The Role of Corporate Governance on Strategic Management Accounting Disclosure

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This research aims to investigate the role of the board of commissioners and the board of directors on the extent of Strategic Management Accounting (SMA) disclosure in annual reports of Indonesian manufacturing companies. The annual reports of manufacturing listed companies for 2014 – 2018 were examined to measure the extent of SMA disclosure and to investigate the effect of the characteristics of the board of commissioners and board of directors. This study used 42 items of weighted disclosure index, based on international guidelines and SMA literature. This study used data panel regression analysis technique. The result shows that the characteristics of the board of commissioners (tenure and educational background) have a significant effect on the extent of SMA disclosure. Meanwhile, only the tenure of the board of directors has a significant effect on the extent of SMA disclosure.

Key words: Corporate Governance, Board of Directors, Board of Commissioners, SMA Disclosure.

Introduction

Corporate governance is a general term that discusses many aspects and related concepts, theories and practices of the board of directors, including executive and non-executives directors in the company (Cochran & Wartick, 1988). Further, corporate governance is a concept that focuses on the relationship between the boards, shareholders, top management, regulators, auditors and other stakeholders. Monk & Minow (1996) define corporate governance as the relationship between various parties in determining the direction and performance of companies. Therefore, the existence of a corporate governance mechanism
within a company becomes important. The World Bank (1999) states that effective corporate governance mechanisms are: transparency (disclosure of financial and non-financial information and corporate control processes), protection of shareholder right and the ability of directors to manage the company (business plan, strategy and control).

One important mechanism that can improve company performance and the competitiveness of companies is the existence of corporate boards (Maassen, 2002). This is consistent with Williams & Shapiro (1979) who state that an effective and strong corporate board is a valuable asset for the company. The premise that states that a company board is an important mechanism in the company's operational activities is supported by theory and previous literature that discusses corporate governance. As one of the leading theoretical approaches, agency theory is frequently applied to understand the role of corporate boards to mitigate agency problems (Maassen, 2002). Meanwhile, another leading theory, the resource dependence theory, is also often used to understand the allocation role of corporate boards.

Regional and international developments have resulted in two leading approaches to the organisation of corporate boards: The Anglo-Saxon (one-tier board systems) and The Continental European (two-tier board systems). Anglo-Saxon countries such as the United States, the United Kingdom and Canada adopted a variant of one-tier board systems. In this system, executive directors and non-executive directors operate together in one organisation. One-tier boards can also operate with a board leadership structure that combines the roles of the CEO and the chairman. Continental European countries such as Germany, Finland and the Netherlands have adopted variants of the two-tier board systems. In this model, an additional organisational layer has been designed to separate the executive function of the board from its monitoring function. Furthermore, in the two-tier system, there is a separation of functions between the management board and the supervision board. Further, Maassen (2002) illustrates the difference between the one-tier system and the two-tier system with regard to control and decision making in a company.

**Figure 1.** Separations of rules in corporate governance structure

![Diagram of corporate governance structure]

**Source:** Maassen (2002)

Maassen (2002) compared the roles between management boards and supervisory boards in two-tier systems according to previous studies (Table 1). This explains that in two-tier systems
there is a separation of roles within the company, management functions (the board of directors) and monitoring functions (the board of commissioners).

**Table 1:** The rules of corporate boards in a two-tier board system

<table>
<thead>
<tr>
<th>Management Board</th>
<th>Supervisory Board</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management function</td>
<td>Supervisory function</td>
<td>Demb &amp; Neubauer (1992)</td>
</tr>
<tr>
<td>Direction and executive action</td>
<td>Accountability and supervision</td>
<td>Tricker (1984)</td>
</tr>
<tr>
<td>Decision management</td>
<td>Decision control</td>
<td>Fama &amp; Jensen (1983)</td>
</tr>
<tr>
<td>Performance enhancement</td>
<td>Monitoring roles</td>
<td>Hilmer (1993)</td>
</tr>
<tr>
<td>Decision making</td>
<td>Decision taking</td>
<td>Pahl &amp; Winkler (1974)</td>
</tr>
</tbody>
</table>

Indonesia adopted a two-tier board system which is characterised by a board of directors and a board of commissioners. In a two-tier system, the board of directors’ acts as the manager and the board of commissioners act as the supervisory party (Wardhani, 2008). The existence of the board of commissioners and the board of directors have an advisory role and act as an internal mechanism to control management (control role) to act in accordance with the principal's interests (Young, *et al.*, 2001).

