies, and the government should strengthen relative standard and regulation on social responsibility disclosure. In 2005, the state council issued the Decision on Implementing Scientific Concept of Development and Strengthening Environmental Protection by the State Council, which highlights the attention the government paid to the social environment problems.

Information Disclosure Instructions to Listed Companies, and this notification appeals listed companies in Shanghai Stock Exchange voluntarily to disclose social responsibility information.

In December 2008, Shanghai Stock Exchange issued Notification on The Preparation of Annual Report of Listed Companies in 2008, which emphasized that parts of listed companies in Shanghai Stock Exchange should mandatorily disclose the social responsibility report. This mandatory policy might cause listed companies to deliberately disclose related information to cater for the regulation. Based on this, the paper focuses on the regulation on social responsibility information disclosure, and studies the difference of the social responsibility information disclosure of listed companies under different regulation policies.

LITERATURE REVIEW

Prior literatures in corporate social responsibility information disclosure are mainly focusing on its determinants, such as firm characteristics, corporate governance and external environment.

Firm characteristics

Size

As an active role in social activities, large companies are more closely followed the public and regulated by the government. Meanwhile, government cares more about whether these larger companies have paid tax as is required. Therefore, large companies always incur higher political costs and arouse more political attention (Watts and Zimmerman, 1978). These companies are more cautious on strategic choices and accounting policy selection, and are more likely to disclose relevant information in detail in order to reduce their political concern and relieve political and supervising pressure (Cowen et al., 1987).

Reverte (2009) points out that larger company are more likely to influence society and community and have more stakeholders, which in return will have effects on corporate information disclosure. Under agency theory and stakeholder theory, Belkaoui and Karpik (1989) investigate the relationship between corporate size and corporate social information disclosure among firms listed in the US, and find that the political attention on the companies increases with firm size and this would urge the company to decrease this pressure through disclosing information that is more detailed. The result reveals that corporate size is significantly positively related to social responsibility information disclosure. Similar results were reached in Hossain et al. (1995), Adams et al. (1998), Cullen and Christopher (2002), Hamid (2004), Haniffa and Cooke (2005) and Naser et al. (2006).

Firm performance

Firm performance reflects the managers’ ability to create value with the resources in charge. As long as the management has achieved its preset operational objective, the company is able to use extra resources to undertake social responsibility activities. Campbell (2007) points out that the company is unlikely to take social responsibilities when the corporate performance is rather poor. Chih et al. (2010) argue that companies have fewer resources to engage in social responsibility activities if their profitability is weak.

Hackston and Milne (1996) indicate that social responsibility information disclosure can reflect the ability of management to deal with social pressure and satisfy the social needs. As the operating ability of management strengthens, their perception of social responsibility will improve and they will seek to enhance their status and remuneration through social responsibility information disclosure. Therefore, the management will disclose more comprehensive social responsibility information when the firm performance is good (Belkaoui and Karpik, 1989; Giner, 1997). Empirical results such as Belkaoui and Karpik (1989), Cowen et al. (1987) Roberts (1992), Ullmann (1985), Cormier and Gordon (2001) and Haniffa and Cooke (2005) etc., are generally in support of such a positive relation, no matter whether it is under the US background, or the context of Canada, Malaysia or China (Belkaoui and Karpik, 1989; Cormier and Gordon, 2001; Haniffa and Cooke, 2005; Shen, 2007, respectively).

However, Reverte (2009) and Jackson and Apostolakou (2010) do not find evidence supporting this positive relationship in their studies based on Spanish and Western Europe context. This can be explained by the ambiguous relationship between firm performance and corporate social disclosure.

Industry sensitivity

Beliveau et al. (1994) point out that corporate social responsibility information disclosure level differs across industries. Companies in different industries have different demands for social resources. The differences in the resources possessed and consumed will result in the divergence in the social responsibility undertaken.

Reverte (2009) argue that companies within industries with sophisticated production procedures will always disclose more information. For example, companies in oil and mining industries will arouse more public and government’ concern of potential environmental pollution and employee safety. Therefore, these companies are willing to take on more social responsibility activities and disclose more relevant information to government and
Corporate internal governance structure includes ownership structure, characteristics of the board of directors, managerial ownership and other aspects. There are few researches studying the effect internal governance structure on corporate social responsibility information disclosure.

Since Berle and Means (1932) come up with the modern corporate theory that ownership is separate from management, controversy issues regarding agency theory have not been terminated. Jensen and Meckling (1976) argue that, due to the separation of ownership from management, the conflicts of interests between shareholders and management arise, and agency costs have increased. Voluntary information disclosure can act as a tool to alleviate agency conflicts. When ownership structure is dispersed, there is no strong supervision party and phenomenon of “free-rider” which is common. Shareholders will ask the management to disclose more information. Reverte (2009) contends that, companies with dispersed ownership structure would disclose social responsibility information to support financial reports and reduce information asymmetry. Haniffa and Cooke (2005) also point out that social responsibility information disclosure could be seen as a strategy to narrow the gaps between shareholders and management.

