



The University of  
**Nottingham**

China Policy Institute

---

## **Discussion Paper 72**

# **DETERMINANTS OF SOCIAL RESPONSIBILITY**

## **DISCLOSURE BY CHINESE FIRMS**

**Shujie YAO, Jianling WANG and Lin SONG**

**July 2011**

---

China Policy Institute  
School of Contemporary Chinese Studies  
International House  
The University of Nottingham  
Jubilee Campus  
Wollaton Road, Nottingham  
NG8 1BB, UK  
Email: [CPI@nottingham.ac.uk](mailto:CPI@nottingham.ac.uk)  
Website: [www.chinapolicyinstitute.org](http://www.chinapolicyinstitute.org)

---

The China Policy Institute, part of the School of Contemporary Chinese Studies at The University of Nottingham, was set up to analyse critical policy challenges faced by China in its rapid development. Its goals are to help expand the knowledge and understanding of contemporary China in Britain, Europe and worldwide, to help build a more informed dialogue between China and the UK and Europe, and to contribute to government and business strategies.

# **DETERMINANTS OF SOCIAL RESPONSIBILITY**

## **DISCLOSURE BY CHINESE FIRMS**

Shujie Yao, Jianling Wang, Lin Song\*

**ABSTRACT:** Based on a content analysis approach, this paper aims to identify the determinants of corporate social responsibility disclosure (CSR) in China using the annual reports of over 800 listed firms on the Shanghai Stock Exchange in 2008 and 2009. It is found that CSR is positively associated with firm size, media exposure, share ownership concentration and institutional shareholding. In addition, companies in environmentally sensitive industries tend to disclose more environmental responsibility information than others. However, contradictory to previous studies, this research shows a negative relationship between CSR and firm age. This can be explained by the specific characters of China's capital market. The research results support the legitimacy theory in an emerging market with important and relevant insights for enterprise managers interested in exploiting the annual reports as a tool to legitimize their corporate social conduct.

**KEY WORDS:** corporate social responsibility disclosure (CSR), annual report, listed companies, China.

**JEL:** D21, L21

### **1. Introduction**

As the world economy becomes more integrated, firms have been facing more and more pressure to disclose their corporate social responsibility (CSR) information over the last few decades (Hooghiemstra, 2000). It is reported that more than half of the Fortune

---

\* Shujie Yao, professor of economics, School of Contemporary Chinese Studies, University of Nottingham and special chair professor of Xi'an Jiaotong University. Jianling Wang, lecturer of accounting, School of Management, Xi'an Jiaotong University. Lin Song, associate professor of economics, School of Economics and Finance, Xi'an Jiaotong University. This research is supported by Chinese Ministry of Education's "Fundamental Research Funds for the Key Universities" (Project number: 2010jdhz03).

1,000 companies regularly issue CSR reports (Jo and Kim, 2008). Consequently, corporate social responsibility disclosure (CSR/D) has attracted considerable research interests since the 1980s (Ullmann, 1985; Ness et al., 1991; Gray, et al., 1995; Blacconiere et al., 1997; Bewley et al., 2000; Toms, 2002; Patten, 1991, 1992, 2002).

Existing studies show that CSR/D may bring about two advantages for reporting firms. First, it can enhance corporate reputation through gaining trust and support by various stakeholders (Woodward et al., 1996). Second, it is helpful to assess the congruence between the social value implied by corporate activities and social norms (Dowling and Pfeffer, 1975). Information disclosure is closely associated with the social and economic environment, and thus, different social-economic institutions may influence the pattern and level of CSR/D.

After more than three decades of fast economic growth, China overtook Japan to become the world's second largest economy by 2010.<sup>1</sup> However, rapid economic expansion has been accompanied with a number of social and environmental problems, including environmental degradation, resource depletion, product quality and safety, social injustice, persistence of poverty and lack of labour protection.

In China, there have been a rising number of companies causing significant damage and shocks to the society. For example, The San Lu Corporation was found to have produced 'tainted milk powder' which caused detrimental damage to the health, or even deaths, of young babies in 2008. Foxconn, a large company making iPods and iPhones for Apple run by a Taiwan businessman, had 13 young workers committing suicides in the first six months of 2010.

These high-profile events attracted serious criticisms throughout China, reflecting the lack of CSR in many Chinese companies. In order to distinguish themselves from these high-profile events and build good corporate image, an increasing number of Chinese companies are engaging in CSR activities. It is generally accepted that companies

---

<sup>1</sup> See, Japanese Economy Slips to Third in the World, <http://news.sky.com>, 16-08-2010.

engaging in CSR activities usually concern the disclosure of related information because of its contribution to financial performance or to market value (Orlitzky et al, 2003; Barnett, 2007; Mackey et al, 2007). As a result, studying CSRD provides an important way to understand CSR performance, though actual corporate social performance differs from what is published to some extent (Magness, 2006; Ullmann, 1985).

More importantly, there was a substantial change in 2008 regarding CSRD which may have influenced Chinese listed companies' behaviour and their disclosure practice. CSRD had been voluntary until December 31, 2008, when the Shanghai Stock Exchange (SSE) issued a code in which three kinds of corporations, i.e., companies in the financial industry, sample companies in the governance board of SSE and companies listed on foreign exchange markets, are required to publish their social responsibility reports along with their annual reports. Moreover, since SSE does not provide detailed requirements, firms can exert some discretion on the extent of information to be reported. Previous literatures are mainly concerned with voluntary CSRD and little concerned with compulsory CSRD (Barakas and Brown, 2008). As a result, it is important to study both voluntary and compulsory CSRD to fill the literature gap.

This article extends the existing work in four different ways. First, in contrast to the studies mainly focused on CSRD from the internet (Gao, 2009), this paper provides empirical evidence on CSRD from the annual reports of Chinese listed companies. Patten (1992) suggests that social information in annual reports represents one of the most important mechanisms that firms can use to influence public policy without being widely scrutinized by ordinary people who do not have easy access to these reports.

Second, it confirms empirical work that identifies company size as a reliable predictor of the extent of CSRD. Previous studies have analyzed this issue based on Anglo-American countries (Ullmann, 1985; Toms, 2002; Patten, 1991, 1992, 2002). This study provides evidence for the effectiveness of the legitimacy theory in China as a developing and emerging economy.

Third, it studies the relationship between CSRD and firm age. Contrary to the results of many previous studies, our results show a negative relation between firm age and CSRD in China. One possible explanation is the specific nature of China's capital market. Hence, it is important to further investigate the specific business environment where CSR information is disclosed.

Finally, this article has some implications for managers and policy makers interested in exploiting the annual report as a tool to legitimize CSR conduct as a complementary practice to support a CSR marketing strategy.

The remainder of this article is organized as follows. The second section reviews the theory and empirical evidence of CSRD. A number of hypotheses are also presented. The third section describes data and research methodologies. The fourth section presents empirical results. The final section concludes with some policy recommendations.

