Determinant Factors of Corporate Social Disclosures in Indonesia

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Abstract
Indonesia as one of the big developing countries has been responding rapidly to the issue of Corporate Social Disclosure (CSD). This can be seen from the CSD section in the listed companies’ annual reports which keep increasing throughout the years. However, there are still inconclusive findings in factors that determine the extent of CSD. Based on a comprehensive research, therefore, this paper examines some selected factors in their relations to the extent of CSD, both quantitatively and qualitatively.

Corporate annual reports for the year 2003 to 2006 were examined to verify the CSD practices by applying a content analysis method and multiple regression analysis. Then, firm’s characteristics (category, size, financial performances, age), and group influential (creditors, auditors, owners) were analysed to seek their significant relationships to the extent of CSD. The findings show that (1) there was no significant influence of ‘company type’ to the extent of CSD; but ‘company status’ was significantly influence CSD (2) ‘company size’, ‘financial performances’, ‘age’, and ‘auditors’ influences’ were found to have significant positive influences to the extent of CSD; (3) ‘Owners’ influence’ correlated positively rather than negatively to CSD; and (4) Mixed results were provided by the ‘creditors’ influence’ throughout the years.

The overall correlations between predictor and criterion variables are considered to be low to moderate, varied from 0.463 to 0.607 for correlation coefficients (R) and 0.215 to 0.368 for determinant coefficients (R^2) in the regression model.

Keywords: Determinant factors, Corporate social disclosure, Annual reports.

Introduction
Corporate social responsibility (CSR) has been of growing issue in the business and academic communities today. There are several key drivers that can be identified related to this remarkable issue, namely: pressures from business competitors, investors, consumers, governments, non-governmental organisations (NGOs), and globalisation (Haigh & Jones, 2006; Chapple & Moon, 2005). Given the considerable differences in the economic and cultural environment, moral judgment and government roles that corporations play in a particular country, the extent of CSR practices differ across countries (Adams, Hill, & Roberts, 1998). Since there are a lot of studies come from
developed countries, it is considered that conducting a research in a developing country, such as Indonesia, will flourish the CSR literatures. This study is considered a very few comprehensive study that was included great numbers of samples with across type of industries. For this reason, this study selects Indonesian listed companies to be examined for their CSR practices by investigating the extent of their corporate social disclosures (CSD).

The reporting of Corporate Social Responsibility (CSR) has been interchangeably used with Corporate Social Disclosure (CSD) in many studies. In fact, CSD underlines the process of ‘disclosure’ of certain subjects in social activities that have been undertaken by companies. Thus, a differentiation can be explained between ‘reporting’ and ‘disclosure’. Reporting tends to refer to ‘a report’ that is used to ‘disclose’ particular topics, such as sustainability and environmental reports; while ‘disclosure’ seems to render information to readers through a report. In this study, because the report for disclosing social activities is an annual report, ‘corporate social disclosure’ (CSD) is used to examine the information disclosed in this report. This is a method of investigating companies’ social activities enumerated in the annual reports.

Some factors have been identified as influencial factors, which both positively and negatively affect the extent of CSD. For example, a positive correlation between CSD and organisational characteristics, such as company’s size and type, have been found by Stanwick and Stanwick (1998), Balabanis (1998), Choi (1999), Kokubu (2001), and Al-Tuwajri (2004). However, Ingram and Frazier (1980), and Freedman and Jaggi (1996) found that these variables are negatively correlated with CSD. Since there are still different results, this study selects some variables to find out which factors influence the extent of CSD, using Indonesian listed companies as unit of analyses.

Literature Review and Hypothesis Development

The development of Corporate Social Responsibility (CSR) reflects a growing expectation from communities and stakeholders about the role of companies in their societies; it also implies that companies should respond to the increasing environmental, social, and economic pressure placed on them (Wilson, 2001). Snider, Hill and Martin (2003) suggested that CSR is the practice of organisations to communicate to their various stakeholders about their commitments to be socially responsible. This situation shows that the demand for CSR is likely to increase as societies rapidly react to environmental and social issues.

Company’s commitments to serve their stakeholders should include such elements of CSR, as issues of environmental protection, and social and economic growth. Details of a number of other CSR elements were addressed by Leonard and McAdam (2003) who consider human rights, workplace and employee issues, such as occupational health and safety, organisational governance, marketplace and consumer issues, community involvement, and social development to be relevant. In addition to these elements, Deegan (2002a) suggested that a number of additional aspects of CSR should
be disclosed in a CSR report, namely Corporate Social Disclosure (CSD), including information about the interaction with local communities, the level of support for community projects, health and safety record, employment training and educational programs, and environmental performance.

Previous studies have identified a number of determinant factors for CSD such as company type, size, financial performance, age, and the influence of owners, creditors, and auditors (see for example, Balabanis, Philips, & Lyall, 1998; Choi, 1999; Hackston & Milne, 1996; Mohamad & Ahmad, 2002; Owen & Scherer, 1993; Stanwick & Stanwick, 1998). These factors are the most common factors that are incorporated as the predictor variables that relate to CSD. The criterion variables are represented by the extent of their influence on CSD, which consists of total quantity and quality scores.

**Corporate Characteristics**

The characteristics of companies are represented by company category, size, financial performance, and age.

**Company Category**

The type of industry has been identified as a factor that potentially affects the quantity and quality of CSD level. Companies in sensitive industries are perceived to provide more CSD than those in non-sensitive industries. They are considered to be more responsive in disclosing activities that relate to social and environmental practices due to their business type.

In Indonesia, industrial types have characteristics particular to their operations. For example chemical, mining, and logging industries will be different from those that provide services, such as banking. This study uses the Indonesian Capital Market Directory 2005 issued by the Jakarta Stock Exchange (JSX) to categorise the types of industries. Companies from sensitive and non-sensitive industries were categorised based on prior studies (Roberts, 1992; Hackston & Milne, 1996; Raar, 2002). The two industry types are listed below.

