

**THE EFFECTS OF STAKEHOLDERS ON CSR
DISCLOSURE: EVIDENCE FROM JAPAN**

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ABSTRACT

This paper examined the effects of stakeholders on firms' CSR information disclosures. In Japan, many firms voluntarily disclose CSR information, with disclosure practices varying across firms. This paper quantified the CSR information released by 236 Japanese listed firms and examined the relationship between CSR information disclosures and the information needs of firm stakeholders. The results revealed that (1) the information needs of external stakeholders, including governments, creditors, consumers and local residents induced firms to disclose CSR information, (2) internal stakeholders have no effects on CSR information disclosure, and (3) CSR advocacy groups as intermediary stakeholders exerted a positive effect on CSR disclosure. The results suggest different relationship between CSR information disclosures and stakeholders' information needs by CSR categories. These findings also reinforce the suggestion that the different stakeholder types (internal, external, and intermediary) have dissimilar CSR information needs. This research would contribute to our understanding of the effect of stakeholders on firms' CSR information disclosure more inclusively.

KEYWORDS corporate social responsibility (CSR); stakeholders; disclosure; ISO 26000

1. INTRODUCTION

Companies today are expected not merely to pursue profit but also to undertake corporate social responsibility (CSR). In general, CSR means that companies take into consideration the concerns of a wide range of corporate stakeholders (e.g., shareholders, employees, suppliers, customers, government, and the local community) and incorporate principles of social fairness and environmental sustainability into the business process. CSR developed because the expansion and globalization of the world economy led to the emergence of multinational companies with economic power greater than the gross domestic product of many small or developing countries. Therefore, business activities correspondingly have a more extensive effect on society than ever before. In addition, with many developed countries recently experiencing severe financial crisis, society increasingly requires that companies take responsibility for environmental conservation, employment, safety, and local community development—areas that previously were primarily the responsibility of national governments. Neglect of these broader social responsibilities therefore threatens both the sustainability of the companies themselves and society as a whole.

The disclosure of CSR information began in the 1980s. Initially, firms engaging in CSR disclosure were mainly in the petroleum, gas, and chemical industries, and they did so mostly because of strong pressure from regulatory authorities and environmental activists (CorporateRegister.com 2008, 4). Subsequently, several countries and international institutions, including the Global Reporting Initiative (GRI), started to develop regulations and guidelines regarding CSR information disclosure. As a result, the number of firms disclosing CSR information increased substantially.

In Japan, firms initially released environmental reports, which primarily comprised booklets describing the firm's environmental activities, but with a strong public relations component. Consequently, the amount and quality of information that firms provided varied considerably. To improve this situation, the Japanese Ministry of the Environment (MOE) issued a directive entitled "Environmental Reporting Guidelines 2000" in February 2001, and the Japanese Ministry of Economy, Trade, and Industry (METI) published "Environmental Reporting Guidelines 2001—With Focus on Stakeholders" in June 2001, subsequently revised with the development of practice as "Environmental Reporting Guidelines 2003." Together, these guidelines have dramatically improved the amount and quality of firm reporting as it relates to the environment. South Korea and Taiwan have enacted similar guidelines to those issued by the Japanese MOE. The Japanese guidelines have also been influential elsewhere in the international arena.

In addition, in April 2005, the Japanese government enacted the "Law Concerning the Promotion of Business Activities with Environmental Consideration by Specified Corporations, etc., by Facilitating Access to Environmental Information, and Other Measures." The aim of this law is to encourage firms to disclose their environmental information through environmental reports and to facilitate the active use of this information by the public. The new law also creates a sense of obligation among large firms to disclose their environmental information, and requires several designated firms, including national universities, Japan Post, the Japan Broadcasting Corporation (NHK), the

Nippon Telegraph and Telephone Corporation (NTT), Japan Railway companies, and the Japan Highway Public Corp., to prepare environmental reports.

Around this time, firms began to publish environmental and other CSR-related information variously as “Sustainability Reports,” “Social and Environmental Reports,” or “CSR Reports.” The number of firms referring to GRI guidelines to prepare reports also increased. As a result, 2005 saw the publication of the “Companion for Combined Application of Environmental Reporting Guidelines and GRI Guidelines.” In addition, the “Environmental Reporting Guidelines” was revised in 2007 and 2012, and now require firms to disclose information on the social and economic aspects of their operations in addition to environmental information.

The number of Japanese firms preparing CSR reports (including environmental reports, environmental and social reports, and sustainability reports) has steadily increased since the 1990s, with more than 1,000 firms providing such information in 2006 alone (MOE 2007). Of these, about two-thirds “disclose environmental, social, and economic information” in their CSR reports (MOE 2007, 6). This indicates that Japanese firms have shifted from environmental reports to CSR reports. Japanese firms now provide high-quality information on CSR activities (KPMG 2008). A growing body of research in Japan examines environmental CSR disclosures in the next stage of environmental disclosure (e.g., Kokubu et al. 2002), but there is little research exploring how firms aim to meet stakeholders’ demands in information disclosure.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Although, several existing studies address the discussion about stakeholders and environmental and social reporting (Gray et al. 1997; Bebbington et al. 2007; Boesso and Kumar 2007; Collier 2008; Georgakopoulos and Thomson 2008; Adams and Whelan 2009; O’Sullivan and O’Dwyer 2009; Eljido-Ten et al. 2010; Oriji 2010; Tilling and Tilt 2010), there is no empirical study with large sample to show how stakeholders have effects on corporate CSR reporting. The purpose of this paper is to examine how firm stakeholders, including external, internal, and intermediary stakeholders, affect CSR information disclosure in Japan. As discussed, the purpose of CSR information disclosures is to provide relevant information not only to the limited set of stakeholders assumed in traditional financial reports, but also to an extended set of stakeholders. We can assume that different stakeholders are interested in different types of information in firms’ CSR disclosures and induce firms to meet their demands for their preferred information.

2.1. External Stakeholders

Governments and politicians are among the external stakeholders that can influence firms’ CSR information disclosures. For example, Watts and Zimmerman (1978) suggest that firms with high profitability receive increased political attention and tend to be subject to political costs through the political process. To reduce these political costs, large firms either undertake earnings management or disclose additional accounting information. CSR information disclosure can then be a way to solve the problem of political costs if firms wish to reduce the likelihood of adverse political action and thereby avoid the transfer of

firm profits to other stakeholders. From this point of view, we predict that firms with political costs will disclose CSR information voluntarily.

Many studies of CSR information disclosure employ firm size as a proxy for political costs and typically indicate relevance through the level of information disclosed (e.g. Patten 1992, 2002; Deegan and Gordon 1996; Neu et al. 1998; Magness 2006; Bewley and Magness 2008; Brammer and Pavelin 2008; Cox 2008; Stanny and Ely 2008; Dawkins and Fraas 2011; Yip et al. 2011; Cohen et al. 2012). For instance, Yip et al. (2011) employ firm size as a proxy for political costs and find a positive relationship between firms' CSR information disclosure and earnings management; they also conclude that earnings management bears a complementary relationship with CSR information disclosure when firms are subject to political costs. However, firms also have ethical incentives to disclose CSR information. Barth et al. (1997), for example, discuss the effect of regulatory pressure on the disclosure of environmental liabilities. Several other studies employ charging, rather than firm size, as a proxy variable representing the pressure on the firm imposed by governments and regulatory institutions, revealing that this also has a relationship with the level of CSR information disclosure (Neu et al. 1998; Huang and Kung 2010).

Creditors form another important stakeholder group with a potential effect on CSR information disclosure (Roberts 1992). For example, Branco and Rodriguez (2008) find a negative relationship between firms' debt ratios and CSR information disclosures on websites. Conversely, Huang and Kung (2010) survey the environmental information disclosures in the annual reports of Taiwanese firms and conclude that there is a positive relationship between creditors and the level of environmental information disclosure. Neu et al. (1998) and Clarkson et al. (2008) likewise prove the effect of the firm's debt ratio on environmental information disclosure.

Elsewhere, Branco and Rodriguez (2008) explain that well-known firms closer to their customers or targeted by the media have higher social visibility. In this regard, a firm's CSR information disclosure is related to its distance from its end-customers and the frequency of targeting by the media. Their study also shows a positive relationship between firms' CSR information disclosures on websites and media coverage. In other work, Yao, et al. (2011) find a positive relationship between the media coverage of firms that release CSR information to their customers and CSR information disclosures, while Maignan (2001) suggests that differences in customer demands for CSR information between countries affect the level of firm disclosure. This indicates that interest in CSR among customers and the media could encourage firms to disclose CSR information.