## **2. Literature review and hypotheses**

The relationship between a corporation and its environment and the role that CSRD plays in influencing this relationship have become important business issues over the last few decades. Carroll (1991) categorizes CSR into four types: economic, legal, ethical and discretionary, and organizes them into a pyramid. In this pyramid, economic responsibility is the most important and fundamental responsibility. However, it is almost impossible to maximize firm value and financial performance if companies are not socially responsible and share with the public their CSR information.

Many studies show that it is difficult for companies investing in CSR activities to maximize their reputation without disclosing information of such activities (Hasseldine et al. 2005, Toms, 2002). Although it seems a little utilitarian and strategic, it is generally accepted that companies engaging in CSR activities usually concern the disclosure of related information because of its contribution to financial performance (Orlitzky et al, 2003;

Barnett, 2007) or to market value (Mackey et al, 2007). This is because CSRD is helpful to assess the congruence between the social value implied by CSR activities and the social norms – legitimacy (Dowling and Pfeffer, 1975).

Legitimacy is different from legality, but closely related to it. As Woodward et al. (1996) illustrate, for a company's activities to be legal is to be legitimate – at least from the perspective of law. Likewise, legitimacy is also closely associated with economic viability, since to be economically viable is to be legitimate. Lindblom (1984) suggests that the concept of organizational legitimacy is not synonymous with legality or economic success, but rather is determined when organizational goals, output and methods of operation conform to societal norms and values (Woodward et al., 1996). Hence, legitimacy is the basis of an organization's survival or long existence in society. It can not come from either the making of profit or the mere observing of legal requirements (Mathews, 1993), but the continuing mandate of society at large (Shocker and Sethi, 1974).

Legitimacy theory suggests that CSRD is a response to both public pressure and media attention or social visibility resulting from major social incidents (Patten, 1991, 1992; Walden and Schwartz, 1997; Brown and Deegan, 1999). Due to the informed application of social pressure, CSRD might be of value to society more generally, either to better gauge the development of policy or to supplement the enforcement of policy by regulatory organizations (Rhodes, 2010).

As Guthrie and Parker (1989) posit, CSRD is reactive to environmental factors and that disclosures legitimize actions. Deegan et al. (2000) argue that the increase in social disclosures represents a strategy to alter public perception about the legitimacy of an organization, and then achieve the continuing mandate of society. CSRD is a critical way for companies to communicate with society, to convince the public that they are meeting their social expectations (Branco and Rodrigues, 2008). Consequently, CSRD can be considered as a signal of building legitimacy, by which companies improve their social and environmental conducts as well as their social reputation (Neu et al., 1998; O'Donovan, 2000; Guthrie and Parker, 1989).

Patten (1992) suggests that social information in annual reports can influence public policies, directly by addressing public and/or legislative concerns, or indirectly by projecting an image of the company's social awareness. It is argued that the greater the likelihood of adverse shifts in public policy, the greater the need to influence the process through social disclosure.

In this paper, we use company size and environmentally sensitive industry as measures of public pressure. We also use consumer proximity industry, media exposure and firm age as measures of social visibility facing firms with respect to environmental and social issues.

A number of studies have indicated that large firms are subject to more social and political pressure than small firms. Trotman and Bradley (1981) and Cowen et al (1987) find that company size has been a significant explanatory variable in their studies of social responsibility disclosure. Cowen et al. (1987) also suggest that "the larger companies tend to receive more attention from the general public and, therefore, to be under greater public pressure to exhibit social responsibility."

Furthermore, in a meta-analysis of 29 disclosure studies, Ahmed and Courtis (1999) find that size is one of the most important predictors of disclosure level in corporate annual reports. Because larger firms are assumed to face greater pressures than smaller firms, the former will increase their disclosures more than the latter to establish a good social image as part of their business strategy.

Based on this argument, the following hypothesis is presented.

**Hypothesis 1:** There is a positive relationship between CSRD and firm size, *ceteris paribus*.

Industry classification is a commonly accepted factor to distinguish CSRD among different companies in legitimacy studies. However, some industries are facing public pressure, while others are undergoing more social visibility. Numerous authors (Bowman

and Haire, 1975; Cowen et al., 1987; Ness et al., 1991; Gao, 2009) have noted that the extent to which public pressure companies face regarding social issues varies across industries. Companies with more environmental impact are found to disclose more environmental information than others (e.g. Patten, 1991; Adams et al, 1998). Likewise, companies with higher public visibility are more likely to disclose CSR information than others (Clarke and Gibson-Sweet, 1999).

Companies with more environmental impact are subject to greater pressures with respect to environmental concerns than others. For example, the extractive and chemical industries (Dierkes and Preston, 1977; Rockness et al., 1986) tend to produce more pollution than other industries. Hence, they are subject to more public pressure regarding their environmental impact and product safety.

In addition, from a consumer visibility perspective, companies producing goods which are widely consumed tend to generate more social visibility (Branco et al, 2008). After the Wenchuan Earthquake on 12 May 2008, for example, many companies donated money to the earthquake relief efforts. The JDB Associates, a private Chinese company producing soft drinks, became well-known almost overnight due to its 100 million RMB donation<sup>2</sup>. The soft drink 'Wang Laoji', a main product of JDB, received rocketing demand and tremendous reaction from customers after the donation. The company name was also quickly known all over the country.

Based on the above discussion, two more hypotheses are presented.

**Hypothesis 2:** Environmentally sensitive industries tend to disclose more environmental CSR information than others.

**Hypothesis 3:** Consumer visible industries are more likely to disclose consumer related CSR information than others.

Individual companies' media exposure, which is generally employed as a proxy for social

---

<sup>2</sup> It was reported that this was the first 100 million RMB philanthropic giving after the Wenchuan Earthquake.

visibility, is likely to be associated with more CSRD (Bansal, 2005; Brammer and Pavelin, 2008; Branco and Rodrigues, 2008; Reverte, 2009). Bansal (2005) suggests that more media coverage raises companies' visibility, making them the object of further public attention and scrutiny and inviting further public attention and scrutiny (Branco and Rodrigues, 2008).

In addition, media plays an important role in affecting stakeholder decision, because it is the main source of CSR information (Simon, 1992). In China, listed companies are required to issue annual reports in three designated national newspapers: *China Securities Journal*, *Securities Times*, and *Shanghai Securities Gazette*. Listed companies can disclose annual reports on all of these three newspapers, and they can choose one or two of them to publish their annual reports. If companies publish their annual reports in more than one media outlet, it may imply that these companies aim to attract more public attention to their CSR activities and financial performance. This argument leads to another hypothesis below.

***Hypothesis 4:*** There is a positive relationship between CSRD and media exposure, *ceteris paribus*.

Roberts (1992) suggests that firm age is significantly related to environmental disclosure and finds a positive relationship between them. There are several other arguments that can explain why younger firms are less likely to report social information than older ones. For instance, younger firms are generally smaller and have fewer issues to report than older ones. Considering the possible detriment to their competitiveness, younger firms may be more reluctant to disclose information as they may be price-sensitive (Parsa and Kouhy, 2008).