**Figure 2.** Indonesian Corporate Governance Structures

Source: Tjager *et al.* (2006)

The resource dependence theory states that there are two views that explains the role played by the board of commissioners and board of directors in the company (Pfeffer & Salancik, 1978). The first view is related to the relationship to the company's environment (environmental linkage perspective) which explains that the board of commissioners and the board of directors are an inseparable part of the company and the environment. Provision of company information and resources conducted by the board of commissioners and board of directors will help the company to protect from environmental uncertainty. Siciliano (1996) argues that individually, the diversity of the board of commissioners and the board of directors who have different
backgrounds will provide a company with an important resource. This view is related to the role of the board of commissioners and the board of directors as advisers in the company.

The second view explains that the board of commissioners and the board of directors act as a control function within the company. Various administrative efforts made by the board of commissioners and the board of directors will affect the level of company efficiency. The existence of a board of commissioners and a board of directors within the company itself is seen as a control mechanism to control management actions that are opportunistic behaviour. Both views propose that the structure of the board of commissioners and the board of directors will potentially affect the company's outcome, which in turn affects the firm’s value.

One of the problems relating to the structure of the board of commissioners and the board of directors is the diversity of a board member. According to Ararat, et al. (2010), the diversity of a board member within a company is a representation of the distribution of differences between board members relating to the characteristics of differences in attitudes and opinions. This diversity refers to the composition of the board of commissioners and board of directors as well as a combination of qualities, characteristics and different skills among individuals and board members associated with decision-making and other processes in companies (Lückerath-Rovers, 2010).

According to Milliken & Martin (1996) the diversity of a board member is distinguished between demographic diversity and cognitive diversity. Demographic diversity is a characteristic of the board member that can be observed directly such as gender, age, race, and nationality. Meanwhile, cognitive diversity is a characteristic of board members that cannot be observed directly such as expertise and experience (Pfeffer, 1973).

This study aims to examine the characteristics of the board of directors and the board of commissioners (tenure, educational background and age) on the extent of strategic management accounting disclosure. One such specific form of voluntary strategy disclosure is strategic management accounting. Previous research has shown that voluntary disclosure is important for companies, specifically its impact on investor decision-making (Glaum, et al., 2011). Some views argue that companies might make decisions to disclose their information to encourage investment, to preserve company reputation (Bourveau & Schoenfeld, 2017), and to increase company value (Fereira & Rezende, 2007; Dhaliwal, et al., 2011; Plumlee, et al., 2015). Sieber, et al. (2014) suggest that voluntary disclosure can be considered as a source of relevant information for investors.

Strategic management accounting (SMA) disclosure is the disclosure of information relating to company activities, competitors and current market conditions (Dixon & Smith, 1993). This is important because the information is important for top management to align their resources
with strategic opportunities to achieve competitive advantage. In addition, SMA information can be used to monitor, evaluate and develop business strategies that have been undertaken by the company (Simmonds, 1981).

SMA has been known for more than 30 years in accounting literature (Carlsson-Wall, et al., 2015). Since the first publication of SMA (Simmond, 1981), there has been various research on this topic from conceptual to empirical investigations in public and private sectors (e.g. Cuganesan, et al., 2012; Modell, 2012). Despite the growing of number of publications in this area and that is has become an established accounting topic (Otley, 2016), the definition of SMA still lacks consensus (Nixon & Burns, 2012).

This research is expected to contribute to the accounting literature through strategic management accounting disclosures as well as the role of the board of directors and board of commissioners on the area of strategic management accounting disclosure in manufacturing companies in Indonesia. The findings of this study can provide insights related to the role of the board of directors and board of commissioners on the extent of strategic management accounting disclosure.