Suppliers also are important stakeholders requiring firms' CSR information. Here, we assume that suppliers require their business partners, as customers, to disclose their CSR information in order to maintain their own CSR reputation. Huang and Kung (2010) argue that, with regard to supply-chain management, suppliers might change their business partners to other firms considered more reliable and cooperative, or take adverse actions, such as suspending shipments to firms, when their demands are not met. Therefore, firms have an incentive to disclose environmental information to their suppliers to ensure reliability as a means of avoiding deterioration in their economic performance. However, the results in Huang and Kung (2010) do not indicate a relationship between the disclosure of environmental information and a variable representing suppliers.

Some studies also report a relationship between the industry sector and the level of firm disclosure (Cox 2008; Cox and Douthett Jr. 2009; Cho and Roberts 2010; Dawkins and Fraas 2011). This is expected, given that firms in the same industry generally display the same CSR characteristics, making them more likely to have similar CSR information disclosure practices. One of the characteristics affecting the level of firm disclosure is market concentration. For example, Ali et al. (2009) demonstrate that managers in an oligopolistic market share strategic information on firm performance with other firms as a means of influencing their competitors' management decisions. When CSR information affects the behavior of competitors in this way, firms in concentrated industries can exert a stronger effect on competitor decisions by strategically disclosing their CSR information. Huang and Kung (2010) also conclude that firms in concentrated industries tend to disclose their CSR information more actively.

Investors, also, have been identified in several studies as stakeholders with influence over firms' CSR information disclosure. Included in this body of work are studies that either regard firm environmental information disclosures as investor signals or examine the relationship between capital costs and CSR information disclosures (Clarkson et al. 2010; Dhaliwal et al. 2011). For example, Dhaliwal et al. (2011) find that firms with high capital costs decrease their capital after they disclose CSR information. Similarly, Clarkson et al. (2010) examine the relationship between capital costs and environmental information disclosures, as well as that between firms' CSR information and the information needs of corporate investors, financial analysts, and investors engaged in socially responsible investment (SRI). Using this approach, Clarkson et al. (2010) conclude that corporate investors and analysts evaluate firms with good CSR performance better, while Dhaliwal et al. (2011, 2012) find that financial analysts can decrease their prediction errors when they employ CSR information. Yao et al. (2011) and Stanny and Ely (2008) also found that corporate investors exert an effect on firms' CSR information disclosures, as can SRI investors that require firms to disclose CSR information.

Finally, Hess et al. (2002) suggest that a firm's participation in community activities helps enhance its reputation, and can be a way to create a competitive advantage. For example, Russo and Tencati (2009) argue that CSR strategies for small and medium-sized enterprises (SMEs) in Italy could be related to their level of involvement with the local community. However, they find no evidence of a link with CSR information disclosure. Kolk and Pinkse (2010) also examine the relationship between CSR information disclosure for Fortune 250 firms and participation in community activities, and again find no evidence of a relationship between them.

The extant research described above suggests that external stakeholders induce firms to disclose CSR information. Therefore, we employ the following hypothesis in this analysis.

Hypothesis 1: There is a positive relationship between the effects of external stakeholders and the level of firms' CSR information disclosure.

2.2. Internal Stakeholders

Internal stakeholders including shareholders and employees might have an effect on CSR information disclosures. Huang and Kung (2010) investigate that firms with a more diffused ownership structure disclose more environmental information, because firms have an incentive to disclose their information to their shareholders to reduce asymmetry of information among them. However, considering with corporate governance, the stock diversification might reduce managers' control incentives due to the dilutive effect of ownership relationship, and as a result, the demands on information disclosures necessary for firms' control might be decreased. When there is a long-term relationship between a firm and the shareholders, their demands on firms' information disclosures including CSR information can increase to influence the management decisions. Therefore, it can be expected that firms with stable shareholders tend to disclose their CSR information positively.

Huang and Kung (2010) define employees as internal stakeholders that can affect a firm's disclosure of environmental information. This is because a decline in a firm's environmental performance will undermine its future financial performance through negative attention from governments or a poor reputation among other stakeholders, which would eventually conflict with employee interests. Huang and Kung (2010) conclude that employees are generally interested in firms' environmental strategies and expect labor unions to convey their opinions on managerial decisions. This shows that employees, as a stakeholder group, exert an effect on firms' information disclosures. Therefore, we formulate the following hypothesis for internal stakeholders.

Hypothesis 2: There is a positive relationship between the effects of internal stakeholders and the level of firms' CSR information disclosure.

2.3. Intermediary Stakeholders

Intermediary stakeholders between firms and their external stakeholders can also exert an effect on CSR information disclosure. These intermediary stakeholders typically include environmental conservation groups and lobby groups. Groups that have an interest in CSR obtain this information from firms and then make their corporate evaluation of this information publicly available. They are also sometimes directly involved in the political process, and lobby for legislation on CSR. For this reason, firms in industries that are an easy target for CSR advocacy groups tend to disclose CSR information to avoid any undue pressure. For example, Patten (1991), Cho and Patten (2007), and Huang and Kung (2010) all conclude that firms in industries with a heavy environmental impact tend to voluntarily disclose their environmental information. In contrast, Neu et al. (1998), after employing a proxy represented by media reports, conclude that environmental groups have a negative influence on firms' disclosure of environmental information.

Auditing firms represent another intermediary stakeholder group. Toms (2002) suggests that firms undergo external environmental audits voluntarily as a signal to build a good reputation regarding their environmental management. If we adopt the notion from contract theory that the firm uses signaling with external auditors to build a favorable CSR reputation, the level of firms' CSR information disclosure will then vary depending on the demands of auditors. However, Toms (2002) fails to find a significant relationship between

the relevance of external auditors and the level of environmental information disclosure among British firms. Conversely, Huang and Kung (2010) reveal that Taiwanese firms audited by the Big Four audit firms generally have high environmental information disclosure scores.

Together, these studies suggest that groups intermediating between firms and external stakeholders may require CSR information related to the purposes of the external stakeholders they serve. Intermediary stakeholders may then also exert an effect on firms' CSR information disclosure. Therefore, we employ the following hypothesis.

Hypothesis 3: There is a positive relationship between the effects of intermediary stakeholders and the level of firms' CSR information disclosure.

3. RESEARCH DESIGN

3.1. Sample

For this analysis, we first sample 348 firms that issued CSR reports on the "environmental reporting plaza" provided by METI from among 2,789 firms across 22 industries that have a significant environmental impact. We select industries as having a significant environmental impact based on the volume both of the hazardous chemical substances and the greenhouse gas emissions from the data of MOE. We then obtain each firm's 2011 CSR report from its website. Information on corporate CSR activities is taken from the Corporate Social Responsibility Database provided by Toyo Keizai, Inc., which database is based on responses to questionnaire on CSR activities sent to listed firms. The final sample comprises 236 firms, after excluding 112 firms not included in the database and eight other firms missing financial data in the NEEDS CD-ROM maintained by Nikkei Digital Media, Inc.

3.2. Empirical Model and Variable Definitions

We employ the following model to examine the relationship between the effect of each stakeholder group and a firm's CSR information disclosure:

$$CSR = \beta_0 + \beta_1 SALE + \beta_2 OWNRR + \beta_3 INTRST + \beta_4 ADV + \beta_5 INVT + \beta_6 MKTS + \beta_7 SRI + \beta_8 EMP + \beta_9 GR + \beta_{10} LCL + \beta_{11} ADT + \beta_{12} ROA + \varepsilon \quad (1)$$

where the dependent variable *CSR* indicates the level of CSR information disclosure in a firm's CSR report. The explanatory variables; *SALE*, *INTRST*, *ADV*, *INVT*, *MKTS*, *LCL* representing external stakeholders are effects of governments, creditors, consumers, suppliers, competitors, and communities, respectively. The explanatory variables *OWNRR* and *EMP* represent the demand for CSR information disclosures from stable shareholders and employees as internal stakeholders. The explanatory variables proxying the effects of intermediary stakeholders between firms and external stakeholders on firms' CSR disclosure are *GR* and *ADT*, where *GR* denotes nonprofit organizations (NPOs) or

nongovernment organizations (NGOs) interested in CSR activities and *ADT* represents external auditors associated with the provision of CSR information.

The corporate CSR disclosure scores (*CSR*) employed as dependent variables are quantified based on the data in each firm's CSR report. When using the CSR disclosure analysis framework, previous studies employ either the GRI Sustainability Reporting Guidelines (Clarkson et al. 2008) or Wiseman's classification (Huang and Kung 2010). However, as the International Integrated Reporting Committee is currently revising the GRI guidelines and because Wiseman's classification focuses on environmental issues, we instead employ International Organization for Standardization (ISO) Social Responsibility Guidance Standard (ISO 26000), issued on November 1, 2010, as our framework for field surveys of information disclosure in the CSR reports. ISO 26000 was developed through a multistakeholder process, with the working group consisting of more than 400 experts representing government, industry, labor, consumers, NGOs, services, support, researchers, academic activities, and others from 42 international institutions across 99 countries. As a result, the CSR content required under ISO 26000 reflects the demands of international as well as Japanese stakeholders, and will be useful for appreciating the effect of stakeholder behavior on CSR information disclosure.