However, considering the specific characteristics of the Chinese capital market, younger firms in China may be more willing to disclose social information because they are more eager to attract bank loans and public investors than the older and more established firms.

First, an increasing number of large state-owned enterprises formally listed on the Hong Kong Exchange, such as Bank of China and Petro China, had just recently returned to be listed on the Shanghai Stock Exchange after 2006. Second, a number of gigantic state-owned enterprises only made their initial public offerings (IPOs) in recent years, including the Industrial and Commercial Bank of China (ICBC), China Life, China Construction Bank and China Mobile. These recently listed companies have become some of the largest companies in the world by market value. These companies may have existed for a long time but they are considered to be young in terms of their short history in the stock exchanges.

Furthermore, many Chinese companies have been merged or re-organized in recent years. For example, Handan Steel Co., Chengde Fantai Co. and Tang Steel Co. have been merged to form the new Hebei Steel Group. The common feature of these companies is that they are considered to be new in the stock market although they have a long operation and public visibility history.

As a result, although they are considered to be 'new' by the capital market, they are actually well established in the market and are not afraid to disclose social information for losing their competitiveness (Qwusu-Ansah, 1998). More importantly, these newly listed companies are even more likely to disclose social information than those with a longer listed history as a strategic tool for building up their corporate image and reputation to consolidate their market position.

In the end, whether firm age has a positive or negative relationship among the listed Chinese companies needs to be tested with empirical data.

### **3. Research design and methodologies**

The key methodology of this paper is to develop a multivariate regression model to test our hypotheses and identify the key determinants of CRSD among the listed Chinese

companies in 2008 and 2009.

Seven models are constructed, all of which use the same explanatory variables but the dependent variables are different. The dependent variables are: total CSRD in the annual reports (*CSRDT*), shareholder responsibility information (*CSRDSH*), employee responsibility information (*CSRDEM*), consumer responsibility information (*CSRDCS*), environmental responsibility information (*CSRDEN*), community responsibility information (*CSDRCM*), and other interested parties responsibility information (*CSRDOT*).

Equation (1) presents the common format of all the different models on the right hand side. The only difference between various models is the dependent variable on the left hand side.

$$CSR D_{it} = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 ENVI_{it} + \alpha_3 CONS_{it} + \alpha_4 MED_{it} + \alpha_5 AGE_{it} + \alpha_6 CONC_{it} + \alpha_7 INS_{it} + \alpha_8 YEAR_{it} + \varepsilon \quad (1)$$

Where for company *i*: *CSR D<sub>it</sub>* refers to the *CSR D* index in year *t* (i.e., *CSRDT*; *CSRDSH*; *CSRDEM*; *CSRDCS*; *CSRDEN*; *CSDRCM* and *CSRDOT*, respectively); *SIZE*, company size; *ENVI*, environmental sensitivity measure; *CONS*, consumer proximity measure; *MED*, media exposure; *AGE*, firm age; *CONC*, ownership concentration; *INS*, institutional shareholding percentage; *YEAR*, time variable;  $\varepsilon$ , error term.

Information disclosure is rooted from the separation of propriety and operation right. Voluntary disclosure has been regarded as a bonding and monitoring tool to reduce agency conflicts between managers and shareholders (Jensen and Meckling, 1976). Apart from the influencing factors referred in the previous section, which are closely related to social and political environment, information disclosure might vary with firm ownership structure (for example, Ghazali, 2007). The degree to which ownership is concentrated in the hands of a few large investors or dispersed among many can affect disclosure policy (Roberts, 1992; Ullmann, 1985). As a result, ownership concentration and institutional shareholding are used to measure the ownership effect on CSRD. A

dummy variable YEAR is used to capture the influence of time on information disclosure.

Firm size, is measured by the natural logarithm of total assets. A binary codification is used to measure the environmental sensitivity proxy. High-profile environmental industries are considered to be those with more risk of being criticized in CSR matters because of their operations that inherently harm the natural environment. Based on existing literature, the following "more sensitive" sectors are identified: Forestry (A03)<sup>3</sup>; Mining (B); Paper (C31); Oil and gas generating (C41); Chemicals (C43); Steel and other metals (C6); Electricity, gas and water supply and distribution (D). All other industries are considered non-sensitive industries. A dummy variable, ENVI, is used to represent environmental sensitivity: taking the value of 1 if a company is from a sensitive industry and 0 otherwise.

The following industries are assumed to have close consumer proximity: Food manufacturing (C0); Textiles (C1); Household goods (C2); Telecommunication Services (G83, G85, G87); Food and Drug retailers (H01, H11) and Finance (I). All other industries are assumed not to have close consumer proximity. The dummy variable, CONS, takes the value of 1 if a company belongs to an industry with close consumer proximity and 0 otherwise.

Media exposure (MED) is measured by the number of newspapers where companies publish their annual reports. MED takes the value of 2 if annual reports are published in all the three officially designated newspapers and at least one other newspaper. It takes the value of 1 if annual reports are published in all the three designated newspapers but not in any other newspapers. It takes the value of 0 if annual reports are published only in one or two of the three designated newspapers.

Firm age is represented by the number of years from when firms are listed on the stock

---

<sup>3</sup> Industry classification is based on the 'Industry Classification Guideline of Listed Companies' issued by CSRC in 2001, the industry classification of each company are extracted from CSMAR data, CSMAR = China Stock Market and Accounting Research Database, which is a professional database about Chinese stock market provided by GTA Co. of Shenzhen, <http://www.gtadata.com/about/about.aspx>.

exchange to the reporting year. Ownership concentration is measured by the ratio of shares held by the largest shareholder as a proportion of the total number of shares listed on the stock exchange. Institutional shareholding percentage is measured by the ratio of shares held by institutional investors as a proportion of all the shares listed on the stock market. Year is a dummy variable that is used to control the possible effect of time on the level of CSRD.

The data sample used in this study comprises all the A-share companies listed on the Shanghai Stock Exchange (SSE). Companies listed on the Shenzhen Stock Exchange (SZSE) are not used in this study because regulatory rules governing both stock exchanges are not comparable.

More specifically, to achieve meaningful and consistent results, companies which are used in this study have to meet the following conditions: (1) listed on SSE before the end of 2009; (2) annual reports for 2008 and/or 2009 available; (3) financial data available from CSMAR data.

The initial sample included all the companies listed on SSE by the end of 2009. Applying the above-mentioned conditions, 851 and 856 companies are selected in this study for 2008 and 2009 respectively. Some summary statistics are reported in Table 1.

The sample companies are grouped according to the classification issued by the China Security Regulatory Commission (CSRC) in 2001. Manufacturing is the largest industrial sector, accounting for more than half of all sample firms. It is followed by the Wholesale & Retail Trade industry. The Media and Culture industry is the smallest sector measured by the number of listed firms.