Companies classified as highly sensitive industries are:

1. Agriculture, including plantation, animal husbandry, fishery, forestry.
2. Mining, including coal mining, crude petroleum and natural gas production, metal and mineral mining, land/stone quarrying.
3. Basic industry and chemicals, including cement, ceramics, glass, porcelain, metal and allied products, chemicals, plastics and packaging, animal feed, wood industries, pulp and paper.
4. Miscellaneous, including machinery and heavy equipment, automotive and components, textile and garment, footwear, cable.
5. Consumer goods, including food and beverages, tobacco manufacturers, pharmaceuticals, cosmetics and household, house ware.
6. Property, real estate and building construction, including property and real estate, building construction.
7. Infrastructure, utilities and transportation, including energy, toll road, airport, harbour and allied products, telecommunication, transportation, construction.

8. Trade, services and investment, including wholesale, retail trade, restaurant, hotel and tourism.

Companies categorised as non-sensitive industries are:

1. Finance, including bank, financial institution, securities, company, insurance, investment fund.
2. Advertising, printing and media.
3. Computer and services.
4. Investment companies.
5. Others, such as provider companies and broadcasting companies.

These classifications are considered appropriate to differentiate between sensitive and non-sensitive industries. In addition, the measurement of company category was also examined based on company status, namely: ‘state owned’ and ‘non-state owned’ companies (Gunawan, 2007). To support the assumption that the ‘sensitive’ and ‘state owned’ industries provide more CSD than do the ‘non-sensitive’ and ‘non-state owned’, the first hypotheses are addressed as:

H1A: Sensitive industries provide greater CSD (quantity and quality) compared to those of non-sensitive industries.

H1B: State owned companies provide greater CSD (quantity and quality) compared to those of non-state owned companies.

Company Size

Company size is commonly used as a factor to determine CSD level (Balabanis, Philips, & Lyall, 1998). Larger firms may have more incentive to make disclosures as they are seen to receive more public attention (Cowen, Ferreri, & Parker, 1987; Hackston & Milne, 1996). Company size is commonly measured by total sales, assets and market capitalisation. Belkaoui and Karpik (1989) employed total sales in their study, Roberts (1992) used total revenue, Patten (1991) applied total sales and Botosan (1997) suggests ‘market capitalisation’ to measure company size. Given that no theoretical reasons exist for a particular measure of size in disclosure studies, total assets, sales and market capitalisation were applied to be tested in this study by assuming that they are positively associated to the extent of CSD (Deegan, 2001). Thus, the second hypotheses are addressed as:

H2A: The greater the company total assets, the greater are CSD (quantity and quality).

H2B: The greater the company total sales, the greater are CSD (quantity and quality).

H2C: The greater the company market capitalisation, the greater are CSD (quantity and quality).

Company Financial Performance
Financial performance has been examined as a factor that may influence CSD practices (Mcguire, Sundgren, & Schneeweis, 1988). Hai et al. (1998) explain that there is a positive relationship between financial performance, measured by return on assets (ROA), return on equity (ROE), and the extent of CSD in Singaporean companies. Similarly, Stanwick and Stanwick (1998) assert that ROA in European companies has a positive relationship to CSD. This study selects three common measurements to evaluate financial performance in the context of Indonesian companies. They are proxied by return on assets (ROA), return on equity (ROE), and earning per share (EPS) as stated in the following hypotheses:

H3A: The greater the company return on assets, the greater are CSD (quantity and quality).
H3B: The greater the company return on equity, the greater are CSD (quantity and quality).
H3C: The greater the company earning per-share, the greater are CSD (quantity and quality).

Company Age

Company age is the number of operational years since the company was established. The more mature a corporation is the more likely it is to have a highly valued reputation and history of its involvement in corporate social activities (Choi, 1999). Roberts (1992) highlights this statement by providing evidence from US companies in which the extent of social disclosure is influenced by corporate age. Choi, through his investigation of the semi annual financial reports of Korean companies, found that the quality of a company environmental disclosure tended to improve with the age of the company. To support to this issue, Adams (2002) included corporate age as one characteristic that may influence CSD practices. For this reason, company age is considered as a positive factor influencing the extent of CSD and thus, it is hypothesised as:

H4: The greater the company age, the greater are CSD (quantity and quality).

Group’s Influences

Ullmann (1985) states that group of stakeholders provide the justification for strategic decisions about activities which relate to corporate social responsibility. This study selects three stakeholder groups that are considered to be representative of common stakeholders by every listed company. This selection was also justified because the influence of these stakeholders can be measured from secondary data.

Creditors

The role of creditors is significant as they control access to financial resources essential for the continuous operation of a corporation (Choi, 1999). This is especially true for the majority of Indonesian companies, which rely significantly on debt financing. Ullmann (1985) states that the more a corporation relies on debt financing, the greater it must respond to the expectations of its creditors in relation to social responsibility.
activities. In this study, the proxy of creditors’ influence is measured by solvency ratio, calculated from total company debt divided by total assets (Botosan, 1997; Choi, 1999). To find whether creditors’ influence is positive to the extent of both the quantity and quality of CSD, the next hypothesis is stated as:

H5: The greater the company solvency, the greater are CSD (quantity and quality).

Auditors

Auditors play a significant role in determining an accounting policy, including the promotion of the decision to disclose social activities (Adams, 2002; Choi, 1999; Mohamad & Ahmad, 2002). Auditors are involved in CSD because one of their important tasks is to assist their clients in conducting business ethically and in accordance with accounting policies. Auditors who work in larger audit firms are considered more independent and professional than those who work in smaller firms, because the bigger firms are expected to be more organised and with clearer regulations. In addition, larger audit firms usually have better reputations than smaller ones and hence, have more responsibility to maintain their good company image. For these reasons, the influence of auditors in the practice of CSD is expected to be positively associated with the extent of disclosures.

H6: Companies audited by a big accounting firm provide greater CSD (quantity and quality) compared to those audited by a non-big accounting firm.