As an efficient mechanism to resolve agency problem, boards of directors have been the focus of researches. Higher independence of boards helps in aligning interest of shareholders with management. Independent non-executive directors will ensure the maximization of shareholders’ interests, and protect other stakeholders’ benefits as well. Zahra and Stanton (1998) suppose that the increase in the numbers of non-executive directors could improve the independence of the board of directors. Thus, concerning their own reputation and social influence, these directors may be more willing to pay attention on corporate reputation and social responsibility and to ask companies to voluntarily disclose related information to improve public image (Buniamin et al., 2008). However, with Malaysia data, Haniffa and Cooke (2005) reached the opposite conclusions. They suppose that, it could be explained by the limited influence that non-executive directors can be placed on the execution of social responsibility.

As an important characteristic of the board, board size is another hot issue in recent researches. Lipton and Lorsch (1992) and Jensen (1993) argue that large board will be difficult to coordinate within the board and is more likely to subject to “free-rider” problems and face with more negotiating and supervising costs. But Coles et al. (2008) find that large board can bring in diversification. Besides, the directors possessing more resources may give more professional advice. Buniamin et al. (2008) also find that, the size of board is positively related with the firm’s decision to disclose social responsibility information.

The separation of chairman from chief executive officer (CEO) would be beneficial to keep the independence of
board and management. If CEO takes the dual role of chairman, then the CEO can influence the nomination and selection of directors (Ahmed and Duellman, 2007), and may weaken the supervising effectiveness of the boards (Agrawal and Chadha, 2005). Forker (1992), Gul and Leung (2004) find the low corporate voluntary disclosure level in CEO duality companies. However, Buniamin et al. (2008) did not find significant relationship.

External environment

External environment involves environmental, cultural and geographical factors, which also have important influence on corporate responsibility performance and information disclosure. Gray (1988), propose that the discrepancy of national culture will affect the selection of accounting pattern and information disclosure.

Buhr and Freedman (2001) compare the historical, geographical, political and legal environment between America and Canada, and find that the differences in these aspects will influence the corporate attitudes towards social responsibility. Haniffa and Cooke (2005) also find out that, in Malaysian listed companies, the race background of directors can affect their pattern of decisions and then have influence on social responsibility disclosure.

The difference in legal system can lead to deviation of the standpoint of information demands between shareholders and management. Ball et al. (2000) find that, listed companies in common law countries disclose more information than those in statute law countries. Lynn (1992), Ho et al. (1994) provide evidence that level of information disclosure in Hong Kong is lower than that in America and Europe due to the different legal environment.

Campbell (2007) stresses the effect of legal environment on corporate social responsibility performance and information disclosure, and points out that a company located in a region with effective legal system will more actively take social responsibilities. Efficient legal system can protect external investors and restrain dysfunctional behavior by insiders. Chih et al. (2010) make comparisons between 34 countries under different legal systems and find significant differences in social responsibility information disclosure, indicating that legal environment has apparent influence on corporate information disclosure.

Factors such as the economic development status and the quality of localities will have effects on public social responsibility awareness and concern. Campbell (2007) proposes that in less developed regions, companies are less likely to engage in social responsibility activities. Shen (2007) discovers that the region where the listed companies are located will influence social responsibility information disclosure. By comparing listed companies in different economic areas, Liu and Anbumozhi (2009) find that the location of the listed companies affects the environmental information disclosure.

Hypotheses development

Market and social responsibility information disclosure

The Chinese capital market was originally established in the early 1990s and has gradually stepped into a regular and orderly track through nearly twenty years’ development. In order to balance the interests of all parties, two stock exchanges were set up by the government, one in Shanghai, and the other in Shenzhen. These two stock exchanges have different function position and trading products.

The Shanghai Stock Exchange has a bias towards larger companies, while the Shenzhen Stock Exchange puts emphasis on small and median size enterprises and Hi-growth enterprises. Being the window of China’s economic reform, Shenzhen bears the burden of absorbing outside development mode and experience from international market. The Shenzhen Stock Exchange issued (The Guidance on Social Responsibility of Listed Companies in Shenzhen Stock Exchange) on September 2006 to guide the listed companies to positively perform their social responsibility and regulate the (social responsibility information) disclosure. After that, in May 2008, Shanghai Stock Exchange issued (The Notification on Listed Company Concerning Reinforcement of Social Responsibility Work and Publication of <Guidance on Environmental Information of Listed Companies in Shanghai Stock Exchange>) and aimed to request listed companies to disclose social responsibility information, especially in the environment part. Thus compared with Shanghai Stock Exchange, the Shenzhen Stock Exchange has a more comprehensive and complete requirement on the social responsibility information disclosure, under which listed companies would disclose social information more regularly. Hence, the listed companies of Shenzhen Stock Exchange make more specific and normative social responsibility information disclosure.