On average, firm size, measured by total assets, increased from 53,311 million RMB in 2008 to 66,430 million RMB in 2009. Amongst the sample companies, ICBC was the largest measured by total assets in both years. In the absence of any firm-specific price deflator for total assets, the national price index of capital goods is used to convert the 2009 values into comparable 2008 values when all the data are used in the regression

model to exclude the price effect over time.

Table 1 Summary statistics of the sample companies

	2008	2009
	N (share %)	N (share %)
N (number of firms)	851	856
Total assets (RMB million)		
Maximum	9,757,654	11,785,053
Minimum	7.1	4.9
Mean	53,311	66,430
Industries (number of firms)	N (share %)	N (share %)
Agriculture, Forestry, Fishing & Hunting	21(2.47)	20(2.34)
Mining	27(3.17)	28(3.27)
Manufacturing	439(51.59)	438(51.17)
Electricity, Gas & Water Supply	39(4.58)	42(4.91)
Construction	23(2.70)	22(2.57)
Transport & Storage	49(5.76)	48(5.61)
Information & Technology	50(5.88)	51(5.96)
Wholesale & Retail Trade	61(7.17)	59(6.89)
Finance & Insurance	20(2.35)	23(2.69)
Real Estate	44(5.17)	49(5.72)
Social Services	22(2.59)	23(2.69)
Media & Culture	9(1.06)	8(0.93)
Conglomerate	47(5.52)	45(5.26)

Notes: Numbers in brackets are % shares as proportion of the total number of firms.

Sources: Collected and calculated by authors from China Security Regulatory Commission (CSRC), Shanghai Stock Exchange (SSE) Websites and CSMAR databank.

The definition of CSR differs between companies, but in general, CSR covers a multi-dimensional perspective relating to the environment, society and business community (Tsoi, 2010). The term “responsibility” also extends from the pure financial aspects for shareholders to environmental, social and community issues. In this paper, CSR is embedded in annual reports which are obtained from A-share companies listed on SSE. An information item is considered as CSR if it is related to one or more of the following interest parties responsibility: shareholders, employees, consumers and products, environment, community and other interests (i.e., government or suppliers

responsibility). There are 20 specific items relating to CSR. The list of responsibility items are drawn from the regulatory guidelines on CSR. Table 2 summarizes the CSR items of Chinese listed companies.

Table 2 Number of Chinese listed companies reporting CSR information

CSR Items	2008 N (%)	2009 N (%)	Change %
<b>Shareholder responsibility</b>			
Corporate governance	848 (99.6)	856 (100.0)	0.35
Obligation to disclose	656 (77.1)	703 (82.1)	5.04
Bonus information	194 (22.8)	172 (20.1)	-2.70
<b>Employee responsibility</b>			
Fair employment	165 (19.4)	196 (22.9)	3.51
Health & safety	226 (26.6)	212 (24.8)	-1.79
Training and education	244 (28.7)	240 (28.0)	-0.63
Professional development	109 (12.8)	110 (12.9)	0.04
Employee's welfare	193 (22.7)	238 (27.8)	5.12
<b>Consumers and products</b>			
Product quality & safety	199 (23.4)	199 (23.3)	-0.14
Customer services	166 (19.5)	171 (20.0)	0.47
Consumer rights	85 (10.0)	60 (7.0)	-2.98
<b>Environment/energy responsibility</b>			
Pollution control	168 (19.7)	141 (16.5)	-3.27
Environmental conservation	144 (16.9)	75 (8.8)	-8.16
Conserving natural resources	72 (8.5)	53 (6.2)	-2.27
Energy saving/emission reduction	303 (35.6)	319 (37.3)	1.66
<b>Community responsibility</b>			
Philanthropic giving	247 (29.0)	210 (24.5)	-4.49
Public welfare undertaking	241 (28.3)	248 (29.0)	0.65
Community involvement	119 (14.0)	82 (9.6)	-4.40
<b>Other responsibility</b>			
Government responsibility	110 (12.9)	138 (16.1)	3.20
Suppliers' responsibility	174 (20.45)	185 (21.6)	1.17
<b>Total of disclosure items</b>	<b>4665</b>	<b>4608</b>	

Notes: Numbers in brackets are % shares of firms reporting that item as a proportion of total number of firms.

Sources: Collected and calculated by authors from the annual reports issued by the companies on China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) websites.

#### **4. Empirical results**

A content analysis is adopted to measure the level of CSR. The procedure is as follows. First, disclosed information is checked against a given list of items. Second, a score is awarded depending on whether an item is disclosed and the extent to which it is disclosed. A score of 2 is awarded if an item is disclosed in great detail. For example, if a company discloses a detailed plan, estimated expenditure, or main development related to environmental protection, a score of 2 will be given. A score of 1 is awarded if an item is disclosed qualitatively without detailed explanation. If no related information is disclosed, the score is 0. Third, a CSR index is constructed based on the following procedure. For each given company, an index number is given by dividing all the above-mentioned scores awarded to that company by the maximum possible scores and multiplying this ratio by 100.

Table 3 presents the descriptive statistics of the index for each category of CSR and the total CSR index. The values of three categories of CSR (CSRDSH, CSRDEM and CSRDOT) increased slightly from 2008 to 2009. The values of the other three categories (CSRDCS, CSRDEN and CSRDCM) declined over the same period. The mean of CSRDT was only 0.27 in 2008 and 2009. This implies that the level of CSR by Chinese listed companies was quite low.

Table 3 Descriptive statistics of CSRD indexes by category, 2008 and 2009

	2008				2009			
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max
CSRDSH	0.66	0.21	0.00	1.00	0.67	0.20	0.17	1.00
CSRDEM	0.22	0.33	0.00	1.00	0.23	0.35	0.00	1.00
CSRDCS	0.17	0.29	0.00	1.00	0.16	0.27	0.00	1.00
CSRDEN	0.20	0.29	0.00	1.00	0.17	0.25	0.00	1.00
CSRDCM	0.24	0.37	0.00	1.00	0.20	0.33	0.00	1.00
CSRDOT	0.16	0.30	0.00	1.00	0.18	0.33	0.00	1.00
CSRDT	0.27	0.26	0.05	0.95	0.27	0.25	0.03	0.90