**Literature Review and Hypotheses Development**

The upper echelon theory is based on the understanding that organisational performance is directly influenced by the knowledge, experience and expertise of individuals who play a role in corporate management (Hambrick & Mason, 1984). The main focus in this theory is managerial characteristics that can be observed such as age, tenure, educational background, etc. (Hambrick, 2007) which usually influence decision-making activities, strategic choices and company performance (Ben-Amar, et al., 2013; Chen, et al., 2018). In addition, the characteristics of the board can influence the company's accounting policies (Ge, et al., 2011). This is in line with research conducted by Ngoc & Chi (2019) who found that there are differences in the ability of adaptation and management career success in terms of tenure, age, managerial experience and education level. In this study, we focus on three main characteristics: tenure, age, and educational background of the board of directors and the board of commissioners to determine its effect on the extent of strategic management accounting disclosure.

Research on the effects of tenure has consistently demonstrated an inverse relationship between the time in office and organisational change (Finkelstein, et al., 2009). Board members with lower tenure tend to try new things and try to implement innovative strategies within the company (Bantel & Jackson, 1989). Wu, et al. (2005) indicates a curvilinear, inverted U-shaped relationship between board tenure and invention. Conversely, board members with longer tenure prove to be more resistant to strategic change (Finkelstein & Hambrick, 1990).
Wiersema & Bantel (1992) and Finkelstein & Hambrick (1996) state that board members with longer tenure in the organisation tend to avoid risk, even though they know that innovation and change will provide better results for the organisation.

Another viewpoint states that with a long service period, a board member is better able to manage the organisation, politics and culture (Kimberly & Evanisko, 1981). Vafeas (2003) states that boards with longer tenure will provide greater experience, competence and commitment to companies. This is because with a long tenure, board members have greater knowledge about the condition of the company and the business environment. Several studies have proven that the tenure of board members has a negative influence on corporate strategy innovation (Wiersema & Bantel, 1992; Boeker, 1997). Naranjo-Gil, et al. (2009) and Pavlatos (2012) show that the length of service of top management has a negative influence on corporate strategic management accounting practices.

Shen (2003) states that a longer working period of top management will reveal lower corporate information because board members will choose a safe position. Lewis, et al. (2014) found that the likelihood of voluntary information disclosure decreases with CEO tenure. Handajani, et al. (2014) and Rao & Tilt (2016) show that board members with longer tenure tend to disclose lower information. Handajani, et al. (2014) state that long-term relationships with other board members and management weaken their monitoring, supervisory and control over executives, which can ultimately become detrimental to long-term corporate sustainability. Based on the theory and results of previous studies, hypotheses 1 proposed in this study are as follows:

**H1a:** the board of commissioners' tenure has a negative effect on the extent of strategic management accounting disclosure  
**H1b:** the board of directors' tenure has a negative effect on the extent of strategic management accounting disclosure

Prior research suggests that an executive’s educational background can have a significant effect on firm behaviors and outcomes (Finkelstein et al., 2009). In general, educational background can be considered as an important factor in the practice of corporate disclosure (Haniffa & Cooke, 2002). Specifically, the level of education may influence the company's disclosure (Farook, et al., 2011; Katmon, et al., 2019). Fernández-Gago, et al. (2018) show that the educational background of the board affects the extent of corporate social disclosure. In addition, the education level of the board also influences the company's performance (Valls, et al., 2016).

In addition, educational background has a significant influence on the use of strategic management accounting techniques (Pavlatos, 2012). This is because the higher the educational background, the more extensive the thinking of a board member will be. Naranjo-Gil et al.
(2009) stated that top management education background will influence the decision making process. This is in line with the research of Emsley, et al. (2006), Davila & Foster (2005) and Graham & Harvey (2001) who stated that the educational background of board members has a significant positive effect on the level of innovation and accounting management systems.