H2: There is significantly difference on corporate social responsibility information disclosure between companies in Shanghai and Shenzhen Stock Exchange.

Regulation and social responsibility information disclosure

On December 30th 2008, Shanghai Stock Exchange issued (The Notification on the Preparation of Annual Report of Listed Companies in 2008) and required that certain companies being listed as sample firms in Shanghai Stock Exchange Corporate Governance Index
(SSECGI) should prepare social responsibility performance report while they disclose 2008 annual report. These firms are those with the issuance of foreign capital stock and financial companies. Companies not in the list are encouraged to make social responsibility information report, as long as they have the ability to do so. The three kinds of companies mentioned above are under the mandatory requirement to disclose such information. At the same time, not only the public, the media and industrial organization will pay attention to their performance on social responsibility, but also governmental agencies will carry a regular compliance check on the relative information disclosure. Both the official and public pressures force the listed company to disclose relative social responsibility information timely and completely.

In “The Notification on Listed Company Concerning Reinforcement of Social Responsibility Work and Publication of <Guidance on Environmental Information of Listed Companies in Shanghai Stock Exchange>”, the environmental protection work is formally put forward. In order to satisfy the requirement of the stock exchange, the supervised listed companies in Shanghai Stock Exchange will prefer to contain more environmental information in the social responsibility report.

H$_2$: The companies regulated would disclose more environmental information.

**Ultimate Owners and Social Responsibility Information Disclosure**

In China, the management of the government-controlled companies is usually appointed by government administration agencies. Due to the Chinese traditional cultural, these companies are always significantly influenced by the government, and behave under the will and interest of the government. That is to say, these firms tend to be in total support of various policies issued by the central and local government. Thus, it can be expected that the newly issued laws, regulations and policies can be easier spread through these companies controlled by the government. Meanwhile, these companies represent the image of the state and they undertake much more moral responsibilities especially when major social crisis happens. They should consider their remuneration to the society while enjoying the social resources as a community member. On the other hand, considering the costs associated with preparation work, the non-government controlled companies, in which the ultimate owners care more about their own economic interests, have less willingness to disclose such information actively. Therefore, we propose hypothesis 3:

H$_3$: Companies controlled by the government would disclose more social responsibility information than non-government controlled firms.

**Voting rights and social responsibility information disclosure**

As is stated in La Porta et al. (1999), the voting right represents the actual control power of the ultimate owners. The more the voting rights under control, the stronger the control power the ultimate owner can wield. The behavior of a listed company will reflect the will of ultimate owners. For example, because of the high control power of the government, the firm ultimately owned by the state usually has more governmental characteristics, performs as the representative of the government, and thus, takes on the role of implementing regulations and policies made by the government and other agencies timely and making complete information disclosure. On the other hand, firms not ultimately owned by the government, will focus on the authenticity and sufficiency of the information they disclosed if the discrepancy of cash flow right and voting right is small. In addition, these ultimate owners may require listed companies to perform social responsibility and disclose relative information.

H$_4$: The voting rights correlates positively with the level of social responsibility information disclosure.

**METHODOLOGY**

**Sample and data source**

The sample comprises those listed companies issuing the corporate social responsibility report or containing social responsibility section in the annual report of Chinese Shanghai Stock Exchange and Shenzhen Stock Exchange in 2008. A total of 446 companies were selected. Annual report and corporate social responsibility reports are available from the website of Shanghai Stock Exchange (http://www.sse.com.cn) and Shenzhen Stock Exchange (http://www.szse.cn). Data of corporate governance and financial information were obtained from the China Stock Market Accounting Research database (CSMAR). Data of ultimate owner of listed companies were manually collected from annual reports.

**Dependent variable: corporate social responsibility disclosure index (CSRI)**

The dependent variable, corporate social responsibility disclosure index is composed with the method of content analysis, which is prevalent in the mainstream of current studies in corporate social responsibility information disclosure (Parker, 2005; Guthrie and Abeysekera, 2006). Content analysis is a technique of collecting data from annual reports and conduct quantification analysis on information collected (Guthrie and Abeysekera, 2006). The specific steps we perform to obtain the dependent variable are as follows: first, items of interest were identified. We identify items according to the principles which are generally accepted, such as sustainable development guidelines [initiated by the Global Reporting Initiative’s, (GRI) for short], and China-specific regulations on
Table 1. Social responsibility information disclosure context and items.