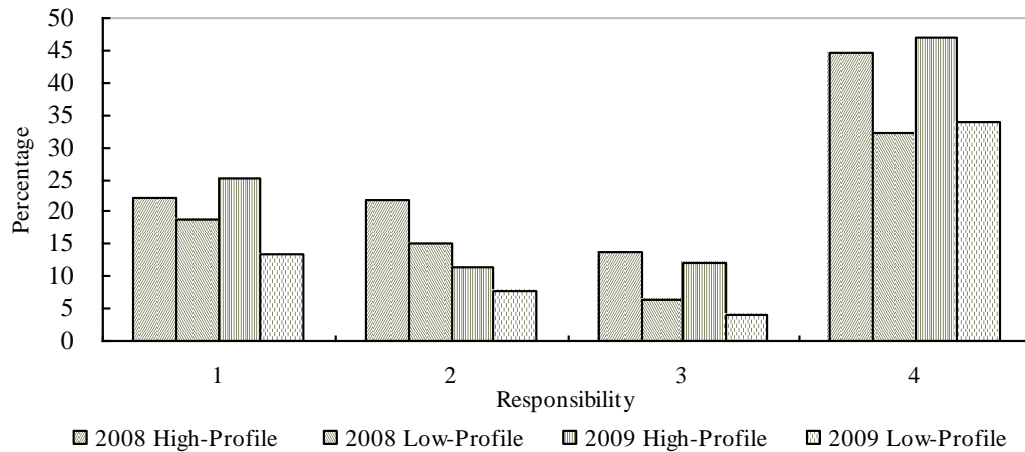
Notes: The first 4 letters, CSRD = corporate social responsibility disclosure. The last 2 letters, SH = shareholder responsibility; EM = employees responsibility; CS = consumers responsibility; EN = environmental responsibility; CM = community responsibility; OT = other responsibility; T = total. Min = minimum, Max = maximum, S.D. = standard deviation.

Sources: Collected and calculated by authors from China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) websites.

There are four information items relating to environmental protection: pollution control, environmental conservation, natural resource conservation, and energy-saving/emission reduction. As discussed in the previous section, companies are divided into two types: environmentally sensitive and environmentally non-sensitive.

Figure 1 compares the levels of CSRD relating to the four environmental information items between the two types of companies. It reveals that companies in the environmentally sensitive industries tend to disclose more such information than the other type of companies. For example, 46% of environmentally sensitive firms disclosed energy saving and emission reduction information in 2009, compared to just 36% of other firms reporting the same information. This finding supports Hypothesis 2 presented in section 2.

Figure 1 Information disclosure by High/Low environmentally sensitive industries



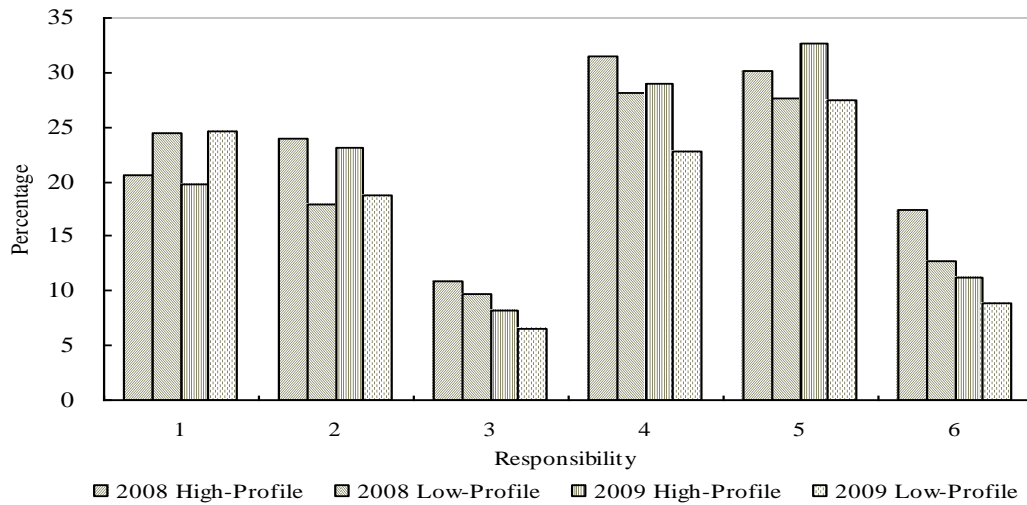
Notes: 1 = pollution control; 2 = environmental conservation; 3 = natural resource conservation and 4 = energy-saving/emission reduction. High-Profile = environmentally sensitive industries; Low-Profile = environmentally non-sensitive industries.

Sources: Collected by authors from China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) Websites.

Six information items are used to represent consumer and community responsibility by listed companies: production quality and safety, costumer services; consumer rights, philanthropic giving, public welfare undertaking, and community involvement. Listed companies are divided into two types: companies whose products are close to community and final consumers (High-Profile), and companies whose products are not so close to community and consumers (Low-Profile).

Figure 2 compares the different levels of information disclosure by these two types of companies for all the six items. Apart from the disclosure of information on product quality and safety, High-Profile companies tend to disclose more information of all the other items than Low-Profile companies. For most items, however, the level of information disclosed declined from 2008 to 2009.

Figure 2 Information disclosure by High/Low consumer proximity industries



Notes: 1 = Product quality/safety; 2 = customer services; 3 = consumer rights; 4 = philanthropic giving; 5 = public welfare undertaking; 6 = community involvement. High-Profile = companies whose products are close to community/consumers; Low-Profile = companies whose products are not so close to community/consumers.

Sources: Collected and calculated by authors from China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) websites.

According to the regulatory rules set by SSE at the end of 2008, three kinds of companies (finance/insurance, listed on foreign stock exchanges, and SSE corporate governance board) are all required to release their CSR reports along with their annual reports. Table 4 presents the reporting results for these companies.

Table 4 Companies mandatorily required by SSE to publish CSR reports

Companies	2008		2009	
	N	%	N	%
Finance/Insurance	19	95.0	14	60.9
Listed on foreign exchanges	48	96.0	35	66.0
SSE governance board	221	95.7	156	65.3
Mandatory required disclosing companies	247	95.7	169	63.8
Total sample	282	33.1	283	33.1

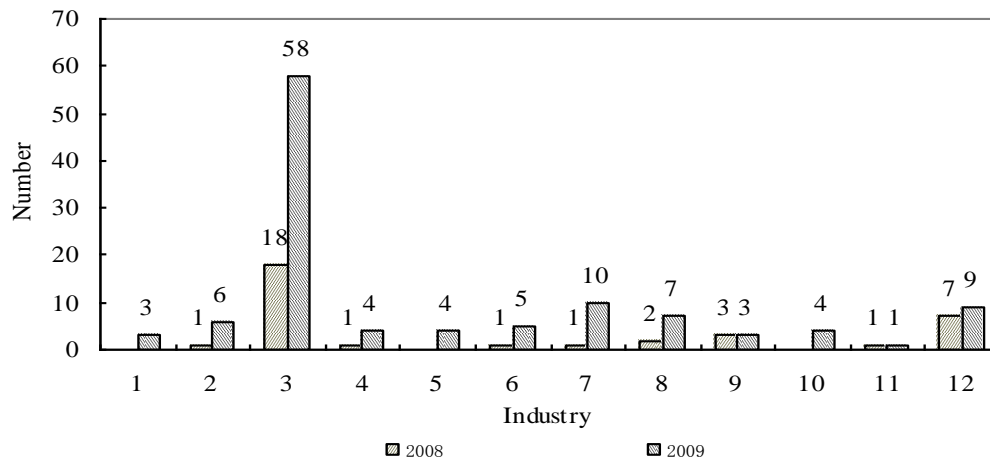
Notes: N = number of companies publishing their CSR reports. % = Number of companies publishing their CSR reports as a proportion of total number of companies in the respective category. Some companies in the first two groups are also members of SSE governance board.