We quantify the disclosure of CSR information based on the seven core subjects under ISO 26000. These seven core subjects consist of 37 issues. The CSR disclosure score on each issue takes on the value 2 if firms disclose quantitative information, 1 if firms disclose qualitative information, and 0 if there is no information. The 37 issues included in ISO 26000 are also classified into seven core subjects, with the score in each subject calculated separately ("Organizational governance": *ORGAN*; "Human rights": *HUMAN*; "Labor practices": *LABOR*; "Environment": *ENVIR*; "Fair operating practices": *FAIR*; "Consumer issues": *CONSU*; "Community involvement and development": *COMMU*).

This analysis specifies various stakeholders as explanatory variables that influence CSR information disclosures by firms. We use six variables to proxy the effect of each group of external stakeholders. These are firm's sales (*SALE*) as a proxy for the effect of governments on CSR information disclosure, the interest expense to sales ratio (*INTRST*) to represent creditors, the advertising sales ratio (*ADV*) (relative to the average industry ratio) for consumers, and the inventory turnover rate (*INVT*) for suppliers. The ratio of sales to total sales in the industry (market share) (*MKTS*) represents the effects of competitors. *LCL* is a dummy variable indicating the firm's participation in community activities.

Testing the hypothesis 2, we use two variables as the effects of internal stakeholders. We use the number of employees (*EMP*) as a proxy variable for the effect of employees, and employ the stable shareholding ratio representing an effect of shareholders who have a long-term relationship with a firm (*OWNER*).

To proxy the effects of intermediary stakeholders on CSR information disclosure, we employ two variables. *GR* indicates the effect of environmental conservation groups, where *GR* is a dummy variable that takes a value of one when a firm belongs to an industry with a significant environmental impact, and zero otherwise. Using Japanese Standard Industry Classifications, these industries comprise pulp, paper, and paper products, chemicals, and the manufacture of petroleum and coal products, plastic products, ceramic, stone and clay products, iron and steel, nonferrous metals and products, fabricated metal

products, electrical machinery, equipment and supplies, and transportation equipment. Finally, *ADT* is a dummy variable that takes a value of one when a firm implements an external environment audit, and zero otherwise. Table 1 shows definition of variables.

<INSERT TABLE 1 HERE>

4. RESULTS

4.1. CSR Disclosure Practices

For the most part, disclosure in the CSR reports of 236 Japanese firms displays the following features.

- (1) Firms tend to have moved the information previously included in their environmental report to their CSR report.
- (2) Firms tend to provide only the most important information in their CSR reports in print format, with most other information published on their website.
- (3) Most Japanese firms prepare their CSR reports based on the MOE's "Environmental Reporting Guidelines" and the GRI's "Sustainability Reporting Guidelines, G3." However, some firms provide a comparison table with ISO 26000 (e.g., Toyota Motor Corp. and Takeda Pharmaceutical Co. Ltd.).

Table 2 presents firms' disclosure frequency in their CSR reports, classifying them by 37 issues.

<INSERT TABLE 2 HERE>

The categorization of CSR disclosure by issues in Table 2 reveals the following.

- (1) The 236 firms surveyed disclose information on 68 percent of the 37 issues possible in their CSR reports.
- (2) A firm's level of disclosure depends on the issue. Overall, firms display high levels of disclosure on the environment (98 percent) and low levels of disclosure on fair operating practices (54 percent) and community involvement and development (57 percent).

Through this survey, we find that CSR reports in each industry have the following characteristics.

- (1) Firms in the chemical industry disclose different levels of CSR information depending on firm size. Most SMEs release only environmental reports.
- (2) Firms in the petroleum industry typically describe the issue "Responsible political involvement" relatively fully.
- (3) Firms in the rubber industry provide relatively little information on the issue "Consumer data protection and privacy."
- (4) Firms in the mining industry disclose different levels of CSR information depending on firm size, while upstream firms tend to issue CSR reports.
- (5) Firms in the ceramics industry disclose well-balanced CSR information in their reports. They especially provide adequate information on the core subject of "Human rights."

- (6) Firms in the iron and steel industry disclose a high level of information in their CSR reports.
- (7) A high proportion of firms in the nonferrous metals industry disclose only their environmental reports.
- (8) Firms in the electric power and gas industries disclose the highest level of information of all industries, especially on the core subject of “Community involvement and development.”
- (9) The level of information disclosure in firms in the motor vehicle industry is relatively high. These firms describe extensively the issue of “Social dialogue,” likely because of the effect of labor unions.
- (10) Firms engaged in the production of medical products disclose a high level of CSR information. They generally provide a detailed description of the firm’s record on human rights, employment of people with disabilities, work–life balance, and prevention of corrupt practices.
- (11) Firms in the machinery industry disclose different levels of CSR information depending on firm size. Therefore, the average disclosure score is not high.
- (12) Firms in the textile industry provide adequate information on employment and work conditions.
- (13) In the electrical equipment industry, end-product producers disclose a high level of information, especially on the core subject of “Consumer issues.” However, SMEs in this industry typically prepare only environmental reports.
- (14) Firms in the food industry provide a detailed description of the core subjects “Consumer issues,” “Human rights,” and “Labor practices.” They also fully describe food aid for refugees, in relation to the issue of “Health.” For the most part, CSR reports in the food industry are colorful, bright, and reader-friendly with many photographs and pictures.
- (15) In the trading industry, both the six largest general trading firms and the more specialized trading firms disclose their information in a balanced manner.
- (16) In the retail industry, the scores on two core subjects, “Human rights” and “Labor practices,” are low, even though most firms in this industry employ many part-time workers.
- (17) Firms in the railroad and bus industries provide high-level CSR information, especially on safety at work. Scores on the core subjects of “Human rights” and “Labor practices” are also high because of the generous benefit packages provided to employees. The information disclosed displays some major similarities across firms.
- (18) Firms in the land, marine, and air transportation industry disclose a high level of information, and especially describe safety at work in fine detail.
- (19) In the service industry, it is difficult to summarize any features because of the wide variety of types of firms. However, many firms in this industry provide information on the core subject of “Consumer issues.”

Table 3 provides the ratio of CSR information disclosure to the maximum score in their CSR reports, classifying them by industry and 37 issues.

<INSERT TABLE 3 HERE>

4.2. Descriptive Statistics

Table 4 includes descriptive statistics for the variables in the analysis. The average disclosure score on the 37 issues is 30.28 (with a range of 6 - 47), This result indicates that the ratio of average disclosure score to the maximum score is around 41percent. The maximum score is 74 points when firms disclose quantitative information on all issues. The issues with the lowest disclosure score ratios are organizational fair operating practices and community involvement and development, which have average score ratios of 27 percent and 29 percent, respectively. The issue of labor practices includes five disclosure items and has an average score ratio of 40 percent. All firms disclose at least one item for the environment (four items), giving the highest average score ratio of 49 percent, and on average, firms disclose 40 percent related to human rights. Lastly, firms on average disclose 33 percent on consumer issues and 40 percent on corporate governance. Table 5 shows the categorization of CSR disclosure scores by industries.

<INSERT TABLES 4 & 5 HERE>

With regard to the explanatory variables in the descriptive statistics, the natural logarithm of sales are 12.88 on average. This means that the average sales for the sample firms total 392.4 billion yen. The average interest expense to sales ratio (*INTRST*) is 0.48 percent (range 0.00 – 4.17). With regard to *OWNR*, the statistics indicate that the average ratio of the number of stable shares to issued shares is 33.6 percent (range 0-77 percent). The advertising sales ratio (*ADV*) is 0.01 on average. The average inventory turnover period (*INVT*) is 0.12. The ratio of sales to total sales in the industry (*MKTS*) averages 0.05 (range 0.00-0.90) ranges from 0.00 to 0.90, with an average of 0.05. This indicates that the sample firms tend to develop their business activities in competitive markets. The sample contains 44 percent of firms with heavy environmental burden (*GR*). It suggests that 44 percent of the sample firms issue holdings related to CSR (*GR*). The value of *LCL* shows that 94 percent of the sample firms participate in local community activities. As shown by *EMP*, the firms have an average of 22,150 employees (range 190 - 360,940). The results for *ADT*, show that 84 percent of the sample firms undergo external environmental audits.

Table 6 details the correlations between the independent variables included in the estimation. The largest correlation coefficient is between *SALE* and *SRI* (0.63, $p < 0.001$). All of the other correlation coefficients are less than 0.60. To address any concerns with multicollinearity, we calculate variance inflation factors (VIFs) for the variables used in the multiple regression analysis. We find that there are no VIF values over five (representing the common rule of thumb for harmful multicollinearity) for any of the variables.