Panel 1: Non-environmental Social Responsibility Information

<table>
<thead>
<tr>
<th>Categories</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>Arts and culture: the company expresses their support to organizations, activities, artists and objectives related to arts and national culture.</td>
</tr>
<tr>
<td></td>
<td>Educations: the company engages in activities intended to increase the educational opportunities and citizens’ general education level.</td>
</tr>
<tr>
<td></td>
<td>Qualities of life: the company is willing to improve the welfare of the community through devotion to agricultural policy or industrial policy.</td>
</tr>
<tr>
<td></td>
<td>Safety: the company discusses its concern towards the safety of residents surrounding its plants.</td>
</tr>
<tr>
<td></td>
<td>Philanthropic projects and Charitable donations: there are formal philanthropic projects in operation or the company takes parts in related activities.</td>
</tr>
<tr>
<td>Employees</td>
<td>Equal opportunities: the company is committed to provide equal opportunities for employment and promotion; there is fair and justifiable remuneration evaluating system.</td>
</tr>
<tr>
<td></td>
<td>Safety: the company presents its concern on manufacturing safety.</td>
</tr>
<tr>
<td></td>
<td>Health and insurance: the company has rational insurance policy or offer aids to staff in difficulties.</td>
</tr>
<tr>
<td></td>
<td>Staff training: the company provides the staff training, learning, overseas studies opportunities.</td>
</tr>
<tr>
<td></td>
<td>Staff benefits: the company organizes rich activities to gives subsidies or other benefits to employees.</td>
</tr>
<tr>
<td>Customers</td>
<td>Quality of products: the company presents its achievements in high products’ quality as parts of social responsibility.</td>
</tr>
<tr>
<td></td>
<td>Customer relationship: complaints resolving, customer satisfaction, special customer relationship retaining.</td>
</tr>
<tr>
<td></td>
<td>Safety: the company expresses its attention on customers’ safety in relation to products and services.</td>
</tr>
<tr>
<td></td>
<td>Extensibility: the company is devoted to the extensibility of the functionalities and varieties of products and services.</td>
</tr>
<tr>
<td>Shareholders</td>
<td>The company conveys its dedication to fairly treatment to the shareholders.</td>
</tr>
<tr>
<td></td>
<td>The company discloses relevant information to the shareholders.</td>
</tr>
<tr>
<td>Suppliers</td>
<td>The company is committed to providing equal opportunities to all suppliers, regardless of its gender, nationality and size.</td>
</tr>
</tbody>
</table>

Panel 2: Environmental Information

<table>
<thead>
<tr>
<th>Categories</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment and energy</td>
<td>Environment: the company presents its concern on environmental protection or retain of the surroundings.</td>
</tr>
<tr>
<td></td>
<td>Energy: the company is committed to energy saving or exploitation of new energy.</td>
</tr>
</tbody>
</table>

This table shows the categories and items of the social responsibility information and environmental information when employing the content analysis to measure the independent variables CSRI and EDI used in our regression.

Corporate social responsibility information disclosure.

Considering the overlap between GRI items and current Chinese regulations related to corporate social responsibility, we merge the items, which are closely related into new items which are specific in China context. The final evaluation system is made up of seven categories and twenty items, covering information of community, employee, environment and energy, shareholder, supplier and others. Afterwards, we review all the social responsibility reports and the social responsibility sections in annual reports and grant certain credits to the information disclosed within each items. If an item is in absence, 0 credit is given; if an item is involved but without quantified information, 1 credit is given; if detailed information is disclosed, 2 credits are given. Then sum up the credits in each category, and weight the results by multiplying relative weighting. According to the research problems and requirements of social responsibility disclosure, we divide the social responsibility information into two parts: non-environmental social responsibility information and environmental information.

Non-environmental social responsibility information (CSRI)

There are 5 categories and 17 items, including community, employee, custom, shareholder and supplier. Detailed information could be seen in panel I of Table 1.

Environmental information disclosure (EID)