Research by Wiersema & Bantel (1992) and Finkelstein & Hambrick (1996) states that the background of management education will influence the decision making process and the selection of strategies that companies will use in an effort to gain competitive advantage. Hsu, et al. (2013) show that the level of education forms an individual's cognitive base and leads to a better ability of the individual to process information and absorb new ideas. Therefore, this will improve the cognitive abilities of the board that come from various views which ultimately increase creativity and innovation in solving problems (Milliken & Martins, 1996). Based on previous research, hypothesis 2 is proposed as follows:

H2a: the board of commissioners' educational background has a positive effect on the extent of strategic management accounting disclosure

H2b: the board of directors' educational background has a positive effect on the extent of strategic management accounting disclosure

Prior literature argues that risk aversion increases with age (Hermann & Datta, 2005). Companies that are led by young board members tend to be aggressive and brave in taking strategic, innovative and bold steps to try new things (Bany-Ariffin, et al., 2014). Conversely, the older the age of the board members, the less courage there is to take risks (Baginski, et al., 2016). Even older board members who are approaching retirement are reluctant to disclose much information, including bad news because it can immediately incur costs, while good news can be verified after they leave the company or retirement (Cassell, et al., 2013; Serfling, 2014).

Previous research has provided empirical evidence that board age influences the quality of corporate disclosure (Dao, et al., 2013; Huang, et al., 2012). Bamber, et al. (2010) found that managers born before World War II disclose less voluntary information than younger executives. Hafsi & Turgut (2013) show a negative relationship between age diversity and CSR performance. Other studies also report a significantly negative relationship between the average age of board members and CSR disclosure (Roitto 2013; Post, et al. 2011). The result of relationship between board age and disclosure is still mixed. Dyreng, et al. (2010), Ge, et al. (2011), Ran, et al. (2015), Schrand & Zechman (2012), and Davis, et al. (2015) do not reveal any observable age effect. Based on the results of previous research, the following hypotheses are proposed:

H3a: The board of commissioners' age has a negative effect on the extent of strategic management accounting disclosure
**Hypothesis**

The board of directors’ age has a negative effect on the extent of strategic management accounting disclosure

**Research Method**

In order to investigate the characteristics of the board of commissioners and board of directors and the extent of SMA disclosure, the dependent variable is the SMA disclosure. SMA disclosure was measured using 42 items of weighted disclosure index, based on international guidelines (e.g. GRI, 10 UN Global Compact, and Malcolm Baldrige) and SMA literature. The index used in this study is similar to the index used by Honggowati, et al. (2017) and Honggowati, et al. (2019).

SMA disclosure was fully adopted from the SMA Voluntary Disclosure Index by Honggowati, et al. (2017) and Honggowati, et al. (2019). The SMA Voluntary Disclosure Index was formulated through several stages.

a. First, collecting the SMA definitions from previous studies (e.g. Simmonds, 1981; Bromwich, 1990; Dixon & Smith 1993; Langfield-Smith, 2008; Ma & Tayles 2009; Hoque, 2006; AlMaryani & Sadik, 2012).  
b. Second, analysing for any elements of the definition that correspond to the disclosure items of the sustainable reporting guidelines of The Global Reporting Initiative (GRI). The obtained disclosure items were supplemented with disclosure items from the 10 UN Global Compact reporting guidelines and from Baldrige (2013).  
c. Third, the SMA index began with a list of 132 items of information that were potentially voluntary. These items were then compared to the national mandatory requirement. The result from this stage is 83 items.  
d. Fourth, from 83 items it was simplified to 44 items (34 indicators from GRI; 1 indicator from 10 UN Global Compact; and 9 indicators from Baldrige).  
e. Fifth, the indicators were tested for content validity through Focus Group Discussion (FGD) with practitioners. The results of the content validity test become the index of SMA voluntary disclosure which was then used as the standard to assess the information published by the manufacturing companies listed on the Indonesia Stock Exchange from 2012 to 2016. The final SMA index consists of 42 items of information of SMA. They are categorised into three group of information types: Strategic Information, Non-Financial Information and Financial Information.