<INSERT TABLE 6 HERE>

4.3. Multiple Regression Analysis

Tables 7 to 13 include the least squares estimates of (1) of the effect of stakeholders on CSR information disclosures. Table 7 details the results of the multiple regression

analysis examining the relationship between the total CSR disclosure scores for the 37 items in firms' CSR information disclosures and the effect of each type of stakeholder. The coefficient on *SALE*, representing the effect of governments as external stakeholders, is significant, and has a positive relationship with CSR information disclosure ($p < 0.001$, one-tailed test). This finding is consistent with the results of earlier studies. That is, large firms tend to be subject to large costs in the political process. To avoid these political costs, these firms actively disclose their CSR information. There is also a positive relationship between *INTRST* and the levels of CSR information disclosure ($p = 0.001$). This is consistent with the hypothesis that creditors require firms to disclose their CSR information as a means of considering their risk of default. In addition, the coefficient on local residents (*LCL*) is significant at 1% level, and on the advertising sales ratio (*ADV*) is also significant at 10% level. The other explanatory variables, comprising the effects of suppliers (*INVT*), competitors (*MKTS*), and SRI investors (*SRI*) on CSR disclosure, are not statistically significant.

<INSERT TABLE 7 HERE>

Neither shareholders (*OWNER*) nor employees (*EMP*) are statistically significant. This result did not support Hypothesis 2. With regard to the explanatory variables signifying intermediary stakeholders, *GR* is significant ($p = 0.012$). This indicates that firms in industries with a significant environmental impact and those with a close connection with NPOs, NGOs, and lobby groups disclose more CSR information. Firms tend to accommodate their requests for CSR information in a positive manner. On the other hand, external environmental audit (*ADT*) does not have a significant effect on CSR information disclosure. This result is not consistent with our expectation that audited firms would disclose more information because of the audit requirements of their external auditors. The result also differs from that in Huang and Kung (2010).

The level of CSR information disclosure meets the sometimes competing demands of the various stakeholders involved in a firm's activities. Accordingly, we hypothesize that stakeholders' requests for CSR information is not homogeneous and that the level of their demand for information disclosure will depend on the firm and/or the type of information sought. To address this, we divide the CSR information into six categories (*HUMAN*; *LABOR*; *ENVIR*; *FAIR*; *CONSU*; *COMMU*). Because ISO26000 rests *ORGAN* on other categories as a superordinate category, we exclude it. We then undertake regression testing as a means of verifying the relevance of each disclosure score with the different types of stakeholders and revealing the relationship between each stakeholder and the firm's CSR information disclosures.

Table 8 presents the results examining the relationship between stakeholders and human rights disclosure. As shown, for external stakeholders, the estimated coefficients for *SALE*, and the *INTRST* are positive and significant ($p < 0.001$; $0.60, p = 0.05$). For internal stakeholders, the number of employees also exerts an effect on information disclosure on human rights ($0.60, p = 0.09$). On the other hand, the estimated coefficient for *OWNER* representing internal stakeholders is significant at 10% level, in contrast to the result of the model employing CSR disclosure scores as a dependent variable. As for intermediary stakeholders, firms in industries with a significant environmental impact (*GR*) also tend to

disclose their human rights information (0.72, $p = 0.06$). These results are similar to those obtained earlier for the total CSR information scores.

<INSERT TABLE 8 HERE>

Table 9 presents the results for the regression analysis examining the relationship between the various stakeholders and disclosure on labor practices. For external stakeholders, *SALE*, *INTRST*, *ADV*, and *LCL* have a significant effect on such information disclosure (0.43, $p = 0.001$; 0.34, $p = 0.05$; 10.91, $p = 0.07$; 1.61, $p = 0.001$, respectively). For intermediary stakeholders, having a significant environmental impact (*GR*) affects the level of information disclosure (0.78; $p = 0.002$). However, neither of effects of internal stakeholders are significant.

<INSERT TABLE 9 HERE>

Table 10 presents the results on the relationship between stakeholders and environmental disclosure. Both *INTRST* and *GR* have significant coefficient. In contrast to the result on total CSR information scores, *SALE* is not significant. Meanwhile, there is positive relationship between *INVT* and *ENVIR* (2.78; $p = 0.003$).

<INSERT TABLE 10 HERE>

As shown in Table 11 the regression where fair operating practices is the dependent variable provides the same results as for the total CSR information score, with the exceptions of *ADV* and *INVT*. Once again, the respective estimates for *SALE*, *INTRST* and *LCL* representing external stakeholders have a positive relationships with firms' information disclosure (0.34, $p = 0.015$; 0.35, $p = 0.009$; 0.73, $p = 0.024$). Industries with a significant environmental impact also have a positive relationship with information disclosures (0.35, $p = 0.034$, respectively). However, we are unable to reject the null hypothesis that the estimated coefficient for *ADV* is not significantly different from zero. Furthermore, we found that *INVT*, which is not significant in total CSR disclosure scores model, have significant coefficient (1.63, $p = 0.096$).

<INSERT TABLE 11 HERE>

Table 12 provides the results of the regression analysis examining the relationship between information disclosures on consumer issues and stakeholders. As shown, *SALE*, *INTRST*, *ADV*, and *LCL* (representing external stakeholders) have positive effects on firms' information disclosures (0.29, $p = 0.014$; 0.73, $p < 0.001$; 15.99, $p = 0.015$; 1.48, $p = 0.003$). Furthermore, *MKTS*, which is insignificant in the total disclosure scores model, has positive effect (2.85, $p = 0.019$). The proxy variables for intermediary stakeholders, *GR*, have no significant association with information disclosure on consumer issues (0.20, $p = 0.231$).

<INSERT TABLE 12 HERE>

Table 13 provides the estimated results of the regression analysis on the relationship between information disclosures on community activities and firm stakeholders. As shown, firm size (external stakeholders) is positively related to information disclosure in this area (0.59, $p < 0.001$). *INTRST*, *ADV*, and *LCL* have positive relationships with firms' disclosure on community activities (0.74, $p < 0.001$; 12.55, $p = 0.025$; 0.69, $p = 0.064$). The explanatory variables proxying the interests of intermediary stakeholders, *GR*, has significant positive effects on disclosures on consumer issues (0.30, $p = 0.098$).

<INSERT TABLE 13 HERE>

To analyze the relationship between firms' CSR disclosure frequency and each stakeholder effect, we estimate the regression models using disclosure frequency of 37 issues as dependent variables. The results show the almost same of the model employing CSR disclosure scores as dependent variables, except on *OWNER*. The *OWNER*, which is not significant in Table 7 is positive and significant at 10% level in the model.

5. SUMMARY AND CONCLUSIONS

This paper examined the effects of stakeholders on firms' CSR information disclosures. In Japan, firms voluntarily disclose CSR information, with disclosure practices varying across firms. For the most part, CSR reports are prepared based on the requirements of a diverse range of users, whereas financial reports have the purpose of providing useful information for investor decision making. For a firm to convey its CSR information more effectively, it is important that it consider the potential user and their information demands to promote effective communication of CSR information and the firm's CSR activities. This paper mainly focused on the relationship between firms' CSR information disclosure and the information demands of a wide range of stakeholders.

In reference to a study by Huang and Kung (2010) surveying environmental information disclosures in annual reports, this paper quantified the CSR information released by Japanese listed firms' CSR reports and examined the relationship between CSR information disclosures and the information needs of firm stakeholders. The results revealed that large firms generally disclosed higher-quality CSR information. This is consistent with the idea that firms under scrutiny from governments and/or politicians, and thereby exposed to political costs through the political process, disclose CSR information voluntarily as a means of avoiding these costs. The results also indicated that firms with high interest expense to sales ratio disclosed more CSR information. This is consistent with the argument that creditors require firms with a high default risk to disclose additional CSR information. In addition to governments and creditors, information needs of consumers and local residents had positive effects on CSR information disclosure.

We found that neither employees nor shareholders as representative internal stakeholders have effect on CSR information disclosure.

With regard to intermediary stakeholders, the results showed that having a significant environmental impact and engaging in cooperative activities with CSR advocacy groups are positively related to firms' CSR information disclosure. This indicates that firms that

are interested in the activities engaged in by stakeholders mediating between firms and external stakeholders react to their requests and needs for information. However, the variables proxying the CSR information needs of environmental auditors had no significant influence on firms' CSR information disclosures.

The findings also indicated that stakeholders' effects differed for the different disclosure items in the CSR reports. For instance, government exerted a significant effect on the total CSR information score, as well as significant effects on five core CSR subjects, namely human rights, labor practices, fair operating practices, consumers, and community involvement and development, but not the environment. Creditors, however, exerted a significant effect on CSR information disclosure in the all of six areas. Information needs of consumers were associated with only labor practices, consumer issues, and community involvement and development. The information needs of the local residents did not have association with human rights and environment. On the other hand, information needs of environmental protection groups was not related to consumer issues and community issues. These findings reinforce the suggestion that the different stakeholder types (internal, external, and intermediary) have dissimilar CSR information needs.