There are mainly two items, including environment and energy. Detailed information is shown in panel II of Table 1.
Table 2. Descriptive statistics for Model 1 and Model 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRI</td>
<td>0.425</td>
<td>5.200</td>
<td>2.268</td>
<td>0.757</td>
<td>0.273</td>
<td>0.554</td>
</tr>
<tr>
<td>EID</td>
<td>0.000</td>
<td>4.000</td>
<td>2.978</td>
<td>0.907</td>
<td>-0.446</td>
<td>-0.419</td>
</tr>
<tr>
<td>Regu</td>
<td>0.000</td>
<td>1.000</td>
<td>0.543</td>
<td>0.499</td>
<td>-0.172</td>
<td>-1.979</td>
</tr>
<tr>
<td>List</td>
<td>0.000</td>
<td>1.000</td>
<td>0.381</td>
<td>0.486</td>
<td>0.491</td>
<td>-1.767</td>
</tr>
<tr>
<td>GovOwn</td>
<td>0.000</td>
<td>1.000</td>
<td>0.702</td>
<td>0.458</td>
<td>-0.885</td>
<td>-1.222</td>
</tr>
<tr>
<td>Vote</td>
<td>0.088</td>
<td>0.896</td>
<td>0.432</td>
<td>0.163</td>
<td>0.019</td>
<td>-0.639</td>
</tr>
<tr>
<td>LnSize</td>
<td>18.991</td>
<td>29.853</td>
<td>22.427</td>
<td>1.606</td>
<td>1.265</td>
<td>3.225</td>
</tr>
<tr>
<td>Indus</td>
<td>0.000</td>
<td>1.000</td>
<td>0.657</td>
<td>0.475</td>
<td>-0.663</td>
<td>-1.567</td>
</tr>
<tr>
<td>ROE</td>
<td>-3.518</td>
<td>1.269</td>
<td>0.089</td>
<td>0.230</td>
<td>-8.745</td>
<td>137.980</td>
</tr>
<tr>
<td>LEVE</td>
<td>0.038</td>
<td>1.843</td>
<td>0.514</td>
<td>0.215</td>
<td>0.769</td>
<td>4.070</td>
</tr>
<tr>
<td>Dual</td>
<td>0.000</td>
<td>1.000</td>
<td>0.112</td>
<td>0.316</td>
<td>2.467</td>
<td>4.106</td>
</tr>
<tr>
<td>BoInd</td>
<td>0.143</td>
<td>0.625</td>
<td>0.360</td>
<td>0.053</td>
<td>1.723</td>
<td>4.881</td>
</tr>
</tbody>
</table>

This table reports the summary statistics of the main variables used in our regression analyses. List, is a dummy variables that equals one if the firm is listed in Shenzhen Stock Exchange and zero otherwise; Regu, is a dummy variable that equals one if the companies are one of the thress types companies, including the Shanghai Stock Exchange Cooperate Governance Index, Financial and Insurance Industry or listed in foreign stock exchange; GovOwn, is a dummy variable that equals one if the listed companies are controlled by government and zero otherwise; Vote, is the voting rights owned by ultimate owner; LnSize, is the natural log of the book value of the total assets; Indus, is a dummy variable that equals one if the company belongs to the manufacturing industry; ROE, is the return of asset; LEVE, equals total liability divided by the total assets; Dual, is dummy variable that equal one if the director and CEO are the same and zero otherwise; BoInd, are the proportion of the independent directors in the board.

Independent variables

Regulation Policy (Regu): A dummy variable, valued one if the company is either on the list of SSE Corporate Governance Index, or issuing shares in foreign stock market, or belongs to the financial industry; valued 0 otherwise.

Market (List): A dummy variable with a value of one when the company is listed in Shenzhen Stock Exchange and a value of zero otherwise.

Ultimate owner types (GovOwn): A dummy variable with a value of one if the ultimate owner is the government and a value of zero otherwise.

Voting rights (Vote): The voting rights owned by ultimate owner.

Firm Size (LnSize): The logarithm of total assets of listed company, which can be calculated as follows:

\[
\text{LnSize} = \ln\left(\frac{\text{book value of total assets at the beginning of the year} + \text{book value of total assets at the end of the year}}{2}\right)
\]

Industry (Indus): Dummy variable. Given that the manufacturing companies consume resources that are more social and undertake more responsibilities of employment arrangement, we grant 1 to manufacturing companies, 0 otherwise.

Firm performance (ROE): Return on equity, to be calculated as:

\[
\text{ROE} = \frac{\text{net profits}}{\left(\frac{\text{book value of equity at the beginning of the year} + \text{book value of equity at the end of the year}}{2}\right)}
\]

Leverage (LEVE): Defined as the book value of total debts divided by the book value of total assets.

Duality of CEO and Chairman of the board (Dual): A dummy variable with a value of one if the Chairman and CEO are the same person and a value of zero otherwise.

Board Independence (BoInd): the percentage of independent directors in the board.

Model construction

\[
\begin{align*}
\text{CSRI} &= \alpha + \beta_1\text{List} + \beta_2\text{GovOwn} + \beta_3\text{Vote} + \beta_4\text{LnSize} + \beta_5\text{Indus} + \beta_6\text{ROE} + \beta_7\text{LEVE} + \beta_8\text{Dual} + \beta_9\text{BoInd} + \epsilon_1 \\
\text{EID} &= \alpha + \lambda_1\text{Regu} + \lambda_2\text{GovOwn} + \lambda_3\text{Vote} + \lambda_4\text{LnSize} + \lambda_5\text{Indus} + \lambda_6\text{ROE} + \lambda_7\text{LEVE} + \lambda_8\text{Dual} + \lambda_9\text{BoInd} + \epsilon_2
\end{align*}
\]

RESULTS

Descriptive statistics

Table 2 reported the descriptive statistics of main variables used in this paper. It showed that the mean value of CSRI was 2.268 and that of EID was 2.987, indicating environmental issues, as one important part of corporate social responsibility, had been focused by public, government and companies. 54.3% of listed
Table 3. Pearson correlation coefficient and Spearman's rank correlation coefficient (Two-tailed).