The samples used were manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018. The data used in this research was secondary data obtained from the annual report of manufacturing companies listed on the Indonesia Stock Exchange from 2014 to 2018. The Company Annual Reports were obtained from the Indonesia Stock Exchange website.
In order to examine the effect of ownership structure and firm characteristics on the SMA disclosure, this study used panel data analysis (OLS – Ordinal Least Square).

This research used hypothesis testing in order to examine the effect of ownership structure and firm characteristics on the SMA disclosure. The following regression model is:

\[ SMAD = \alpha + \beta_1 Ten\_BoC + \beta_2 Edu\_BoC + \beta_3 Age\_BoC + \beta_4 Ten\_BoD + \beta_5 Edu\_BoD + \beta_6 Age\_BoD + \beta_7 SIZE + \beta_8 LEV + \beta_9 PROFIT + \epsilon \]

**Result and Descriptive Statistics**

Descriptive statistics conducted in this study aim to present information related to the characteristics of the research variables used. Descriptive statistics are needed to explain the characteristics of each variable used including the minimum, maximum, mean and standard deviation. Table 2 reports the descriptive statistics. This table shows the dependent and independent variable.
Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMA&amp;D</td>
<td>0.160</td>
<td>0.720</td>
<td>0.394</td>
<td>0.147</td>
</tr>
<tr>
<td>Ten_BoC</td>
<td>1.000</td>
<td>32.000</td>
<td>8.077</td>
<td>5.847</td>
</tr>
<tr>
<td>Edu_BoC</td>
<td>2.000</td>
<td>5.000</td>
<td>3.648</td>
<td>0.763</td>
</tr>
<tr>
<td>Age_BoC</td>
<td>32.000</td>
<td>87.000</td>
<td>62.356</td>
<td>8.073</td>
</tr>
<tr>
<td>Ten_BoD</td>
<td>1.000</td>
<td>32.000</td>
<td>7.738</td>
<td>5.820</td>
</tr>
<tr>
<td>Edu_BoD</td>
<td>2.000</td>
<td>5.000</td>
<td>3.620</td>
<td>0.731</td>
</tr>
<tr>
<td>Age_BoD</td>
<td>32.000</td>
<td>86.000</td>
<td>62.044</td>
<td>8.289</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.462</td>
<td>12.843</td>
<td>7.651</td>
<td>1.670</td>
</tr>
<tr>
<td>LEV</td>
<td>0.000</td>
<td>70.831</td>
<td>1.580</td>
<td>3.703</td>
</tr>
<tr>
<td>PROFIT</td>
<td>0.000</td>
<td>90.646</td>
<td>0.526</td>
<td>6.141</td>
</tr>
</tbody>
</table>

This study uses panel data regression to examine the effect of the characteristics of the board of commissioners and board of directors on SMA disclosure. This study uses the Ordinal Least Square analysis, with the fixed method approach to examine the effect of the characteristics of the board of commissioners and board of directors on the extent of strategic management accounting disclosure.

Table 3: Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.120</td>
<td>1.812</td>
<td>0.071</td>
</tr>
<tr>
<td>Ten_BoC</td>
<td>-0.004</td>
<td>-4.211</td>
<td>0.000***</td>
</tr>
<tr>
<td>Edu_BoC</td>
<td>0.015</td>
<td>2.216</td>
<td>0.027**</td>
</tr>
<tr>
<td>Age_BoC</td>
<td>0.000</td>
<td>0.092</td>
<td>0.926</td>
</tr>
<tr>
<td>Ten_BoD</td>
<td>-0.002</td>
<td>-1.709</td>
<td>0.088*</td>
</tr>
<tr>
<td>Edu_BoD</td>
<td>0.005</td>
<td>0.749</td>
<td>0.455</td>
</tr>
<tr>
<td>Age_BoD</td>
<td>-0.001</td>
<td>-1.145</td>
<td>0.253</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.037</td>
<td>10.761</td>
<td>0.000</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.001</td>
<td>-0.493</td>
<td>0.622</td>
</tr>
<tr>
<td>PROFIT</td>
<td>0.004</td>
<td>4.239</td>
<td>0.000</td>
</tr>
</tbody>
</table>