This research topic arises from the findings in this paper that some of the stakeholders we expected to have an impact displayed no significant relationship with CSR information disclosure. There is the possibility that these stakeholders delegate their information needs to other stakeholders, which then affect firms' information disclosures. In future research, we should consider the effect of the various stakeholders' structured information needs on CSR information disclosure. However, this research would contribute to our understanding of the effect of stakeholders on firms' CSR information disclosure more inclusively.

REFERENCES

- Adams, C.A. and Whelan, G. (2009), "Conceptualising future change in corporate sustainability reporting", *Accounting, Auditing & Accountability Journal*, Vol. 22 No.1, pp. 118-43.
- Aerts, W. and Cormier, D. (2009), "Media legitimacy and corporate environmental communication", *Accounting, Organization and Society*, Vol. 34, pp. 1-27.
- Ali, A., Klasa, S. and Yeung, E. (2009), "Product market competition and corporate disclosure policy", Working Paper, University of Texas Dallas, 10 May 2013.
- Al-Tuwaijri, S.A., Christensen, T.E. and Hughes II, K.E. (2004), "The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equation approach", *Accounting, Organization and Society*, Vol. 29, pp. 447-71.
- Barth, M.E., McNichols, M.F. and Wilson, G.P. (1997), "Factors influencing firms' disclosures about environmental liabilities", *Review of Accounting Studies*, Vol. 2, pp. 35-64.
- Bebbington, J., Brown, J., Frame, B. and Thomson, I. (2007), "Theorizing engagement: The potential of a critical dialogic approach", *Accounting, Auditing & Accountability Journal*, Vol. 20 No. 3, pp. 356-81.
- Bewley, K. and Magness, V. (2008), "The impact of a change in regulation on environmental disclosure: SAB92 and the US chemical industry", *Issues in Social and Environmental Accounting*, Vol. 2 No. 1, pp. 61-88.
- Boesso, G. and Kumar, K. (2007), "Drivers of corporate voluntary disclosure: A framework and empirical evidence from Italy and the United States", *Accounting, Auditing & Accountability*

Journal, Vol. 20 No. 2, pp. 269-96.

- Brammer, S. and Pavelin, S. (2008), "Factors influencing the quality of corporate environmental disclosure", *Business Strategy and the Environment*, Vol. 17, pp. 120-36.
- Branco, M.C. and Rodrigues, L.L. (2008), "Factors influencing social responsibility disclosure by Portuguese companies", *Journal of Business Ethics*, Vol. 83, pp. 685-701.
- Cho, C.H. and Patten, D.M. (2007), "The role of environmental disclosures as tools of legitimacy: A research note", *Accounting, Organization and Society*, Vol. 32, pp. 639-47.
- Cho, C.H. and Roberts, R.W. (2010), "Environmental reporting on the internet by America's toxic 100: Legitimacy and self-presentation", *International Journal of Accounting Information Systems*, Vol. 11, pp. 1-16.
- Cho, C.H., Roberts, R.W. and Patten, D.M. (2010), "The language of US corporate environmental disclosure", *Accounting, Organization and Society*, Vol. 35, pp. 431-43.
- Clarkson, P.M. and Li, Y. (2004), "The market valuation of environmental capital expenditures by pulp and paper companies", *The Accounting Review*, Vol. 79 No. 2, pp. 329-53.
- Clarkson, P.M., Li, Y., Richardson, G.D. and Vasvari, F.P. (2008), "Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis", *Accounting, Organization and Society*, Vol. 33, pp. 303-27.
- Clarkson, P.M., Fang, X.H., Li, Y. and Richardson, G. (2010), "The relevance of environmental disclosure for investors and other stakeholder groups: Which audience are firms speaking to?", Working Paper, University of Toronto. 10 May 2013.
- Cohen, J.R., Holder-Webb, L.L., Nath, L. and Wood, D. (2012), "Corporate reporting of nonfinancial leading indicators of economic performance and sustainability", *Accounting Horizon*, Vol. 26 No. 1, pp. 65-90.
- Collier, P.M. (2008), "Stakeholder accountability: A field study of the implementation of a governance improvement plan", *Accounting, Auditing & Accountability Journal*, Vol. 21 No. 7, pp. 933-54.
- CorporateRegister.com (2008), *Global Winners & Reporting Trends*, CorporateRegister.com Limited, London, UK.
- Cox, C.A. (2008), "Factors associated with the level of superfund liability disclosure in 10 K reports: 1991-1997", *Academy of Accounting and Financial Studies Journal*, Vol. 12 No. 3, pp. 1-17.
- Cox, C.A. and Douthett Jr., E.B. (2009), "Further evidence on the factors and valuation associated with the level of environmental liability disclosures", *Academy of Accounting and Financial Studies Journal*, Vol. 13 No. 3, pp. 1-26.
- Dawkins, C.E. and Fraas, J.W. (2011), "Erratum to: Beyond acclamations and excuses: Environmental performance, voluntary environmental disclosure and the role of visibility", *Journal of Business Ethics*, Vol. 99, pp. 383-97.
- Deegan, C. and Gordon, B. (1996), "A study of the environmental policies of Australian corporations", *Accounting and Business Research*, Vol. 26 No.3, pp. 187-89.
- De Villers, C. and Van Staden, C.J. (2011), "Where firms choose to disclose voluntary environmental information", *Journal of Accounting and Public Policy*, Vol. 30, pp. 504-25.
- Dhaliwal, D.S., Li, O.Z., Tsang, A. and Yang, Y.G. (2011), "Voluntary nonfinancial disclosure and the costs of equity capital: The initiation of corporate social responsibility reporting", *The Accounting Review*, Vol. 86 No. 1, pp. 59-100.
- Dhaliwal, D.S., Radhakrishnan, S., Tsang, A. and Yang, Y.G. (2012), "Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure", *The Accounting Review*, Vol. 87 No. 3, pp. 723-59.
- Elijido-Ten, E., Kloot, L. and Clarkson, P. (2010), "Extending the application of stakeholder influence strategies to environmental disclosures: An exploratory study from a developing

- country”, *Accounting, Auditing & Accountability Journal*, Vol. 23 No. 8, pp. 1032-59.
- Espinosa, M. and Trombetta, M. (2004), “The reputational consequences of disclosures”. *I.V.I.E. Working Paper No. EC 2004-10*, SSRN available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=511682 (accessed 10 May 2013).
- Georgakopoulos, G. and Thomson, I. (2008), “Social reporting, engagements, controversies and conflict in an arena context”, *Accounting, Auditing & Accountability Journal*. Vol. 21 No. 8, pp. 1116-43.
- Gray, R., Dey, C., Owen, D., Evans, R. and Zadek, S. (1997), “Struggling with the praxis of social accounting”, *Accounting, Auditing & Accountability Journal*, Vol. 10 No. 3, pp. 325-64.
- Guidry, R.P. and Patten, D.M. (2010), “Market reactions to the first-time issuance of corporate sustainability reports: Evidence that quality matters”, *Sustainability Accounting, Management and Policy Journal*, Vol. 1 No. 1, pp. 33-50.
- Hess, D., Rogovsky, N. and Dunfee, T.W. (2002), “The next wave of corporate community involvement”, *California Management Review*, Vol. 44 No. 2, pp. 110-25.
- Hooks, J. and Van Staden, C.J. (2011), “Evaluating environmental disclosures: The relationship between quality and extent measures”, *The British Accounting Review*, Vol. 43, pp. 200-13.
- Huang, C.-L. and Kung, F.-H. (2010), “Drivers of environmental disclosure and stakeholder expectation: Evidence from Taiwan”, *Journal of Business Ethics*, Vol. 96, pp. 435-51.
- Kim, Y., Park, M.S. and Wier, B. (2012), “Is earnings quality associated with corporate social responsibility?”, *The Accounting Review*, Vol. 87 No. 3, pp. 761-96.
- Kokubu, K., Noda, A., Onishi, Y., Shinabe, T. and Higashida, A. (2002), “Specified factors of environmental disclosures by Japanese firms”, *Corporate Accounting*, Vol. 54 No. 2, pp. 74-80. (In Japanese)
- Kolk, A. and Pinkse, J. (2010), “The integration of corporate governance in corporate social responsibility disclosures”, *Corporate Social Responsibility and Environmental Management*, Vol. 17 No. 1, pp. 15-26.
- KPMG (2008), *KPMG international survey of corporate responsibility reporting 2008*, KPMG International, Netherlands.
- Magness, V. (2006), “Strategic posture, financial performance and environmental disclosure: An empirical test of legitimacy theory”, *Accounting, Auditing & Accountability Journal*. Vol. 19 No. 4, pp. 540-63.
- Maignan, I. (2001), “Consumers’ perceptions of corporate social responsibilities: A cross-cultural comparison”, *Journal of Business Ethics*, Vol. 30, pp. 57-72.
- Ministry of Environment (MOE) (2005), *Companion for Combined Application of Environmental Reporting Guidelines and GRI Guidelines*, Ministry of Environment, Tokyo, Japan.
- Ministry of Environment (MOE) (2007), *Survey for Eco-friendly Corporate Behavior*, Ministry of Environment, Tokyo, Japan.
- Moneva, J.M. and Cuellar, B. (2009), “The value relevance of financial and non-financial environmental reporting”, *Environmental Resource and Economics*, Vol. 44, pp. 441-56.
- Moneva, J.M., Rivera-L., J.M. and Muñoz-T, M.J. (2007), “The corporate stakeholder commitment and social and financial performance”, *Industry Management and Data System*, Vol. 107 No. 1, pp. 84-102.
- Neu, D., Warsame, H. and Pedwell, K. (1998), “Managing public impressions: Environmental disclosures in annual reports”, *Accounting, Organizations and Society*, Vol. 23 No. 3, pp. 265-82.
- Orij, R. (2010), “Corporate social disclosures in the context of national cultures and stakeholder theory”, *Accounting, Auditing & Accountability Journal*, Vol. 23 No. 7, pp. 868-89.
- O’Sullivan, N. and O’Dwyer, B. (2009), “Stakeholder perspectives on a financial sector legitimation process: The case of NGOs and the equator principles”, *Accounting, Auditing &*