<table>
<thead>
<tr>
<th>Variables</th>
<th>CSRI</th>
<th>EID</th>
<th>Regu</th>
<th>List</th>
<th>GovOwn</th>
<th>Vote</th>
<th>LnSize</th>
<th>Indus</th>
<th>ROE</th>
<th>LEVE</th>
<th>Dual</th>
<th>Bolnd</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRI</td>
<td>1</td>
<td>0.311**</td>
<td>-0.151**</td>
<td>0.221**</td>
<td>0.109*</td>
<td>0.116*</td>
<td>0.173**</td>
<td>0.115*</td>
<td>0.068</td>
<td>0.021</td>
<td>0.037</td>
<td>0.044</td>
</tr>
<tr>
<td>EID</td>
<td>0.327**</td>
<td>1</td>
<td>0.322**</td>
<td>-0.221**</td>
<td>0.309**</td>
<td>0.096*</td>
<td>0.405**</td>
<td>0.237**</td>
<td>-0.043</td>
<td>0.048</td>
<td>-0.008</td>
<td>0.040</td>
</tr>
<tr>
<td>Regu</td>
<td>-0.124**</td>
<td>0.320**</td>
<td>1</td>
<td>-0.885**</td>
<td>0.257**</td>
<td>0.081</td>
<td>0.217**</td>
<td>-0.057</td>
<td>0.001</td>
<td>0.067</td>
<td>-0.073</td>
<td>0.042</td>
</tr>
<tr>
<td>List</td>
<td>0.207**</td>
<td>-0.200**</td>
<td>-0.855**</td>
<td>1</td>
<td>-0.225**</td>
<td>-0.061</td>
<td>-0.171**</td>
<td>0.110*</td>
<td>0.032</td>
<td>0.114*</td>
<td>0.102*</td>
<td>-0.007</td>
</tr>
<tr>
<td>GovOwn</td>
<td>0.131**</td>
<td>0.314**</td>
<td>0.257**</td>
<td>-0.225**</td>
<td>1</td>
<td>0.093</td>
<td>0.374**</td>
<td>-0.060</td>
<td>-0.128**</td>
<td>0.141**</td>
<td>-0.172**</td>
<td>0.029</td>
</tr>
<tr>
<td>Vote</td>
<td>0.139**</td>
<td>0.080</td>
<td>0.082</td>
<td>-0.057</td>
<td>0.079</td>
<td>1</td>
<td>0.183**</td>
<td>0.034</td>
<td>0.099*</td>
<td>-0.031</td>
<td>-0.081</td>
<td>-0.019</td>
</tr>
<tr>
<td>LnSize</td>
<td>0.229**</td>
<td>0.380**</td>
<td>0.256**</td>
<td>-0.212**</td>
<td>0.355**</td>
<td>0.185**</td>
<td>1</td>
<td>-0.118*</td>
<td>0.066</td>
<td>0.392**</td>
<td>-0.134**</td>
<td>0.065</td>
</tr>
<tr>
<td>Indus</td>
<td>0.105*</td>
<td>0.243</td>
<td>-0.057</td>
<td>0.110*</td>
<td>-0.006</td>
<td>0.035</td>
<td>0.160**</td>
<td>1</td>
<td>-0.114*</td>
<td>-0.087</td>
<td>0.017</td>
<td>-0.027</td>
</tr>
<tr>
<td>ROE</td>
<td>0.054</td>
<td>0.000</td>
<td>-0.025</td>
<td>0.042</td>
<td>-0.086</td>
<td>0.068</td>
<td>0.033</td>
<td>0.003</td>
<td>1</td>
<td>-0.059</td>
<td>0.084</td>
<td>-0.045</td>
</tr>
<tr>
<td>LEVE</td>
<td>0.022</td>
<td>0.064</td>
<td>0.074</td>
<td>-0.124**</td>
<td>0.113*</td>
<td>-0.056</td>
<td>0.379**</td>
<td>-0.093*</td>
<td>-0.171**</td>
<td>1</td>
<td>-0.063</td>
<td>-0.009</td>
</tr>
<tr>
<td>Dual</td>
<td>0.022</td>
<td>-0.007</td>
<td>-0.073</td>
<td>0.102*</td>
<td>-0.172**</td>
<td>-0.075</td>
<td>-0.136**</td>
<td>0.017</td>
<td>0.012</td>
<td>-0.036</td>
<td>1</td>
<td>0.036</td>
</tr>
<tr>
<td>Bolnd</td>
<td>0.061</td>
<td>0.020</td>
<td>0.021</td>
<td>-0.005</td>
<td>0.000</td>
<td>-0.019</td>
<td>0.036</td>
<td>-0.009</td>
<td>0.007</td>
<td>0.011</td>
<td>0.063</td>
<td>1</td>
</tr>
</tbody>
</table>