Owners

Company owners are stakeholders who have significant influence in any company. Cormier and Gordon (2001) state that the status and percentage of ownership influence the amount of social and environmental disclosure. According to Choi (1999), dispersed corporate ownership will increase the pressure for management to make more disclosures because there will be more individual needs to be fulfilled. Further, concentrated ownership may reduce the management pressure to disclose social activities. The measurement of owners’ influence is calculated by the major or principal stockholder’s shares divided by total capital (Choi, 1999). Under this assumption, the following hypothesis is addressed as:

H7: The greater the company owners’ influence, the lower are CSD (quantity and quality).

Research Methodology

A content analysis was performed to determine the extent of CSD in the annual reports, using a list of disclosure items based on Gunawan (2010). Two measurements applied in terms of the extent of CSD: quantity (from 1 to 5) and quality (from 1 to 7), based on study conducted by Raar (2002). Then, correlation and regression analyses were applied to test the hypotheses. The secondary data was sourced from company annual reports, selected based on the simple random sampling method.
Table 1. Quantity and Quality Measurement

<table>
<thead>
<tr>
<th>Quantity of disclosure “how much”</th>
<th>Quality of disclosure “how measured”</th>
<th>Quality definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = sentence</td>
<td>1 = monetary</td>
<td>Disclosure in monetary/currency terms</td>
</tr>
<tr>
<td>2 = paragraph</td>
<td>2 = non-monetary</td>
<td>Quantified in numeric terms of weight, volume, size, etc. but not financial/currency</td>
</tr>
<tr>
<td>3 = half A4 page</td>
<td>3 = qualitative only</td>
<td>Descriptive prose only</td>
</tr>
<tr>
<td>4 = 1 A4 page</td>
<td>4 = qualitative and monetary</td>
<td>Descriptive prose and currency</td>
</tr>
<tr>
<td>5 = &gt;1 A4 page</td>
<td>5 = qualitative and non-monetary</td>
<td>Descriptive prose and numeric terms</td>
</tr>
<tr>
<td></td>
<td>6 = monetary and non-monetary</td>
<td>A combination of currency and numeric terms</td>
</tr>
<tr>
<td></td>
<td>7 = qualitative, monetary and non-monetary</td>
<td>Descriptive prose, financial and numeric terms</td>
</tr>
</tbody>
</table>

Adopted from Raar (2002)

Since this study aimed to gather annual reports from the same company for four consecutive years, the sample had to be selected based on companies that provided annual reports for each year from 2003 until 2006, as the current year of this research conducted. Annual reports were collected at the Jakarta Stock Exchange (JSX) Library, The Capital Market Reference Centre (for hard copies), and The Capital Market Electronic Document Services (for soft copies). Alternative sources were from the JSX website (www.jsx.co.id, now is www.idx.co.id) or the company’s own website. Consequently, there are 117 company annual reports for each year, with 76 from sensitive and 41 from non-sensitive industries every year, which total 468 annual reports.

Chi-Square Contingency Table in Cross-tabulation analysis as non-parametric tests was used to examine hypotheses 1A, 1B and 6, refers to the ‘type’ and ‘status’ of companies and ‘big and non-big audit firms’. Spearman’s rho correlation was used to measure the strength of relationship between the two variables and Simple regression tests were undertaken to predict the power or strength of the influence from every single predictor to the criterion variable. Finally, Multiple regressions were undertaken after the simple regression to generate a regression model from some predictor variables. Before undertaking multiple regression analyses, a factor analysis was conducted to anticipate the problems of multicollinearity. The ‘best’ model of this combination (the highest value of $R^2$) was then chosen as a regression model. The model is written in an equation as:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots + b_kX_k + e$$

Result and Discussion

Company Category

Two steps were undertaken for this analysis. Firstly, a categorical analysis was completed by coding variables Y (CSD quantity and quality scores) and classified into two groups: low and high, based on their frequencies. Then, the analyses was further un-
dertaken using a *Chi-Square* test in a *cross-tabulation* to find any significant differences between the ‘sensitive and non-sensitive’ in ‘company type’, and ‘state-owned and non-state owned’ in ‘company status’. The results show that the type of industry was not significantly influential for CSD in both quantity and quality (p-values = 0.272 and 0.185 respectively). Further observation shows that both CSD quantity and quality in sensitive industries obtain greater mean values than those in the non-sensitive industries (Table 1). This result might indicate that companies categorised in sensitive industries provide greater CSD quantity and quality than companies in non-sensitive industries, although the differences in contributing to the extent of CSD between these two types are not statistically significant as discussed.

**Table 2. Descriptive Statistics for CSD in Sensitive and Non-sensitive Industries**

<table>
<thead>
<tr>
<th>Descriptive statistic</th>
<th>CSD Quantity</th>
<th>CSD Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>non-sensitive</td>
<td>sensitive</td>
</tr>
<tr>
<td>Mean</td>
<td>24.375</td>
<td>26.646</td>
</tr>
<tr>
<td>Median</td>
<td>19</td>
<td>21.5</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>16.766</td>
<td>19.748</td>
</tr>
</tbody>
</table>

Companies in sensitive industries tend to provide greater CSD as they may attain more public attention regarding their business operations, which exploit natural resources, for example, agriculture, petroleum, chemical, forest or paper products, compared to other industries which do not use much of these resources (Hackston & Milne, 1996; Roberts, 1992). These kinds of industries can damage the environment through the use or discharge of hazardous wastes and effluent, which will have an affect on the surrounding communities. For this reason, the companies within sensitive industries are expected to show more responsibility in conducting and reporting their social activities compared to those in non-sensitive industries (Deegan & Gordon, 1996).