Sources: Collected by authors from China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) websites.

The results in Table 4 indicate that 282 companies published their CSR reports in 2008 and 283 in 2009 respectively, accounting for 33.1% of the respective sample companies in both years. About 96% of the companies which were mandatorily required to publish their CSR reports actually did in 2008, but this share declined to only 64% in 2009. In contrast, the number of companies which were not required to publish CSR reports rose significantly from 2008 to 2009, rising from 35 in 2008 to 114 in 2009.

Figure 3 shows the distribution of listed companies which voluntarily published their CSR reports by industry. Three industries published their CSR reports in 2009 for the first time, including agriculture, forestry, fishery and hunting; construction; and social services. Manufacturing was a dominant industry disclosing CSR information. There were significantly more companies in the Information and Technology industry disclosing their CSR information from 2008 to 2009. This may be attributed to rising public pressure on firms of this industry to publish their CSR information because the industry has become ever more important in the Chinese economy.

Figure 3 Companies voluntarily published CSR reports by industry



Notes: 1 = agriculture, forestry, fishing & hunting; 2 = mining; 3 = manufacturing; 4 = electricity, gas & water supply; 5 = construction; 6 = transport & storage; 7 = information & technology; 8 = wholesale & retails; 9 = real estate; 10 = social services; 11 = media & culture; 12 = conglomerate.

Sources: Collected by authors from China Security Regulatory Commission (CSRC) and Shanghai Stock Exchange (SSE) websites.

Before conducting the regression analysis, it is necessary to carry out several diagnostic tests, such as multicollinearity test. This is to make sure that the regression results will be meaningful and reliable.

Multicollinearity is tested based on the correlation matrix incorporating all the independent variables as well as computing the variance inflation factor (VIF). Table 5 reports the correlation matrix which indicates that the highest correlation coefficient is 0.32. The highest value of VIF is far less than 2. All the results suggest that multicollinearity is unlikely to be a problem.

Table 5 Correlation coefficients between explanatory variables

	SIZE	ENVI	CONS	MED	AGE	CONC	INS	YEAR
SIZE	1.00							
ENVI	0.14*** (0.00)	1.00						
CONS	0.08*** (0.00)	-0.12*** (0.00)	1.00					
MED	0.26*** (0.00)	-0.00 (0.86)	0.03 (0.21)	1.00				
AGE	-0.26*** (0.00)	-0.15 (0.00)	0.03 (0.25)	-0.19*** (0.00)	1.00			
CONC	0.32*** (0.00)	0.16*** (0.00)	-0.15*** (0.00)	0.01 (0.70)	-0.17*** (0.00)	1.00		
INS	0.21*** (0.00)	-0.02 (0.44)	-0.07** (0.00)	0.08*** (0.00)	-0.07*** (0.00)	-0.03 (0.16)	1.00	
YEAR	0.05 (0.06)	0.02 (0.35)	0.01 (0.72)	0.03 (0.26)	0.11*** (0.00)	-0.01 (0.78)	-0.02 (0.48)	1.00

Notes: SIZE = firm size, ENVI = environmentally sensitive industry, CONS = consumer sensitive industry, MED = media number, AGE = firm age, CONC = share ownership concentration, INS = institutional share ownership, YEAR = time dummy. \*, \*\*, \*\*\* Significant at 10%, 5%, 1% respectively (2-tailed).

Each of the dependent variables is regressed against all the explanatory variables listed in Table 5. Table 6 reports the regression results. In all regressions, the F values indicate that there is a significant relationship between the dependent and explanatory variables.

Most of the estimated coefficients have the expected signs and are statistically significant, meaning that the explanatory variables have the expected effects on the dependent variables.

Three interesting results are evident. First, firm size is positively associated with the level of CSR in all regressions, supporting Hypothesis 1 in section 2. Second, the extent of media exposure is positively related with the level of CSR, supporting Hypothesis 4. Third, firm age is negatively correlated with the level of CSR. This final result contradicts those of previous studies but it is not unexpected in the Chinese context. This is because

firm age in this study refers to the time span between when a firm was listed on SSE and the sample year. However, the newly listed firms may have existed for a long time before they were listed. Many of these firms are also large state-owned enterprises which are more likely to publish CSR reports than their private counterparts.

Each dependent variable actually reflects a specific aspect of CSR. We can examine the regression results for each of the dependent variables reflecting those specific aspects.

Firm size, media exposure and firm age are all found to have a significant effect on all the dependent variables. This is consistent with the first model which uses an aggregate CSR index as the dependent variable (CSRDT).

Environmental sensitive industry, represented by ENVI, appears to have a significant and positive effect on the level of CSR relating to the disclosure of environmental information (CSRDEN), supporting Hypothesis 2. The same variable, however, appears to have a negative relationship with employees (CSRDEM) and community (CSRDCM) issues and does not have any significant effect on other CSR information items.

CONS, which represents consumer sensitivity, is found not to have any significant effect on the level of CSR in all aspects. The results, therefore, do not support Hypothesis 3. Media exposure (MED), share ownership concentration (CONS) and institutional share ownership (INS) are found to have positive effects on most of the CSR categories. This means that the willingness of companies to publish CSR information also leads to higher level of information disclosure. The higher the level of share ownership concentration and the higher the level of institutional ownership also lead to higher level of information disclosure in most aspects of CSR. All the results are not dissimilar to those of existing studies on other countries.

Table 6 Regression results of models using different CSR indicators as dependent variables

Dependent Variables	Intercept	SIZE	ENVI	CONS	MED	AGE	CONC	INS	YEAR	Adj. R <sup>2</sup>	D-W
CSRDSH	0.26 *** (0.00)	0.16*** (0.00)	-0.02 (0.54)	-0.39 (0.70)	0.04* (0.08)	-0.10*** (0.00)	0.04 (0.10)	0.10 *** (0.00)	0.03 (0.25)	0.07	1.89
CSRDEM	-1.33*** (0.00)	0.35*** (0.00)	-0.05** (0.02)	-0.01 (0.70)	0.05** (0.02)	-0.11*** (0.00)	0.06** (0.01)	0.08*** (0.00)	0.02 (0.44)	0.20	1.93
CSRDCS	-0.96*** (0.00)	0.30 *** (0.00)	-0.06** (0.01)	-0.02 (0.42)	0.06** (0.01)	-0.07*** (0.00)	0.03 (0.21)	0.13*** (0.00)	-0.02 (0.39)	0.16	1.84
CSRDEN	-1.11*** (0.00)	0.36 *** (0.00)	0.06 *** (0.00)	-0.01 (0.65)	0.06 ** (0.01)	-0.08 *** (0.00)	0.07*** (0.00)	0.09*** (0.00)	-0.06** (0.01)	0.22	1.88
CSRDCM	-1.65*** (0.00)	0.40 *** (0.00)	-0.04 ** (0.04)	0.01 (0.53)	0.06 ** (0.01)	-0.08 *** (0.00)	0.03 (0.19)	0.09*** (0.00)	-0.06** (0.01)	0.24	1.87
CSRDOT	0.94*** (0.00)	0.25*** (0.00)	-0.02 (0.32)	-0.01 (0.73)	0.04 (0.10)	-0.05* (0.06)	0.06 ** (0.01)	0.10 *** (0.00)	0.03 (0.21)	0.11	1.98
CSRDT	-1.00*** (0.00)	0.37*** (0.00)	-0.03 (0.23)	-0.01 (0.74)	0.06 ** (0.01)	-0.10 *** (0.00)	0.06** (0.01)	0.11 *** (0.00)	-0.01 (0.50)	0.23	1.89