- Accountability Journal*, Vol. 22 No. 4, pp. 553-87.
- Patten, D. (1991), "Exposure, legitimacy, and social disclosure", *Journal of Accounting and Public Policy*, Vol. 10, pp. 297-308.
- Patten, D.M. (1992), "Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory", *Accounting, Organizations and Society*, Vol. 17 No. 5, pp. 471-75.
- Patten, D.M. (2002), "The relation between environmental performance and environmental disclosure: A research note", *Accounting, Organizations and Society*, Vol. 27 No. 8, pp. 763-73.
- Roberts, R.W. (1992), "Determinants of corporate social responsibility disclosure: An application of stakeholder theory", *Accounting, Organizations and Society*, Vol. 17 No. 6, pp. 595-612.
- Russo, A. and Tencati, A. (2009), "Formal vs. informal CSR strategies: Evidence from Italian micro, small, medium-sized, and large firms", *Journal of Business Ethics*, Vol. 85 Supplement 2, pp. 339-53.
- Stanny, E. and Ely, K. (2008), "Corporate environmental disclosures about the effects climate change", *Corporate Social Responsibility and Environmental Management*, Vol. 15, pp. 338-48.
- Tilling, M.V. and Tilt, C.A. (2010), "The edge of legitimacy: Voluntary social and environmental reporting in Rothmans' 1956-1999 annual reports", *Accounting, Auditing & Accountability Journal*, Vol. 23 No. 1, pp. 55-81.
- Toms, J.S. (2002), "Firm resources, quality signals and the determinants of corporate environmental reputation: Some UK evidence", *The British Accounting Review*, Vol. 34, pp. 257-82.
- Watts, R. and Zimmerman, J. (1986), *Positive Accounting Theory*, Prentice Hall, Englewood Cliffs.
- Yao, S., Wang, J., and Song, L. (2011), "Determinants of social responsibility disclosure by Chinese firms", Discussion Paper 72, The University of Nottingham, China Policy Institute, 10 May 2013.
- Yip, E., Van Staden, C. and Cahan, S. (2011), "Corporate social responsibility reporting and earnings management: The role of political costs", *Australasian Accounting Business and Finance Journal*, Vol. 5 No. 3, pp. 17-34.

Table 1. Variable definition

Disclosure / Stakeholder group	Variables	Description
CSR disclosure score total	<i>CSR</i>	Total disclosure score based on the 37 issues on ISO26000
Organizational governance score	<i>ORGAN</i>	Disclosure score for 1 disclosure item on organizational governance
Human rights score	<i>HUMAN</i>	Disclosure score for 8 disclosure items on human rights
Labor practices score	<i>LABOR</i>	Disclosure score for 5 disclosure items on labor practices
Environment score	<i>ENVIR</i>	Disclosure score for 4 disclosure items on environment
Fair operating practices score	<i>FAIR</i>	Disclosure score for 5 disclosure items on fair operating practices
Consumer issues score	<i>CONSU</i>	Disclosure score for 7 disclosure items on consumer issues
Community involvement and development score	<i>COMMU</i>	Disclosure score for 7 disclosure items on community involvement and development
Shareholders	<i>OWNR</i>	Stable shareholders ratio
Employees	<i>EMP</i>	The number of employees (thousand)
Government	<i>SALE</i>	Sales (log)
Creditors	<i>INTRST</i>	Interest expense to sales ratio
Consumers	<i>ADV</i>	Advertisement expenses / Sales
Suppliers	<i>INVT</i>	Inventory turnover period / Industry average of inventory turnover period
Competitors	<i>MKTS</i>	Sales / Total sales in the industry
SRI	<i>SRI</i>	Holdings including SRI and eco-fund (dummy variable)
Local residents	<i>LCL</i>	Presence or absence of participation in community activities (dummy variable)
Environment conservation groups	<i>GR</i>	An industry with a significant environmental burden (dummy variable)
Environment auditors	<i>ADT</i>	Implementation of external environment audit (dummy variable)
Return on assets	<i>ROA</i>	Operating income / Assets

Table 2. CSR disclosure frequency by ISO26000, 37 issues (n=236)*

Items	Core subjects and issues	ISO section	Percentage of firms disclosing the item(%)
1	Organizational Governance	6.2	80%
	Human rights	6.3	65%
2	Due diligence	6.3.3	70%
3	Human rights risk situations	6.3.4	49%
4	Avoidance of complicity	6.3.5	41%
5	Resolving grievances	6.3.6	68%
6	Discrimination and vulnerable groups	6.3.7	77%
7	Civil and political rights	6.3.8	71%
8	Economic, social and cultural rights	6.3.9	70%
9	Fundamental rights at work	6.3.10	73%
	Labor practices	6.4	80%
10	Employment and employment relationships	6.4.3	81%
11	Conditions of work and social protection	6.4.4	85%
12	Social dialogue	6.4.5	53%
13	Health and safety at work	6.4.6	90%
14	Human development and training in the workplace	6.4.7	93%
	Environment	6.5	98%
15	Prevention of pollution	6.5.3	98%
16	Sustainable resource use	6.5.4	99%
17	Climate change mitigation and adaptation	6.5.5	99%
18	Protection and restoration of the natural environment	6.5.6	96%
	Fair operating practices	6.6	54%
19	Anti-corruption	6.6.3	76%
20	Responsible political involvement	6.6.4	21%
21	Fair competition	6.6.5	74%
22	Promoting social responsibility in the sphere of influence	6.6.6	69%
23	Respect for property rights	6.6.7	27%
	Consumer issues	6.7	66%
24	Fair marketing, factual and unbiased information and fair contractual practices	6.7.3	64%
25	Protecting consumers' health and safety	6.7.4	89%
26	Sustainable consumption	6.7.5	81%
27	Consumer service, support, and dispute resolution	6.7.6	79%
28	Consumer data protection and privacy	6.7.7	63%
29	Access to essential services	6.7.8	25%
30	Education and awareness	6.7.9	61%
	Community involvement and development	6.8	57%
31	Community involvement	6.8.3	94%
32	Education and culture	6.8.4	82%
33	Employment creation and skills development	6.8.5	42%
34	Technology development and access	6.8.6	36%
35	Wealth and income creation	6.8.7	25%
36	Health	6.8.8	65%
37	Social investment	6.8.9	53%
	Total		68%

* The ratios of average disclosure frequency on CSR information disclosures by 37 issues of ISO26000 (the disclosure frequency takes on the value 1 if firms disclose qualitative information, and 0 if there is no information.)