However, since the differences between the types of industries were not significant, this may indicate that Indonesian companies in non-sensitive industries also tend to provide a large amount of CSD, as demonstrated by some prominent services institutions, such as banks. Owen and Scherer (1993) explain that service industries like banking may tend to be more attuned to the potential impact of social responsibility issues because of their closeness to the customers. This highlights the fact that reporting social responsibility is not only to satisfy the environmental regulations, or to meet community expectations, but it also underlines stakeholder relationships, human resources, products, and sustainability (Deegan, 2002a). These aspects provide comprehensive CSD information that companies in all industry types are encouraged to consider.

Similar steps for ‘sensitive and non-sensitive industries’ testing were applied to evaluate ‘state and non-state owned companies’ to CSD. The CSD quantity and quality scores were classified into two nominal categories: low and high. The *Chi-square* test shows that p-value < 0.05 for CSD quantity and quality, which signifies that both state and non-state owned companies have significant differences in influencing the extent of CSD.
Table 2 demonstrates that the mean scores for CSD quantity and quality in ‘state owned’ companies are far greater than those in the ‘non-state owned’. This result suggests that although there were fewer state owned companies in Indonesia (about 37 from a total of around 330 companies listed in JSX), these companies play a significant role in the wider acceptance of CSD practices in Indonesia. It may be a signal that ‘state owned’ companies comply with the regulations by allocating a budget for CSR activities, and subsequently, this leads to a high practice of CSD (refer to Government regulation no. 19/2003 for ‘state owned companies’). The finding is consistent with a study conducted in Australia, which indicated that companies disclosed the information to comply with accepted standards or government regulations (Tilt, 2004).

| Table 3. Descriptive Statistics for CSD in State and Non-state Companies |
|-----------------------------|-----------------------------|
| **Descriptive Statistic**   | **CSD Quantity** | **CSD Quality** |
|                             | non-state owned | state owned    | non-state owned | state owned    |
| Mean                        | 23.955          | 55.964         | 33.271          | 83.786         |
| Median                      | 20              | 53.5           | 28              | 82.5           |
| Std. Deviation              | 17.796          | 22.892         | 22.129          | 46.108         |

In practice, it was also noticed that the Indonesian state owned companies have been playing a significant role, not only in the area of CSD, but also in the whole Indonesian economic and business. In this context, it is likely that the practice of CSR in Indonesia has been influenced much by the government, and it can be predicted that the government will also play an important role in developing CSD. Elijido-Ten (2007) provided evidence about the existing power of the Australian government. Using the 2002 Australian Conservation performance, it showed that government companies provided more environmental disclosures to minimise public litigation, than did non-government companies.

**Company Size**

The Spearman’s rho coefficient correlations for each year of 2003 to 2006 showed a significant positive relationship between company total assets to CSD, with p-value < 0.05. The rho correlation coefficients ranged from 0.245 to 0.610 in CSD quantity. Similarly, for CSD quality, the correlations showed a significant positive ranged from 0.222 to 0.590 with p-values <0.05 across all year 2003 to 2006. Thus, the companies which own greater assets will provide higher CSD both in quantity and quality, compared to those with less assets.

For the years 2004 to 2006, the Spearman’s rho analyses indicated a highly significant positive relationship between total sales and both CSD quantity and quality (p-values < 0.05). The relationships for 2003 were still significant and positive (p values < 0.05), but were weaker. The rho correlation coefficients increased from 0.166 to 0.665 in CSD quantity and from 0.188 to 0.648 in CSD quality. Thus, the companies with greater total sales will provide greater CSD rather than those with lower sales.
The rho correlation coefficients of company market capitalisation also show significance to the extent of CSD throughout the year 2003 to 2006. These correlations fluctuate between 0.173 to 0.713 for CSD quantity, and 0.202 to 0.703 in CSD quality, with p-values < 0.05. The results indicate that companies with greater market capitalisation are more likely to provide greater CSD both in quantity and quality, but this situation may not occur for companies with less market capitalisation.

Statistically positive significant correlations have been reported for the three variables that represent company size for CSD in both quantity and quality, in each year from 2003 to 2006. The correlation coefficients between these company size variables and the extent of CSD increased through time, although temporal trends were not tested statistically. These outcomes might indicate that in the future, larger companies (refer to total assets, sales and market capitalisation) will be more likely to provide more comprehensive CSD as they may have more incentive to do so and competency to make disclosures, compared to those with smaller companies. Further, larger companies are often seen to receive more public attention so their need for CSD reporting is greater (Cowen, Ferreri, & Parker, 1987; Hackston & Milne, 1996). This result is consistent with prior studies, conducted in New Zealand and Singapore that found larger companies provided greater CSD than smaller companies (Hackston & Milne, 1996; Purushothaman et al., 2000). Supporting the arguments of Hackston and Milne (1996), Deegan (2001) explains that the size of a company is often used as an indicator of market power which leads to greater scrutiny by the stakeholders, and as a result, an expectation of better reporting is greater for larger firms.

The results seem to support Indonesian condition, that many firms are often conglomerate companies that play significant roles in directing and determining the country’s economic condition. The public see them as being very close to the government, which in turn has power through relevant regulations, including for CSD practices and reporting. With the combination of ‘power’ and ‘financial abilities’, it is understandable that ‘large’ Indonesian companies practise greater CSD to maintain their credibility through public exposure, rather than companies with less ‘power’ and ‘financial ability’, as they attract more attention from the community.

Company Financial Performance

Company return on assets (ROA) was generated from the total net income divided by total assets. Results from the Spearman’s rho correlation demonstrated that ROA was positively significantly correlated to the extent of CSD in quantity and quality from 2004 to 2006 (p-values < 0.05). The ranges of significant correlation strength were from 0.256 to 0.359 for CSD quantity and 0.302 to 0.357 for CSD quality. However, in 2003, ROA did not significantly correlate to the extent of both CSD quantity and quality. The correlation coefficients were very weak (less than 0.10). This might be because of many negative values of the net income, generating negative ROA, and the practice of CSD being relatively immature. Further examination is needed to provide more evidence about the influence of ROA on the extent of CSD.
The company’s net income was divided by total equity to generate the return on equity (ROE) ratio. The positive correlation strength of ROE and the extent of CSD varied from 0.385 to 0.407 and from 0.375 to 0.418 for CSD quantity and quality respectively, resulting in a significant relationship in 2004 to 2006, but not in 2003. As with ROA, it is likely that ROE experienced many negative values in 2003 that caused the insignificant correlation to the extent of CSD.