Notes: (1) Dependent variables. The first 4 letters of different dependent variables CSR = corporate social responsibility disclosure. CSRDT is a total score index. The last 2 letters of other variables represent different aspects of information disclosure: SH = shareholders, EM = employees, CS = consumer services, EN = environment, CM = community, OT = other social responsibilities. (2) Explanatory variables. SIZE = firm size, ENVI = environmentally sensitive industry, CONS = consumer sensitive industry, MED = media exposure, AGE = firm age, CONC = ownership concentration, INS = ownership by institutional investors, YEAR = time dummy. (3) D-W = Durbin-Watson statistics. Figures in parentheses represent the p-values. \*, \*\*, \*\*\* Significant at 10%, 5%, 1% respectively (2-tailed).

## **5. Conclusions and policy implications**

Corporate management considers CSRD as a tool of legitimacy through improving social and environmental conduct. This paper uses all the companies listed on SSE which published annual reports in 2008 and/or in 2009. About one-third of all the listed firms published their CSR information. The level of participation is not high but it is a positive sign that CSRD has become a common practice among the Chinese listed companies.

Different kinds of firms may have different activities towards CSRD. In this paper, CSRD is divided into different categories relating to various aspects of CSR, including information on shareholders, employees, customer services, environment, community and others. A significant contribution of this paper is that each of the information items is given a specific score. The total scores are then added up to quantify the level of CSRD for each of the aspects and for all the aspects as a whole.

Based on previous studies on other countries, a few hypotheses are developed. The essence of these hypotheses is to provide a theoretical underpinning for constructing a multivariate regression model for each of the dependent variables which represent various aspects of CSRD.

Firm size, environmental sensitivity, consumer sensitivity, media exposure, firm age, share ownership concentration by the largest shareholder and institutional shareholding are found and tested to be important determinants of CSRD.

Both tabulation and regression analyses reveal that firm size, share ownership concentration, institutional ownership and media exposure are found to have positive and significant effect on the levels of various CSRD indicators. This means that larger firms, firms which are more controlled by one single owner or institutions, and firm's willingness to share their CSR information with the public tend to disclose more CSR information.

Environmental sensitivity and consumer sensitivity are found to have some mixed results. They have both positive and negative effects on the level of CSRD in different aspects. This means that firms in environmentally and consumer sensitive industries do not necessarily report more information than other firms.

Two important policy implications can be made from this study. Firstly, Chinese listed companies are more willing to disclose their CSR information if the government imposes stronger rules and regulations. Over 95% of firms which were requested by SSE to report CSR information complied with the regulations. In contrast, only one-third of firms not requested by SSE to report CSR information decided to do so in the sample years. This implies that the government should use regulations to push listed firms to disclose their CSR information.

Secondly, smaller firms and firms with a more diversified ownership structure are more reluctant to disclose CRS information than larger firms or firms with a higher concentration of ownership or institutional ownership. This means that more efforts should be made to encourage smaller firms to be more socially responsible.

## **References:**

- Adams, C.A., W.-Y. Hill and C.B. Roberts: 1998, 'Corporate Social Reporting Practices in Western Europe: Legitimizing Corporate Behaviour', *The British Accounting Review*, 30(1), 1-21.
- Ahmed, K. and J. K. Courtis: 1999, 'Associations between Corporate Characteristics and Disclosure Levels in Annual Reports: A Meta-analysis', *The British Accounting Review*, 31(1), 35-61.
- Bansal, P.: 2005, 'Evolving Sustainability: A Longitudinal Study of Corporate Sustainable Development', *Strategic Management Journal*, 26(3), 197-218.
- Barakas, D. G. & A.M Brown: 2008, 'Corporate Social Reporting and Board Representation: Evidence from Kenyan Banking Sector', *Journal of Management and Governance*, 12(4), 309-324.

- Barnett, M.L.: 2007, 'Stakeholder Influence Capacity and the Variability of Financial Returns to Corporate Social Responsibility', *Academy of Management Review*, 32(3), 794-816.
- Bewley, K. and Y. Li: 2000, 'Disclosure of Environmental Information by Canadian Manufacturing Companies: A Voluntary Disclosure Perspective', *Advances in Environmental Accounting and Management*, 1, 201-226.
- Blacconiere, W. G. and W. D. Northcut: 1997, 'Environmental Information and Market Reactions to Environmental Legislation', *Journal of Accounting, Auditing & Finance*, 12(2), 149-178.
- Bowman, E.H. and M. Haire: 1975, 'A Strategic Posture Toward Corporate Social Responsibility', *California Management Review*, 18(2), 49-58.
- Brammer, S. and S. Pavelin: 2008, 'Factors Influencing the Quality of Corporate Environmental Disclosure', *Business Strategy and the Environment*, 17(2), 120-136.
- Branco, M.C. and L.L. Rodrigues: 2008, 'Factors Influencing Social Responsibility Disclosure By Portuguese Companies', *Journal of Business Ethics*, 83(4), 685-701.
- Brown, N., and C. Deegan.: 1999, 'The Public Disclosure of Environmental Performance Information – a Dual test of Media Agenda Setting Theory and Legitimacy Theory', *Accounting and Business Research*, 29(1), 21-41.
- Carroll, A. B.: 1991, 'The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders', *Business Horizon*, 34(4), 39-48.
- Clarke, J. and M. Gibson-Sweet: 1999, 'The Use of Corporate Social Disclosure in the Management of Reputation and Legitimacy: A Cross Sectoral Analysis of UK Top 100 Companies', *Business Ethics: A European Review*, 8(1), 5-13.
- Cowen, S.S., L.B. Ferri, and L.D. Parker: 1987, 'The Impact of Corporate Characteristics on Social responsibility Disclosure: A Typology and Frequency-based Analysis', *Accounting, Organizations and Society*, 12(2), 111-122.
- Deegan, C., M. Rankin, & P. Voght: 2000, 'Firms' Disclosure Reactions to Major Social Incidents: Australian Evidence', *Accounting Forum*, 24(1), 101-130.
- Dierkes, M. and L. E. Preston: 1977, 'Corporate Social Accounting Reporting for the