Table 4. Descriptive statistics (n = 236)

	Mean	Max	Min	Std. Dev.
<i>CSR</i>	30.28	47.00	6.00	9.95
<i>ORGAN</i>	0.80	1.00	0.00	0.40
<i>HUMAN</i>	6.08	11.00	0.00	3.58
<i>LABOR</i>	5.09	9.00	0.00	2.01
<i>ENVIR</i>	6.67	8.00	1.00	1.06
<i>FAIR</i>	2.71	5.00	0.00	1.42
<i>CONSU</i>	4.92	9.00	0.00	2.11
<i>COMMU</i>	4.01	9.00	0.00	1.98
<i>CSRF</i>	25.43	37.00	4.00	8.46
<i>ORGANF</i>	0.80	1.00	0.00	0.40
<i>HUMANF</i>	5.30	8.00	0.00	3.00
<i>LABORF</i>	4.03	5.00	0.00	1.35
<i>ENVIRF</i>	3.95	4.00	1.00	0.32
<i>FAIRF</i>	2.69	5.00	0.00	1.41
<i>CONSUF</i>	4.65	7.00	0.00	1.89
<i>COMMUF</i>	4.00	7.00	0.00	1.96
<i>SALE</i>	12.88	16.77	8.82	1.49
<i>OWNR</i>	33.64	77.02	0.03	15.28
<i>INTRST</i>	0.48	4.17	0.00	0.62
<i>ADV</i>	0.01	0.10	0.00	0.02
<i>INVT</i>	0.12	0.41	0.00	0.08
<i>MKTS</i>	0.05	0.90	0.00	0.10
<i>SRI</i>	0.45	1.00	0.00	0.50
<i>EMP</i>	22.15	366.94	0.19	42.93
<i>GR</i>	0.44	1.00	0.00	0.50
<i>LCL</i>	0.94	1.00	0.00	0.24
<i>ADT</i>	0.84	1.00	0.00	0.36
<i>ROA</i>	0.76	5.41	-8.26	1.66

* *CSR* = Total CSR disclosure score, *ORGAN* = Organizational governance score, *HUMAN* = Human rights score, *LABOR* = Labor practices score, *ENVIR* = Environment score, *FAIR* = Fair operating practices score, *CONSU* = Consumer issues score, *COMMU* = Community involvement and development score; *CSRF* = Total CSR disclosure frequency, *ORGANF* = Organizational governance frequency, *HUMANF* = Human rights frequency, *LABORF* = Labor practices frequency, *ENVIRF* = Environment frequency, *FAIRF* = Fair operating practices frequency, *CONSUF* = Consumer issues frequency, *COMMUF* = Community involvement and development score;; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 5. CSR categories and disclosure scores by industry^a (n = 236)

	Governance (1 issue)	Human (8 issues)	Labour (5 issues)	Environment (4 issues)	Practices (5 issues)	Consumer (7 issues)	Community (7 issues)	Total (37 issues)
Chemical (39 firms)	0.82 ^a (0.41) ^b	5.26 (0.33)	4.95 (0.39)	6.87 (0.49)	2.38 (0.24)	3.87 (0.28)	2.97 (0.21)	27.13 (0.37)
Petroleum (2 firms)	1.00 (0.50)	9.00 (0.56)	7.50 (0.50)	7.00 (0.50)	3.00 (0.30)	7.00 (0.43)	5.50 (0.39)	40.00 (0.54)
Rubber (6 firms)	0.67 (0.33)	5.17 (0.32)	5.17 (0.40)	7.17 (0.50)	2.17 (0.22)	5.17 (0.35)	4.83 (0.35)	30.33 (0.41)
Mining (1 firm)	1.00 (0.50)	9.00 (0.56)	5.00 (0.40)	8.00 (0.50)	3.00 (0.30)	6.00 (0.43)	6.00 (0.43)	38.00 (0.51)
Ceramics (7 firms)	0.86 (0.43)	6.71 (0.42)	5.71 (0.41)	6.57 (0.48)	3.43 (0.34)	5.14 (0.37)	5.14 (0.37)	33.57 (0.45)
Iron and steel (2 firms)	1.00 (0.50)	9.50 (0.59)	6.50 (0.45)	7.00 (0.50)	3.50 (0.35)	6.00 (0.43)	5.00 (0.36)	38.50 (0.52)
Non-ferrous metal (13 firms)	0.85 (0.42)	6.31 (0.39)	5.38 (0.43)	7.08 (0.50)	2.77 (0.28)	5.15 (0.33)	2.54 (0.18)	30.08 (0.41)
Electric power (9 firms)	0.89 (0.44)	9.44 (0.59)	6.44 (0.49)	7.11 (0.50)	4.11 (0.39)	7.33 (0.48)	7.11 (0.49)	42.44 (0.57)
Gas (2 firms)	0.50 (0.25)	10.50 (0.66)	6.00 (0.50)	5.50 (0.50)	3.50 (0.35)	8.00 (0.50)	7.00 (0.50)	41.00 (0.55)
Motor Vehicles (18 firms)	0.78 (0.39)	6.72 (0.42)	5.83 (0.43)	7.06 (0.50)	3.17 (0.32)	5.39 (0.37)	5.89 (0.42)	34.83 (0.47)
Medical product (14 firms)	0.93 (0.46)	6.71 (0.42)	5.79 (0.46)	6.79 (0.50)	2.79 (0.28)	6.57 (0.42)	4.57 (0.33)	34.14 (0.46)
Machinery (22 firms)	0.68 (0.34)	4.55 (0.28)	4.05 (0.32)	6.95 (0.50)	2.09 (0.21)	3.86 (0.28)	3.95 (0.28)	26.14 (0.35)
Textile (6 firms)	0.83 (0.42)	7.00 (0.44)	6.33 (0.43)	7.17 (0.50)	3.33 (0.33)	5.83 (0.40)	5.50 (0.39)	36.00 (0.49)
Electrical equipment (22 firms)	0.64 (0.32)	5.68 (0.36)	4.73 (0.38)	7.00 (0.50)	2.95 (0.29)	4.95 (0.34)	3.82 (0.27)	29.77 (0.40)
Food (24 firms)	0.79 (0.40)	6.79 (0.42)	5.04 (0.41)	6.88 (0.50)	2.83 (0.28)	5.33 (0.35)	3.21 (0.23)	30.88 (0.42)
Trading (18 firms)	0.89 (0.44)	5.61 (0.35)	4.33 (0.39)	5.83 (0.50)	2.94 (0.29)	3.94 (0.27)	3.50 (0.25)	27.06 (0.37)
Retailing (7 firms)	0.43 (0.21)	4.14 (0.26)	4.43 (0.36)	6.57 (0.46)	1.57 (0.16)	4.86 (0.33)	2.86 (0.20)	24.86 (0.34)
Railroad and bus transportation (4 firms)	0.75 (0.38)	6.75 (0.42)	4.50 (0.33)	6.25 (0.50)	2.75 (0.28)	5.25 (0.30)	4.75 (0.34)	31.00 (0.42)
Land transportation (3 firms)	1.00 (0.50)	5.67 (0.35)	4.67 (0.40)	6.00 (0.50)	2.00 (0.20)	4.67 (0.33)	2.33 (0.17)	26.33 (0.36)
Marin transportation (4 firms)	1.00 (0.50)	5.25 (0.33)	4.75 (0.40)	6.00 (0.50)	2.00 (0.20)	4.50 (0.29)	4.00 (0.29)	27.50 (0.37)
Air transportation (1 firm)	1.00 (0.50)	6.00 (0.38)	4.00 (0.40)	4.00 (0.50)	2.00 (0.20)	6.00 (0.36)	2.00 (0.14)	25.00 (0.34)
Service (12 firms)	0.92 (0.46)	6.00 (0.38)	5.25 (0.42)	4.67 (0.45)	2.25 (0.23)	4.33 (0.29)	4.17 (0.30)	27.58 (0.37)
Average score (Average percentage)	0.80 (0.40)	6.08 (0.38)	5.09 (0.40)	6.67 (0.49)	2.71 (0.27)	4.92 (0.33)	4.01 (0.29)	30.28 (0.41)

^a Average disclosure score on CSR information disclosures by industry (the disclosure score takes on the value 2 if firms disclose quantitative information, 1 if firms disclose qualitative information, and 0 if there is no information.)

^b The ratios shown in parentheses are ratios of average disclosure score in the industry to the maximum score.