Earnings per-share (EPS) is described by the total net income divided by the total outstanding common stock. The test of Spearman’s rho correlation found, that from 2004 to 2006, EPS has significantly correlated to the extent of CSD in both quantity and quality (p-values < 0.05). The rho coefficient correlations varied from 0.365 to 0.447 for CSD quantity and from 0.405 to 0.426 for CSD quality. In 2003, EPS did not significantly correlate with CSD, and this is possibly because a number of big companies experienced negative incomes, and also they split their outstanding common stock, which influenced the number of the outstanding common stock. Accordingly, the EPS values fall. Additionally, public expectations that companies would adopt the practice of CSD were increasing; so, despite adverse economic conditions, many companies continued disclosing their social activities. This is a possible explanation why EPS (also ROA and ROE) in 2003 did not show significant correlations to the extent of CSD.

Financial performance has been reported as having positive, negative, or neutral impacts on CSD in the literature. The variable chosen to represent company financial performance also differs amongst these studies (Choi, 1999; Hai et al., 1998; Stanwick & Stanwick, 1998). Although the majority of the relevant results in this present study indicate significant positive correlations, the relationships between financial performance and the extent of CSD requires further investigation. This may be possible in the future where a longer time series for a broader range of financial performance indicators is available.

**Company Age**

The age of the company was calculated by the number of months, since it was established, regardless of any changes of the company name. The Spearman’s rho correlation test shows that the company age correlates significantly with both CSD quantity and quality for each year (p-values < 0.05), except for CSD quality in 2005 (p-value = 0.051). The rho significant coefficient correlations ranged from 0.183 to 0.209 and 0.171 to 0.187 for CSD quantity and quality respectively, indicating weak correlations. This finding provides support for a relationship between ‘age’ and CSD.

Similarly, Choi (1999) and Roberts (1992) found that company age was positively correlated with CSD. The fundamental argument about this positive relationship is the more mature a company is, the more likely it is to have a highly valued reputation and a history of involvement in corporate social activities. The public may recognise this easily and may expect greater CSD from a well-established company than a new com-
pany. This is probably true in Indonesia where the public, especially local communities, gives more attention to ‘mature’ companies than to ‘newer’ companies.

**Stakeholders Group Influences**

Solvency ratio was often used to proxy creditor power by calculating total company debt divided by total assets (Botosan, 1997; Choi, 1999). This study found that the solvency ratio is weakly, but positively significantly correlated (0.160 and 0.188) to the extent of CSD quantity in 2003 and 2004, but not in 2005 and 2006. Thus, hypothesis H5 can be accepted with caution.

For CSD quality, none of the years yielded significant correlation (p-value > 0.05). It was observed that correlation coefficient signs were weakly negative in 2006, for both CSD quantity and quality (rho correlation coefficients = -0.062 and -0.059 respectively), although these correlations were not significant. Prior studies which also found negative correlation for this variable are Cormier and Gordon (2001), in Canadian companies, and Elijido-Ten (2007) in Australian companies. They argued that solvency ratio can be negatively related to CSD because it may indicate areas of increased proprietary costs for companies. These costs could make credit negotiations more difficult and costly because publication may indicate areas of corporate risk; therefore the companies are reluctant to provide CSD.

Conversely, Ullmann (1985) noticed that companies which rely on greater debt financing also provided greater CSD as a way of meeting creditors’ expectations for activities of social responsibility in US companies. In the context of the present study, Indonesian companies may be more likely to ‘satisfy’ their creditors’ demands than consider the proprietary costs for disclosures. However, caution is needed since the correlation coefficient values in both CSD quantity and quality were low and differently signed through time.

A Chi-square test in a Cross-tabulation analysis was applied to examine auditors’ influence, as the variables were nominal or categorical. Companies audited by big accounting firms were labelled ‘one’ and those audited by non-big firms were labelled ‘zero’. The extent of CSD was classified into two groups: low and high. The results show that there were significant differences in the extent of CSD quantity and quality between a company audited by a big accounting firm and one audited by a non-big accounting firm for the entire four-year period (p-values < 0.05). The tests were conducted for the total sample collected from 2003 to 2006 to obtain more than five numbers of frequencies for each tabulation, and for the robustness purposes in the Chi-Square test. However, inevitably, the sample frequency for companies audited by non-big accounting firms categorised in the ‘high’ group of CSD quality only resulted in two observations. This limited sample suggests interpreting the results with caution.

Descriptive analysis was further performed to explore the data. The mean values show that companies audited by big accounting firms provided greater CSD quantity and quality compared to those audited by non-big accounting firms (Table 4).
Table 4. Descriptive Statistics for Companies Audited by Big and Non-big Audit Firms

<table>
<thead>
<tr>
<th>Descriptive statistic</th>
<th>CSD Quantity</th>
<th>CSD Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Big firms</td>
<td>Non-big</td>
</tr>
<tr>
<td>Mean score</td>
<td>29.580</td>
<td>19.657</td>
</tr>
<tr>
<td>Median</td>
<td>24</td>
<td>17</td>
</tr>
</tbody>
</table>

Findings in this study are in line with a prior study conducted in Malaysia by Mohamad and Ahmad (2002) who found that auditors play a significant role in assisting their clients to conduct business ethically, and to comply with accounting policies and stakeholder’s demands. The same situation pertains in Indonesia. The auditors who work in big accounting firms have a great influence on the practice of CSD, as they have more involvement and responsibility in maintaining a high audit quality by assisting companies to provide adequate information about their social activities in their annual reports. Currently, in responding to the rapidly developing issue of CSD, the Indonesian Accountant Association, under the Management Accountant Compartment has established a centre for sustainability reporting. This center name is National Center for Sustainability Reporting (NCSR) which primarily purposed to support the practice of CSD in Indonesia, especially in sustainability reporting. This situation will be more likely to encourage Indonesian companies to practise better CSD in the future.