- Physical Environment: A Critical Review and Implementation Proposal', *Accounting, Organizations and Society*, 2(1), 3-22.
- Dowling, J. and J. Pfeffer: 1975, 'Organizational Legitimacy: Social Values and Organizational behavior', *Pacific Sociological Review* 18(1), 122-126.
- Gao, Y.: 2009, 'Corporate Social Performance in China: Evidence from Large Companies', *Journal of Business Ethics*, 89(1), 23-35.
- Gray, R., R. Kouhy and S. Lavers. 1995, 'Corporate Social and Environmental Reporting: A Review of the Literature and a Longitudinal Study of UK Disclosure', *Accounting, Auditing and Accountability Journal*, 8(2), 47-77.
- Ghazali, N.A.M.: 2007, 'Ownership Structure and Corporate Social responsibility Disclosure: Some Malaysian Evidence', *Corporate Governance*, 7(3), 251-266.
- Guthrie, J. and L.D. Parker: 1989, 'Corporate Social Disclosure: A Rebuttal of Legitimacy Theory', *Accounting and Business Research*, 19(76), 343-352.
- Hasseldine, J., A. I. Salama and J. S. Toms: 2005, 'Quantity Versus Quality: The Impact of Environmental Disclosures on the Reputations of UK PLCs', *The British Accounting Review*, 37(2), 231-248.
- Hooghiemstra, R.: 2000, 'Corporate Communication and Impression Management – New Perspectives Why Companies Engage in Corporate Social Reporting', *Journal of Business Ethics*, 27(1/2), 55-68.
- Jensen, M. and W. Meckling: 1976, 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure', *Journal of Financial Economics*, 3(4), 305-360.
- Jo, H. and Kim, Y.: 2008, 'Ethics and Disclosure: A Study of the Financial Performance of Firms in the Seasoned Equity Offerings Market', *Journal of Business Ethics*, 80(4), 855-878.
- Lindblom, C. E.: 1984, 'The Accountability of Private Enterprise: Private – No. Enterprise – Yes', In: T. Tinker (ed.), *Social Accounting for Corporations: Private Enterprise versus the Public Interest*. Manchester University Press, Manchester.
- Mackey, A., T. B. Mackey, and J. B. Barney: 2007, 'Corporate Social Responsibility and Firm Performance: Investor Preference and Corporate Strategies', *Academy of Management Journal*, 32(3), 817-835.
- Magness, V.: 2006, 'Strategic Posture, Financial Performance and Environmental

- Disclosure: An Empirical Test of Legitimacy Theory', *Accounting, Auditing & Accountability Journal*, 19(4), 540-563.
- Mathews, M. R.: 1993, 'Socially Responsible Accounting', Chapman & Hall, London.
- Ness, K. and A. Mirza: 1991, 'Corporate Social Disclosure: A Note on the Test of Agency Theory', *The British Accounting Review*, 23(3), 211-217.
- Neu, D., H. Warsame and K. Pedwell: 1998, 'Managing Public Impressions: Environmental Disclosures in Annual Reports', *Accounting, Organizations and Society*, 23(3), 265-282.
- O'Donovan, G.: 2000, 'Legitimacy Theory as an Explanation for Corporate Environmental Disclosures', Victoria University of Technology, Melbourne, Australia.
- Orlitzky, M. F.L. SchMidt & S.L.Rynes: 2003, 'Corporate Social and Financial Performance: A Meta-analysis', *Organization Studies*, 24(3), 403-441.
- Owusu-Ansah, S.: 1998, 'The Impact of Corporate Attributes on the Extent of Mandatory Disclosure and Reporting by Listed Companies in Zimbabwe', *The International Journal of Accounting*, 33(5), 605-631.
- Parsa, S. and R. Kouhy: 2008, 'Social Reporting by Companies Listed on the Alternative Investment Market', *Journal of Business Ethics*, 79(3), 345-360.
- Patten, D.M.: 1991, 'Exposure, Legitimacy, and Social Disclosure', *Journal of Accounting and Public Policy*, 10(4), 297-308.
- Patten, D.M.: 1992, 'Intra-industry Environmental Disclosures in Response to the Alaskan Oil Spill: A Note on Legitimacy Theory', *Accounting, Organization and Society*, 17(5), 471-475.
- Patten, D.M.: 2002, 'Media Exposure, Public Policy Pressure, and Environmental Disclosure: An Examination of the Impact of Tri Data Availability', *Accounting Forum*, 26(2), 152-171.
- Perrow, C.: 1986, 'Complex Organizations: A Critical Essay (3<sup>rd</sup> ed.)', New York: Random House.
- Reverte, C.: 2009, 'Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Companies', *Journal of Business Ethics*, 88(2), 351-366.

- Rhodes, M.J.: 2010, 'Information Asymmetry and Socially Responsible Investment', *Journal of Business Ethics*, 95(1), 145-150.
- Roberts, R.W.: 1992, 'Determinants of Corporate Social Responsibility Disclosure: An Application of Stakeholder Theory', *Accounting, Organizations and Society*, 17(6), 595-612.
- Rockness, J., P. Schlachter and H.O. Rockness: 1986, 'Hazardous Waste Disposal, Corporate Disclosure, and Financial Performance in the Chemical Industry', *Advances in Public Interest Accounting*, 1, 167-191.
- Shocker, A. D. & S. P. Sethi: 1974, 'An Approach to Incorporating Social Preferences in Developing Corporate Action Strategies', In *the Unstable Ground: Corporate Social Policy in a Dynamic Society* (Los Angeles: Melville Publishing Company. 67-80.
- Simon, F.L.: 1992, 'Marketing Green Products in the Triad', *Columbia Journal of World Business*, 27(3-4), 268-285.
- Toms, J.S.: 2002, 'Company Resources, Quality Signals and the Determinants of Corporate Environmental Reputation: Some UK Evidence', *The British Accounting Review*, 34(3), 257-282.
- Trotman, K.T. and G. W. Bradley: 1981, 'Association between Social Responsibility Disclosure and Characteristics of Companies', *Accounting, Organizations and Society*, 6(4), 355-362.
- Tsoi, J.: 2010, 'Stakeholders' Perceptions and Future Scenarios to Improve Corporate Social Responsibility in Hong Kong and Mainland China', *Journal of Business Ethics*, 91(3), 391-404.
- Ullmann, A.A.: 1985, 'Data in Search of a Theory: A Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economic Performance of U.S. Firms', *Academy of Management Review*, 10(3), 540-558.
- Walden, W. D. and B.N. Schwartz: 1997, 'Environmental Disclosures and Public Policy Pressures', *Journal of Accounting and Public Policy*, 16(2), 125-154.
- Woodward, D.J., P. Edwards, & F. Birkin: 1996, 'Organizational legitimacy and Stakeholder Information Provision', *British Journal of Management*, 7(4), 329-347.