Table 6. Correlation matrix (n = 236)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) <i>SALE</i>	1.000 ^a											
	---- ^b											
	---- ^c											
(2) <i>OWNR</i>	-0.336	1.000										
	-5.450	----										
	0.000	----										
(3) <i>INTRST</i>	0.115	-0.227	1.000									
	1.764	-3.572	----									
	0.079	0.000	----									
(4) <i>ADV</i>	0.092	-0.155	-0.138	1.000								
	1.415	-2.402	-2.132	----								
	0.158	0.017	0.034	----								
(5) <i>INVT</i>	-0.181	-0.163	-0.084	-0.079	1.000							
	-2.823	-2.521	-1.283	-1.213	----							
	0.005	0.012	0.201	0.226	----							
(6) <i>MKTS</i>	0.474	-0.312	0.165	0.001	-0.129	1.000						
	8.227	-5.030	2.563	0.011	-1.992	----						
	0.000	0.000	0.011	0.991	0.048	----						
(7) <i>SRI</i>	0.630	-0.297	0.100	0.201	-0.053	0.354	1.000					
	12.395	-4.759	1.540	3.136	-0.815	5.781	----					
	0.000	0.000	0.125	0.002	0.416	0.000	----					
(8) <i>EMP</i>	0.591	-0.200	-0.017	0.133	-0.024	0.320	0.374	1.000				
	11.200	-3.127	-0.257	2.060	-0.374	5.158	6.160	----				
	0.000	0.002	0.797	0.041	0.709	0.000	0.000	----				
(9) <i>GR</i>	-0.051	0.024	-0.140	-0.020	0.253	-0.099	-0.054	0.062	1.000			
	-0.776	0.361	-2.168	-0.305	3.998	-1.523	-0.828	0.949	----			
	0.439	0.718	0.031	0.760	0.000	0.129	0.409	0.344	----			
(10) <i>LCL</i>	0.195	0.027	-0.026	0.090	-0.098	0.094	0.202	0.107	-0.014	1.000		
	3.044	0.413	-0.402	1.384	-1.512	1.440	3.161	1.644	-0.209	----		
	0.003	0.680	0.688	0.168	0.132	0.151	0.002	0.102	0.835	----		
(11) <i>ADT</i>	0.055	-0.055	-0.116	0.017	0.023	0.065	0.042	0.101	0.031	0.174	1.000	
	0.839	-0.837	-1.785	0.262	0.358	1.002	0.636	1.556	0.469	2.707	----	
	0.402	0.404	0.076	0.794	0.721	0.318	0.525	0.121	0.640	0.007	----	
(12) <i>ROA</i>	0.064	0.043	0.044	-0.079	-0.137	0.023	-0.025	0.044	-0.293	0.101	0.131	1.000
	0.978	0.662	0.669	-1.208	-2.114	0.351	-0.386	0.673	-4.682	1.549	2.020	----
	0.329	0.509	0.504	0.228	0.036	0.726	0.700	0.502	0.000	0.123	0.045	----

^a *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

^b Correlation coefficients, ^c *t*-statistic, ^d *p*-value

Table 7. Regression results

(Dependent variable: *CSR*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-15.623	8.227	.029
<i>SALE</i>	+	2.731	0.602	.000
<i>OWNR</i>	+	0.054	0.043	.105
<i>INTRST</i>	+	3.044	0.976	.001
<i>ADV</i>	+	50.226	33.785	.069
<i>INVT</i>	+	10.140	8.160	.108
<i>MKTS</i>	+	6.675	6.296	.145
<i>SRI</i>	+	0.888	1.497	.277
<i>EMP</i>	+	-0.007	0.017	.675
<i>GR</i>	+	2.789	1.227	.012
<i>LCL</i>	+	5.916	2.408	.007
<i>ADT</i>	+	-1.375	1.593	.806
<i>ROA</i>		-0.432	0.362	.234
Adjusted R ²		.262		
F (Prob)		7.945 (.000)		

* *CSR* = Total CSR disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 8. Regression results
(Dependent variable: *HUMAN*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-8.620	3.112	0.006
<i>SALE</i>	+	0.958	0.228	0.000
<i>OWNR</i>	+	0.022	0.016	0.091
<i>INTRST</i>	+	0.596	0.369	0.054
<i>ADV</i>	+	6.267	12.782	0.312
<i>INVT</i>	+	1.630	3.087	0.299
<i>MKTS</i>	+	2.606	2.382	0.138
<i>SRI</i>	+	0.659	0.566	0.123
<i>EMP</i>	+	-0.008	0.006	0.886
<i>GR</i>	+	0.720	0.464	0.061
<i>LCL</i>	+	1.137	0.911	0.107
<i>ADT</i>	+	-0.610	0.603	0.844
<i>ROA</i>		-0.048	0.137	0.726
Adjusted R ²		0.184		
<i>F</i> (Prob)		5.421	(.000)	

* *HUMAN* = Human rights disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 9. Regression results
(Dependent variable: *LABOR*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-2.581	1.782	0.149
<i>SALE</i>	+	0.427	0.130	0.001
<i>OWNR</i>	+	0.010	0.009	0.141
<i>INTRST</i>	+	0.344	0.211	0.053
<i>ADV</i>	+	10.910	7.319	0.069
<i>INVT</i>	+	1.444	1.768	0.207
<i>MKTS</i>	+	0.910	1.364	0.253
<i>SRI</i>	+	-0.094	0.324	0.614
<i>EMP</i>	+	-0.002	0.004	0.710
<i>GR</i>	+	0.776	0.266	0.002
<i>LCL</i>	+	1.611	0.522	0.001
<i>ADT</i>	+	-0.464	0.345	0.910
<i>ROA</i>		-0.015	0.079	0.851
Adjusted R ²		0.147		
F (Prob)		4.382 (.000)		

* *LABOR* = Labor practices disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 10. Regression results
(Dependent variable: *ENVIR*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		5.960	0.993	0.000
<i>SALE</i>	+	0.018	0.073	0.403
<i>OWNR</i>	+	-0.002	0.005	0.653
<i>INTRST</i>	+	0.207	0.118	0.040
<i>ADV</i>	+	0.853	4.077	0.417
<i>INVT</i>	+	2.784	0.985	0.003
<i>MKTS</i>	+	-0.665	0.760	0.809
<i>SRI</i>	+	-0.181	0.181	0.841
<i>EMP</i>	+	0.001	0.002	0.345
<i>GR</i>	+	0.324	0.148	0.015
<i>LCL</i>	+	0.020	0.291	0.472
<i>ADT</i>	+	0.081	0.192	0.336
<i>ROA</i>		-0.008	0.044	0.858
Adjusted R ²		0.052		
F (Prob)		2.064 (.020)		

**ENVIR* = Environment disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 11. Regression results
(Dependent variable: *FAIR*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-3.078	1.254	0.015
<i>SALE</i>	+	0.341	0.092	0.000
<i>OWNR</i>	+	0.006	0.007	0.166
<i>INTRST</i>	+	0.352	0.149	0.009
<i>ADV</i>	+	3.320	5.152	0.260
<i>INVT</i>	+	1.629	1.244	0.096
<i>MKTS</i>	+	-0.085	0.960	0.535
<i>SRI</i>	+	0.181	0.228	0.214
<i>EMP</i>	+	-0.001	0.003	0.612
<i>GR</i>	+	0.345	0.187	0.034
<i>LCL</i>	+	0.733	0.367	0.024
<i>ADT</i>	+	-0.127	0.243	0.700
<i>ROA</i>		-0.005	0.055	0.924
Adjusted R ²		0.162		
F (Prob)		4.785 (.000)		

* *FAIR* = Fair operating practices disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 12. Regression results
(Dependent variable: *CONSU*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-1.046	1.783	0.558
<i>SALE</i>	+	0.290	0.131	0.014
<i>OWNR</i>	+	0.010	0.009	0.131
<i>INTRST</i>	+	0.728	0.212	0.000
<i>ADV</i>	+	15.989	7.321	0.015
<i>INVT</i>	+	1.049	1.768	0.277
<i>MKTS</i>	+	2.845	1.364	0.019
<i>SRI</i>	+	0.196	0.324	0.273
<i>EMP</i>	+	0.002	0.004	0.258
<i>GR</i>	+	0.196	0.266	0.231
<i>LCL</i>	+	1.479	0.522	0.003
<i>ADT</i>	+	-0.362	0.345	0.852
<i>ROA</i>		-0.250	0.079	0.002
Adjusted R ²		0.229		
F (Prob)		6.833 (.000)		

* *CONSU* = Consumer issues disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.

Table 13. Regression results
(Dependent variable: *COMMU*)

Independent variables	Sign	Coefficient	Std. error	Prob.
Intercept		-5.348	1.549	0.001
<i>SALE</i>	+	0.589	0.113	0.000
<i>OWNR</i>	+	0.004	0.008	0.297
<i>INTRST</i>	+	0.736	0.184	0.000
<i>ADV</i>	+	12.554	6.363	0.025
<i>INVT</i>	+	1.343	1.537	0.192
<i>MKTS</i>	+	0.848	1.186	0.238
<i>SRI</i>	+	0.193	0.282	0.247
<i>EMP</i>	+	0.002	0.003	0.291
<i>GR</i>	+	0.300	0.231	0.098
<i>LCL</i>	+	0.691	0.453	0.064
<i>ADT</i>	+	0.160	0.300	0.297
<i>ROA</i>		-0.095	0.068	0.166
Adjusted R ²		0.341		
F (Prob)		11.129 (.000)		

* *COMMU* = Community involvement and development disclosure score; *SALE* = Sales (log), *OWNR* = Stable shareholders ratio, *INTRST* = Interest expense to sales ratio, *ADV* = Advertisement expenses / Sales, *INVT* = Inventory turnover rate/ Industry average of inventory turnover rate, *MKTS* = Sales / Total sales in the industry, *SRI* = Holdings including SRI and eco-fund (dummy), *LCL* = Presence or absence of participation in community activities (dummy), *EMP* = The number of employees (thousand), *GR* = An industry with a significant environmental burden (dummy), *ADT* = Implementation of external environment audit (dummy variable), *ROA* = Return on Assets.