The Spearman’s rho correlation indicated that the influence of the company owners, represented by the degree of ownership concentration, has weak positive significant correlations with the extent of CSD quantity in 2005 and 2006 (0.191 and 0.285 respectively), and to CSD quality in 2003, 2005, and 2006 (0.163, 0.196, and 0.309 in that order). The rho correlation coefficients ranged from 0.105 to 0.285 (quantity) and 0.109 to 0.309 (quality) with no clear temporal trends evident. Since the correlation predictions were negative, the finding does not support the hypotheses, and hence, the hypotheses 7 are rejected.

In contrast to the expectations, this study found that the wider the ownership dispersions, indicated by lower percentage numbers, the more likely it was for the company to provide less CSD. This suggests that shareholder power may not be relevant in Indonesia, CSD practice being more likely to be influenced by communities (Gunawan, 2010). While the result conflicts with the findings of Choi (1999), Cormier and Gordon (2001), Elijido-Ten (2007), and McKinnon and Dalimunthe (1993), it coincides with Alsaeed (2006). He found that high ownership concentration in Saudi Arabian companies tended to disclose more information. Some explanation is tentatively provided in the following paragraph; however, given that the rho correlation coefficients were relatively low and the statistical testing provided positive trends for the directional hypotheses, the results of the present study should be interpreted with caution.
To summarise, the Spearman’s rho correlation results used to examine the major hypotheses were discussed above and are presented in Table 5.

Table 5. The Spearman’s rho Correlation Results

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<tr>
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</tr>
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<tbody>
<tr>
<td>Total Asset</td>
<td>Correlation Coefficient</td>
<td>0.245**</td>
<td>0.495**</td>
<td>0.534**</td>
<td>0.610**</td>
<td>0.222**</td>
<td>0.471**</td>
<td>0.528**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.004</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.008</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Total Sales</td>
<td>Correlation Coefficient</td>
<td>0.166*</td>
<td>0.441**</td>
<td>0.492**</td>
<td>0.665**</td>
<td>0.188*</td>
<td>0.450**</td>
<td>0.531**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.037</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.021</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Capitalisation</td>
<td>Correlation Coefficient</td>
<td>0.173*</td>
<td>0.473**</td>
<td>0.537**</td>
<td>0.713**</td>
<td>0.202*</td>
<td>0.463**</td>
<td>0.551**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.031</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.014</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA</td>
<td>Correlation Coefficient</td>
<td>-0.008</td>
<td>0.256**</td>
<td>0.267**</td>
<td>0.359**</td>
<td>0.061</td>
<td>0.302**</td>
<td>0.334**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.465</td>
<td>0.003</td>
<td>0.002</td>
<td>0.000</td>
<td>0.258</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>ROE</td>
<td>Correlation Coefficient</td>
<td>0.090</td>
<td>0.407**</td>
<td>0.365**</td>
<td>0.385**</td>
<td>0.099</td>
<td>0.409**</td>
<td>0.418**</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.166</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.145</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>EPS</td>
<td>Correlation Coefficient</td>
<td>0.114</td>
<td>0.365**</td>
<td>0.421**</td>
<td>0.447**</td>
<td>0.152</td>
<td>0.405**</td>
<td>0.475**</td>
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<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.110</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.051</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td>Correlation Coefficient</td>
<td>0.208*</td>
<td>0.209*</td>
<td>0.189*</td>
<td>0.183*</td>
<td>0.171*</td>
<td>0.180*</td>
<td>0.152</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.012</td>
<td>0.012</td>
<td>0.021</td>
<td>0.024</td>
<td>0.033</td>
<td>0.026</td>
<td>0.051</td>
</tr>
<tr>
<td>Solvency</td>
<td>Correlation Coefficient</td>
<td>0.160*</td>
<td>0.188*</td>
<td>0.049</td>
<td>-0.062</td>
<td>0.080</td>
<td>0.143</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.043</td>
<td>0.021</td>
<td>0.301</td>
<td>0.254</td>
<td>0.194</td>
<td>0.062</td>
<td>0.405</td>
</tr>
<tr>
<td>Owner</td>
<td>Correlation Coefficient</td>
<td>0.140</td>
<td>0.105</td>
<td>0.191*</td>
<td>0.285**</td>
<td>0.163*</td>
<td>0.109</td>
<td>0.196*</td>
</tr>
<tr>
<td></td>
<td>Sig. (1-tailed)</td>
<td>0.066</td>
<td>0.130</td>
<td>0.020</td>
<td>0.001</td>
<td>0.040</td>
<td>0.121</td>
<td>0.017</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (1-tailed).
* Correlation is significant at the 0.05 level (1-tailed).

Capitalisation refers to market capitalisation, ROA=Return on Asset, ROE= return on Equity, EPS=Earning per-share, Owner refers to percentage of ownership.
Multivariate Analysis

A multiple regression analysis was then undertaken to ascertain the influence of the predictor variables and criterion variables. Four techniques of the regressions were performed to find the ‘best’ model that fits to the data set. First, all predictor variables in the raw data were included in a multiple regressions analysis. The results indicated the presence of multicollinearity problems. Second, predictor variables were selected by analysing their correlation from Spearman’s rho analysis conducted previously. The results show that the group ‘company size’, proxied by total assets, total sales, market capitalisation, and also the group ‘company financial performance’, proxied by ROA, ROE, and EPS, showed strong correlations within their proxies in each group. These predictor variables correlate themselves more than 0.5 in their own group. As three variables represent a similar group (company size and financial performance), only one variable with the highest correlation to the extent of CSD from the each group was selected to represent the group. These variables were expected to provide strong influences on the criterion variables, together with other predictors from other groups.