This table presents the correlation matrix among the main variables used in our regression analysis. The left triangular matrix is Pearson correlation matrix; the right triangular matrix is Spearman correlation matrix; List, is a dummy variables that equals one if the firm is listed in Shenzhen Stock Exchange and zero otherwise; Regu, is a dummy variable that equals one is the companies are one of the thrives tyes companies, including the Shanghai Stock Exchange Cooperate Governance Index, Financial and Insurance Industry or listed in foreign stock exchange; GovOwn, is a dummy variable that equals one if the listed companies are controlled by government and zero otherwise; Vote, is the voting rights owned by ultimate owner; LnSize, is the natural log of the book value of the total assets; Indus, is a dummy variable that equals one if the company belongs to the manufacturing industry; ROE, is the return of asset; LEVE, equals total liability divided by the total assets; Dual, is dummy variable that equal one if the director and CEO are the same and zero otherwise; Bolnd, are the proportion of the independent directors in the board; * and **, indicate significant at the 5 and 1%, level respectively (Two-tails).

Asd companies were mandatorily required to disclose the social responsibility information. These companies were all from Shanghai Stock Exchange.

In the sample, there were nearly 38.1% of listed companies from Shenzhen Stock Exchange, while 70.2% were ultimately owned by the government. The minimum value of voting rights owned by ultimate owner was 8.8%, and the maximum value was 89.6%. The mean value of voting rights (43.2%) indicated that the degree of ownership concentration was still very high in China, especially for the companies controlled by government. As to firm size, the mean value was 5 493 814 087 RMB (LnSize, 22.427). Almost 65.7% of the listed companies were from manufacturing industries.

The mean value of ROE, as an indicator of operating performance, was 0.089. It meant that profitability was not good. It was reasonable that the leverage kept at the level of 0.541. As the preventative of shareholders to implement the duty of making decision and monitoring the managers, the board should be with higher independence. However, the data showed that there were 11.2% of the listed companies with duality of the chairman and CEO, and the average percentage of independent director was 36%.

Correlation analysis

Table 3 reported the correlation coefficient among the main variables used in this paper. From the correlation matrix, there were significant differences on the social responsibility information and environmental information disclosure of the listed companies in different stock exchanges since the requirements on social responsibility information disclosure was different between Shanghai Stock Exchange and Shenzhen Stock Exchange.

Types of ultimate owners and voting rights were positively related with CSRI. This was consistent with our hypothesis. The relationship between control variables and dependent variables was consistent with our expectation.

Moreover, we did not find any strong correlation between independent variables. Therefore, multicollinearity could be avoided in the regression models.
Table 4. Regression results investigating the impact of regulation on CSRI and EID.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicted Sign</th>
<th>MODEL1 (CSRI)</th>
<th>MODEL2 (EID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td>-1.360***</td>
<td>-2.231***</td>
</tr>
<tr>
<td>List</td>
<td>+</td>
<td>0.419***</td>
<td>0.396***</td>
</tr>
<tr>
<td>Regu</td>
<td>+</td>
<td>0.174**</td>
<td>0.305***</td>
</tr>
<tr>
<td>GovOwn</td>
<td>+</td>
<td>0.432**</td>
<td>-0.143</td>
</tr>
<tr>
<td>Vote</td>
<td>+</td>
<td>-0.126***</td>
<td>-0.332*</td>
</tr>
<tr>
<td>LnSize</td>
<td>+</td>
<td>0.126***</td>
<td>0.205***</td>
</tr>
<tr>
<td>Indus</td>
<td>+</td>
<td>0.178**</td>
<td>0.585***</td>
</tr>
<tr>
<td>ROE</td>
<td>+</td>
<td>0.097</td>
<td>-0.028</td>
</tr>
<tr>
<td>LEVE</td>
<td>-</td>
<td>-0.126</td>
<td>-0.332*</td>
</tr>
<tr>
<td>Dual</td>
<td>+</td>
<td>0.117</td>
<td>0.216*</td>
</tr>
<tr>
<td>Bolnd</td>
<td>+</td>
<td>0.751</td>
<td>0.005</td>
</tr>
<tr>
<td>Adj.R²</td>
<td>0.143</td>
<td>0.309</td>
<td></td>
</tr>
<tr>
<td>F value</td>
<td>9.228***</td>
<td>23.131***</td>
<td></td>
</tr>
</tbody>
</table>