F-Statistics: 5.649
Prob(F-Statistics): 0.000
Adj. R. Square: 0.499

Discussion

This study will examine the effect of the characteristics of the board of commissioners and board of directors on the extent of strategic management accounting disclosure in manufacturing companies listed on the Indonesia Stock Exchange from 2014 - 2018.
Hypotheses 1a and 1b formulate that the board of commissioners' and board of directors' tenure has a negative effect on the extent of strategic management accounting disclosure. Table 3 shows that the board of commissioners' and board of directors' tenure has a negative effect on the voluntary disclosure of strategic management accounting ($H_{1a}$ and $H_{1b}$ supported). This is consistent with previous research showing that voluntary information disclosure decreases in line with the director's increased service tenure (Lewis et al., 2014). These results are also consistent with research by Handajani et al., (2014) and Rao & Tilt (2016). This result is different from the results of research by Hafsi & Turgut (2013) which showed an insignificant effect between tenure and corporate social performance.

Hypotheses 2a and 2b formulate that the board of commissioners' and board of directors' educational background has a positive effect on the extent of strategic management accounting disclosure. Table 3 shows that only the board of commissioners' educational background had a positive effect on the voluntary disclosure of strategic management accounting ($H_{2a}$ supported and $H_{2b}$ not supported). This is in accordance with previous studies that had shown that the educational background of a board has a significant influence on corporate behavior and performance (Finkelstein et al., 2009). The results of this study are consistent with Farook, et al., (2011), Fernández- Gago, et al. (2018) and Katmon, et al. (2019) which show that the board's educational background has effect on the extent of corporate disclosure.

Hypotheses 3a and 3b formulate the hypothesis that the board of commissioners' and board of directors' age has a negative effect on the extent of strategic management accounting disclosure. Based on Table 3, the board of commissioners' and board of directors' age has an insignificant effect on the extent of strategic management accounting disclosure ($H_{3a}$ and $H_{3b}$ not supported). This research is consistent with Dyreng, et al. (2010), Ge, et al. (2011), Ran, et al. (2015), Schrand & Zechman (2012), and Davis, et al. (2015) that does not reveal any observable age effect.

**Additional Analysis**

Additional analysis is used to determine whether there are differences in the characteristics of the board of directors and the board of commissioners. The results of the different tests in Table 4 show that there are no significant differences in the characteristics of the board of directors and the board of commissioners, both their tenure, educational background and age.
Table 4: Independent T Test

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure</td>
<td>0.338</td>
</tr>
<tr>
<td>Educational Background</td>
<td>0.529</td>
</tr>
<tr>
<td>Age</td>
<td>0.543</td>
</tr>
</tbody>
</table>

Conclusion, Limitations, and Suggestions

This study aims to examine the characteristics of the board of directors and the board of commissioners (tenure, educational background and age) on the extent of SMA disclosure. The result shows that the characteristics of the board of commissioners (tenure and educational background) have a significant effect on the extent of SMA disclosure. Meanwhile, only the tenure of a board of director has a significant effect on the extent of strategic management accounting disclosure.

This finding has important implications not only for top management of manufacturing companies in Indonesia but also in other countries. Company management needs to communicate more effectively to the company's image and reputation. This research also has important implications for academics and practitioners to conduct further research related to strategic management accounting.

This study has several limitations. First, the scoring and classification of strategic management accounting index have inherent judgment limitations and subjectivity. Second, our research only focuses on the practice of disclosure of strategic management accounting in manufacturing companies in Indonesia through annual reports, although management can use other communication mechanisms. Future research can consider the disclosure of strategic management accounting in other media such as corporate websites or magazines. Because this research is only for manufacturing companies in Indonesia, further research can be extended to manufacturing companies in other countries with the same culture or other sectors. Third, in our study, SMA disclosure was measured using an index of 42 items derived from international guidelines (eg. GRI, 10 UN Global Compact, and Malcolm Baldrige) and strategic management accounting literature. Future studies can consider other methodological approaches and also improve the strategic management accounting disclosure index.
REFERENCES