Next, the third technique was to transform all predictor and criterion variables to reduce data outliers and to make them normally distributed. However, the presence of multicollinearity was observed. Finally, the last technique was to perform a ‘factor analysis’ to overcome the multicollinearity problem, by excluding variables which have strong collinearity. Factor analysis can also be used to summarise and reduce the data in multivariate analysis (Hai et al., 1998). From the four techniques of multiple regressions, the significant predictors were observed in order to choose the model of ‘best’ fit to the data. The findings resulted in no major differences among these four techniques; however, the last technique initiated with a factor analysis appeared to generate a slightly better model when compared with the others, with no multicollinearity problem being identified. For this reason, the study selected the multiple regressions with the factor analysis technique to be used to analyse the variables.

Using principal components and varimax rotation, four and five factors were extracted from the total 12 predictor variables. The highest correlation from each loading factor (higher than 0.5) was selected to be potentially tested with the criterion variables, as these factors explain more than 50 percent of the variance in the dataset. The analyses passed both the Kaiser-Meyer-Olkin measure of sampling adequacy (0.66 to 0.71) and the Bartlett’s test of sphericity (X² significance equals zero). This indicates that the pattern of correlation is relatively compact; therefore factor analysis should yield distinct and reliable factors, the dataset being suitable for factor analysis. The results of every factor extracted varied from year to year, but they represent every group of the predictor variables (refer to company size, type, financial performances, influential parties, and characteristics).
Predictor Variables for Corporate Social Disclosure - Quantity

CSD Quantity-2003

The factor analysis generated four varimax components in 2003 and the best model of the predictor variables were ‘company status’, ‘type’, ‘age’, and ‘ownership concentration’. The multiple regressions result indicates that this model significantly influences the extent of CSD quantity (p-value < 0.05) with ‘company status’ and ‘age’ as the significant influence variables (p-value = 0.000 and 0.006 respectively). The four selected predictor variables account for 0.505 (R value) of the variation in CSD quantity score. The adjusted R² shows 0.228, suggesting that this model explains 22.8 percent of the extent of CSD quantity, and since the difference between R² and adjusted R² is considered small (0.255-0.228=0.027), the cross-validity of this model is relatively good (Field, 2005). From the Variance Inflation Factor (VIF) values, no multicollinearity problems can be identified (VIF < 4).

CSD Quantity-2004

Five components were generated from the factor analysis. ‘Company status’, ‘age’, ‘ROA’, ‘auditor’s’, and ‘owner’s influences’ were included into a regression model as they produced the highest adjusted R² (0.265) compared to other variable combinations. These variables account for 0.545 (R) of the variation in CSD quantity score and explain 0.297 of the amount of CSD (R²). This model is significant (p-value < 0.05) with three variables significant to the CSD quantity, namely company status, auditors’ influence, and company age. There was no multicollinearity that could be identified (VIF < 4).

CSD Quantity-2005

The next model selected ‘company status’, ‘age’, ‘type’, ‘ROA’ and the ‘influence of auditor’ as the ‘best’ to explain the extent of CSD quantity in 2005. This model accounts for 0.593 and influences 0.322 to the extent of CSD. The validity of this model can be confirmed as the differences between R² and adjusted R² were relatively small (0.03). The significance of the model (p-value < 0.05) consists of the four predictor variables which influence the extent of CSD quantity in 2005 significantly, namely ‘company status, ROA, company age, and auditors’ influence. The VIF coefficients are less than four, which confirm the absence of harmful multicollinearity.

CSD Quantity-2006

Derived from four principal components in the factor analysis, variable ‘company status’, ‘ROA’, ‘solvency’, and ‘age’ resulted in the highest adjusted R² (0.331) when compared with those of other models. Since the VIF coefficients were less than four, no harmful multicollinearity problem exists. This model generated three variables that significantly influence the extent of CSD quantity in 2006, namely, ‘company status’, ‘ROA’, and ‘age’, with p-values less than 0.01.

To conclude the findings for the extent of CSD in quantity, several points can be highlighted. First, the results of predictor variable analyses to the extent of CSD in quantity
during 2003 to 2006 generally support the discussions and findings in the hypotheses. Variables ‘company status’ and ‘age’ have constantly influenced CSD, suggesting that they have power in explaining the scores. In the multivariate analyses especially, ‘company status’ has continually showed the greatest significant correlations, implying that this variable is also the strongest predictor for the extent of CSD in quantity. Second, although the variables of ‘company type’, ‘owners’, and ‘solvability’ are supported the model, they were not significant in influencing the quantity of CSD. Finally, the regression models have not experienced the problems of multicollinearity that can reduce validity; instead, the models generate better predictions to the extent of CSD quantity, as indicated by the increase in the adjusted R² for each year of the study.

**Predictor Variables for Corporate Social Disclosure - Quantity**

**CSD Quantity-2003**

The factor analysis generated four varimax components in 2003 and the best model of the predictor variables were ‘company status’, ‘type’, ‘age’, and ‘ownership concentration’. The multiple regressions result indicates that this model significantly influences the extent of CSD quantity (p-value < 0.05) with ‘company status’ and ‘age’ as the significant influence variables (p-value = 0.000 and 0.006 respectively). The four selected predictor variables account for 0.505 (R value) of the variation in CSD quantity score. The adjusted R² shows 0.228, suggesting that this model explains 22.8 percent of the extent of CSD quantity, and since the difference between R² and adjusted R² is considered small (0.255-0.228=0.027), the cross-validity of this model is relatively good (Field, 2005). From the Variance Inflation Factor (VIF) values, no multicollinearity problems can be identified (VIF < 4).

**CSD Quantity-2004**

Five components were generated from the factor analysis. ‘Company status’, ‘age’, ‘ROA’, ‘auditor’s’, and ‘owner’s influences’ were included into a regression model as they produced the highest adjusted R² (0.265) compared to other variable combinations. These variables account for 0.545 (R) of the variation in CSD quantity score and explain 0.297 of the amount of CSD (R²). This model is significant (p-value < 0.05) with three variables significant to the CSD quantity, namely company status, auditors’ influence, and company age. There was no multicollinearity that could be identified (VIF < 4).