This table shows the regression results for Model 1 where the dependent variables is the CSRI and Model 2 the dependent variable is EID. The dependent variables CSRI and EID are all measure by content analysis. The sample size is 446, which are selected from listed companies from China in 2008. List, is a dummy variables that equals one if the firm is listed in Shenzhen Stock Exchange and zero otherwise. Regu, is a dummy variable that equals one is the companies are one of the thress yes companies, including the Shanghai Stock Exchange Cooperative Governance Index, Financial and Insurance Industry or listed in foreign stock exchange; GovOwn, is a dummy variable that equals one if the listed companies are controlled by government and zero otherwise; Vote, is the voting rights owned by ultimate owner; LnSize, is the natural log of the book value of the total assets; Indus, is a dummy variable that equals one if the company belong to the manufacturing industry; ROE, is the return of asset; LEVE, equals total liability divided by the total assets; Dual, is dummy variable that equal one if the director and CEO are the same and zero otherwise; Bolnd, are the proportion of the independent directors in the board; *, ** and *** indicate significant at the 10, 5 and 1%, level respectively (Two-tails).

Regression results

Table 4 presented the regression results. In model 1, we put CSRI as the dependent variable. The F value of this model was 9.228 and significant at 1% level. The adjusted R² was 14.3%, which was close to the results of extant researches. In model 2, we used EDI as the dependent variable. The F value of Model 2 was 23.131 and significant at 1% level. The adjusted R² was 30.9% and showed a good explanation power of Model 2.

In Model 1, the coefficient on List was 0.419 and significant at 1% level. It indicated that there were significant differences on CSRI between listed companies in Shanghai Stock Exchange and Shenzhen Stock Exchange. This could be attributed to the different on the information disclosure guideline issued by different stock market. The guideline on corporate social disclosure in Shenzhen Stock Exchange mainly focused on the social responsibility information disclosure and the scope it covered was broader than that in Shanghai Stock Exchange, which mainly focused on environmental information. Listed companies always actively adhere to guideline issued by the stock market. Thus, the listed companies in Shanghai Stock Exchange would put more effort on the environmental information disclosure and neglect other corporate social responsibility information disclosure, and hypothesis 1 was tested. The coefficient on the types of ultimate owners was 0.174 and significant at 5% level. It indicated that listed companies controlled by government disclosed more non-environmental social responsibility information. Government takes more social morality and responsibility, and thus, the listed companies controlled by government acted as the spokesman of the government to implement the duty to take social responsibility. Thus, these companies disclosed more social responsibility information. As to the ability of ultimate owner to control the listed companies, coefficient on Vote was 0.432 and significant at 5% level. This indicated that listed companies would disclose more social responsibility information with increasing voting rights. To the control variables, the regression results of LnSize, Indus, ROE, LEVE, Dual and Bolnd were consistent with our expectation.

Model 2 investigated the impact of information regulation policy on EID. The coefficient on the variable Regu was 0.396 and significant at 1% level. It meant that listed companies would disclose more corporate social information when these companies were required to disclose information related to social responsibility. Simultaneously, authority would check whether these companies had disclosed social information in accordance with the guideline. Thus, the level of mandatory information was better than that of voluntary disclosure. Here hypothesis 2 was supported. The relationship between types of ultimate owners and EID was consistent with Model 1, that is, listed companies...
controlled by the government would disclose more environmental information, so hypothesis 3 was supported. However, the coefficient on Vote was not significant. It was probably because environmental information was related to regulation, firm size and industry sensitive and less related with the ability of ultimate owner to control the companies. It was consistent with results in the correlation analysis. As two important factors that had impact on environmental information disclosure, coefficients on LnSize and Indus were consistent with prior researches. Results of other control variables were also consistent with our expectation.

Conclusions
With more attention to social problems, such as resource exhaustion and environmental deterioration, what role should company play in society has been a hot issue in the last decades (Hackston and Milne, 1996; Reverte, 2009). Under this background, researches and government propose and urge that the companies should not only maximize the interest of shareholders, but also balance the interest among stakeholders, including government, employees, communities and others. Companies should actively take on their social responsibilities and disclose related information to the stakeholders. We intend to investigate whether the governmental regulation has an impact on corporate social disclosure. Taking the sample of the companies that disclose social responsibility information listed in Shanghai and Shenzhen Stock Exchanges, the paper examines the effect of governmental regulation, stock market and ultimate owner on corporate social responsibility information disclosure.

After controlling firm size, industry, performance, leverage and internal corporate structure, we find that listed companies may stress on the disclosure of environmental information to adhere to the governmental regulation, while neglect some non-environmental social responsibility information. Simultaneously, there are significant differences in the disclosure of social responsibility information between companies in different stock exchanges. Companies controlled by government not only disclose more non-environmental social responsibility information, but also more environmental information. We also find a significant relationship between voting rights and corporate social information.

Based on the results, we argue that governmental regulation should play a vital role on implementing social responsibility and disclosing related information. Thus, government should actively issue instruction and guideline on the implementation and disclosure of corporate social responsibility. At the same time, companies, as one important part of the society, should take on more social responsibility and disclose related information to advance the social development.

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REFERENCES