**CSD Quantity-2005**

The next model selected ‘company status’, ‘age’, ‘type’, ‘ROA’ and the ‘influence of auditor’ as the ‘best’ to explain the extent of CSD quantity in 2005. This model accounts for 0.593 and influences 0.322 to the extent of CSD. The validity of this model can be confirmed as the differences between R² and adjusted R² were relatively small (0.03). The significance of the model (p-value < 0.05) consists of the four predictor variables which influence the extent of CSD quantity in 2005 significantly, namely ‘company status, ROA, company age, and auditors’ influence. The VIF coefficients are less than four, which confirm the absence of harmful multicollinearity.
CSD Quantity-2006

Derived from four principal components in the factor analysis, variable ‘company status’, ‘ROA’, ‘solvability’, and ‘age’ resulted in the highest adjusted R² (0.331) when compared with those of other models. Since the VIF coefficients were less than four, no harmful multicollinearity problem exists. This model generated three variables that significantly influence the extent of CSD quantity in 2006, namely, ‘company status’, ‘ROA’, and ‘age’, with p-values less than 0.01.

To conclude the findings for the extent of CSD in quantity, several points can be highlighted. First, the results of predictor variable analyses to the extent of CSD in quantity during 2003 to 2006 generally support the discussions and findings in the hypotheses. Variables ‘company status’ and ‘age’ have constantly influenced CSD, suggesting that they have power in explaining the scores. In the multivariate analyses especially, ‘company status’ has continually showed the greatest significant correlations, implying that this variable is also the strongest predictor for the extent of CSD in quantity. Second, although the variables of ‘company type’, ‘owners’, and ‘solvability’ are supported the model, they were not significant in influencing the quantity of CSD. Finally, the regression models have not experienced the problems of multicollinearity that can reduce validity; instead, the models generate better predictions to the extent of CSD quantity, as indicated by the increase in the adjusted R² for each year of the study.

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Sum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CSD Quantity</td>
<td>4</td>
<td>113</td>
<td>12,575</td>
<td>26.870</td>
<td>18.795</td>
</tr>
<tr>
<td>Total CSD Quality</td>
<td>4</td>
<td>195</td>
<td>17,453</td>
<td>37.293</td>
<td>26.965</td>
</tr>
</tbody>
</table>

Total sample = 468 companies for 4 years examination

Conclusion

The CSD scores used in this study include the measure of quantitative and qualitative information in company annual reports using the content analysis method, for the years 2003 to 2006. Company size as represented by total assets, total sales, and market capitalisation has been found to be a significant predictor variable to the extent of CSD quantity and quality. Similarly, the financial performance represented by ROA, ROE, and EPS has influenced the extent of CSD substantially, except in 2003. These findings show that financial performances for Indonesian companies play significant role to support CSD. Bigger companies tend to disclose more CSD compared to those smaller industries.

Other variables found to be significant were ‘auditor’s influence’, ‘company age’ and ‘company status’, while ‘solvency ratio’ was significant in influencing CSD quantity, but not quality. ‘Ownership concentration’ displayed the opposite sign to the expected relationship. This finding is interesting as tentative evidence suggests that the major owners of Indonesian companies are likely to have a strong influence on directing the company’s activities, including CSD.
Relevant to the bivariate analysis, four predictor variables were found to be potentially significant in influencing CSD in regression models. The variables are 'company status', 'company age', 'ROA', and 'auditor's influence'. The 'company status' variable is the only one which consistently significantly influences the extent of CSD in both quantity and quality, in any regression models, for all the years of examination. This variable constantly correlated to CSD with a significance level of 0.01 (99% confidence level), and the asymptotic significant value (p-value) of 0.000. This contrasted with 'company type', represented by sensitive and non-sensitive industries, which could not be seen as a significant predictor variable in influencing the extent of CSD. These findings describe that more reputable and prominent companies, regardless of their company type, were more likely to explain their CSD better. Further, it seems that reputation play significant consideration for Indonesian companies in disclosing their social and environmental performances.

To conclude, the outcomes of the statistical tests were supported by the results of higher financial performance tend to have greater quantity and higher quality of social disclosures. These greater amounts of CSD also relate to 'company status' and 'auditor’s influences'. By the complexity of industries in Indonesia, particularly in referring to company size and status, these two variables consistent significantly influence to the extent of CSD because of regulations and financial strength. The size of company could refer to the strength of economical condition so that companies are able to allocate their resources in disclosing more and better CSD rather than those which do not have enough resources. ‘Status’, proxied by state owned companies disclosed more CSD because they are exposed by many regulations from the State Minister for State Owned Enterprises. One of the foremost regulations is allocating 2-2.5% from company net profit to conduct partnership and community development program and this information is disclosed greatly in CSD. This result supports the legitimacy theory which may apply in Indonesian context.

This study establishes an important benchmark and comparative study in the area of CSD by providing these conclusions, together with discussions about content analysis and the relationships of the predictor variables to CSD, which were found to be relatively robust under different measurement techniques.

As a result of the limited availability of annual reports, the data collection may be insufficient for certain frequency analyses. Since this limitation was noticed, significant effort was made during the research to overcome the issue. In addition, some issues surrounding the validity of the content analysis method may appear because the technique of codifying text into numbers is still considered to be subjective. The level of subjectivity in coding the different items of disclosures is unavoidable given the diversity of the presentation in the annual reports.

Broader comprehensive reports used to inform social activities would enhance the generalisability of the findings, instead of limiting the study to company annual reports, although the availability of data might still be an issue. The discussion could be also extended by including the differentiation of every specific industry related to their particular CSD nature.
References


Based Analysis”. *Accounting, Organizations, and Society, 12*, 111-122.


