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Strategic Management Accounting disclosure, ownership structure, and firm characteristics in Indonesia manufacturing companies

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Abstract

Why managers should choose to disclose their information with investors is one of the major issues in accounting research. Because of information asymmetry and the agency problem, disclosure is an important aspect of the modern capital market. This study aims to measure the extent of Strategic Management Accounting (SMA) disclosure and the impact of ownership structure (managerial ownership, foreign ownership, government ownership) and firm characteristics (firm size, leverage, profitability) on SMA practices in annual reports of Indonesia manufacturing companies. The annual reports of 545 listed companies for 2012–2016 were examined to measure the extent of SMA disclosure and investigate potential determinant factors of SMA disclosure. This study used 42 items of weighted disclosure index, based on international guideline and SMA literature. This study used multiple regression analysis to examine the association between ownership structure, firm characteristics, and SMA disclosure. The results indicate a low extent of SMA disclosure in annual reports of Indonesia manufacturing companies. The average of SMA disclosure rate is only 39.4 percent, which indicates that SMA has not been commonly disclosed in annual reports. Further results indicate that only leverage that has an insignificant effect on the extent of SMA disclosure. The finding regarding SMA disclosure in annual reports should be on concern to regulatory authorities and standard-setters in Indonesia.

Abstrak

Salah satu isu utama dalam penelitian akuntansi adalah mengapa manajer harus memilih untuk mengungkapkan informasi perusahaan kepada investor. Adanya asimetri informasi dan masalah keagenan, pengungkapan menjadi aspek penting dalam pasar modal modern. Penelitian ini bertujuan untuk mengukur sejauhmana pengungkapan Akuntansi Manajemen Strategis (AMS) dan pengaruh struktur kepemilikan (manajerial, asing, dan pemerintah) dan karakteristik perusahaan (ukuran perusahaan, leverage, dan profitabilitas) pada praktik AMS dalam laporan tahunan perusahaan manufaktur Indonesia. Penelitian ini menggunakan 545 perusahaan yang terdaftar di BEI pada tahun 2012-2016 untuk mengukur luas pengungkapan SMA dan menguji faktor determinan yang berpengaruh terhadap pengungkapan AMS. Penelitian ini menggunakan 42 item indeks AMS, berdasarkan pedoman internasional dan literatur AMS. Penelitian ini menggunakan analisis regresi berganda untuk menguji hubungan antara struktur kepemilikan, karakteristik perusahaan dan pengungkapan AMS. Hasil menunjukkan bahwa tingkat pengungkapan AMS dalam laporan tahunan perusahaan manufaktur Indonesia masih rendah. Rata-rata tingkat pengungkapan AMS adalah 39,4 persen, yang menunjukkan bahwa AMS belum secara umum diungkapkan dalam laporan tahunan. Hasil lebih lanjut menunjukkan bahwa hanya leverage *yang tidak berpengaruh terhadap tingkat pengungkapan AMS. Temuan mengenai pengungkapan AMS dalam laporan tahunan dapat menjadi perhatian bagi otoritas terkait dan regulator di Indonesia.*

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1. Introduction

External communication with the capital markets is crucial for every firm because this communication is useful for facilitating efficient asset allocation and for increasing firm value (Chen et al., 2018). Moreover, information is the foundation on which traders from their beliefs about a company and ultimately their investment decisions (Bourveau & Schoenfeld, 2017). Thus, companies regularly present various form of information (e.g. financial statements, earnings announcement, various form of voluntary disclosures) to market, particularly related to operations, strategies, and financial performance.

Bamber & McMeeking (2010) argue that investors need more additional information in decision-making. Furthermore, Lev (1992) suggests that mandatory disclosure has all basic information in decision-making, but this information is not sufficient (Ho & Wong, 2001; Gisbert & Navallas, 2013). Prior research indicates that voluntary disclosure has identified as an important mechanism to reduce transparency problem (Peters & Romy, 2013; Martínez Ferrero, Ruiz Cano, & García Sánchez, 2016; Martínez-Ferrero, Rodríguez-Ariza, García-Sánchez, & Cuadrado-Ballesteros, 2018). Martínez-Ferrero, Ruiz Cano, & García Sánchez (2016) show that greater information asymmetry is associated with a higher level of voluntary information disclosure, which may reduce agency problem.

Companies always want to present additional information besides the one required by the regulations. In the practice of preparing voluntary information, the management should consider the extent and type of information to be published in the hope that the company will get positive value from the presented information. While the information that may risk the company value tends not to be published, despite the requirement of the Financial Accounting Standard Board (FASB) (2010) which stipulates that information relevant to the financial statements must be stated in order to be understood by the users of the financial statements.

Voluntary disclosure becomes an important aspect for investors and potential investors because it is where a company discloses unique information, in accordance with the type of products that it produces in order to introduce the company and to appeal to the potential investors, as well as to maintain sustainability and to achieve competitive advantage. Healy & Palepu (1995, 2001) suggest that managers tend to make accounting decision and disclose their information to investors for contracting political, or corporate governance reasons. Bamber & McMeeking (2010) identifies five factors that affect voluntary disclosure decisions, several firms used voluntary disclosure to (1) mitigate the information asymmetry; (2) explain of poor performance; (3) increase the liquidity and reduce contracting cost; (4) mitigate of litigation threat, and (5) signaling the quality of management.

Prior research shows that voluntary disclosure is important to companies, specifically its impact on investor decision-making (Glaum et al., 2011). Some views argue that companies might make a decision to disclose their information to encourage investment, to preserve company reputation (Bourveau & Schoenfeld, 2017), and to increase firm value (Ferreira & Rezende, 2007; Dhaliwal et al., 2011; Plumlee et al., 2015). Sieber et al. (2014) suggest that voluntary disclosure can be considered as a relevant source of information for investors. From the internal party point of view, voluntary disclosure is a form of transparency that can increase corporate value (Uyar & Kýlýç, 2012).

Firm's information can be presented in the company's annual report (including both mandatory and voluntary disclosure) or presented separately on the standalone documents that are most usual, but not always, voluntary (Thorne, Mahoney, & Manetti, 2014), and it may also be published through other media such as websites, television or magazines. More specifically, voluntary information disclosure may include information related to strategic (e.g. Strategic Management Accounting). Prior research suggests that voluntary strategy disclosure is important to stakeholders and users of financial reports because voluntary strategy disclosure provides some information to understand and judge the financial performance and position of the company in the market (Morris & Tronnes, 2018). Further, IASB (2010) and GRI (2013) recommend that information related to corporate strategy be disclosed, although it is voluntary. In addition, GRI (2013) recommend to managers to disclose their information related to strategy not only for corporate social responsibility reporting but also to economic performance. At last, voluntary strategy disclosure presented by a company can be used as a broader analysis material to make investment decisions (Sieber et al., 2014). One such specific form of voluntary strategy disclosure is Strategic Management Accounting (SMA) Disclosure.

Simmonds (1981) defined SMA as [...] the provision and analysis of management accounting data about a business and its competition for the use in developing and monitoring the business strategy, particularly relating levels and trends in real costs and prices, volume, market share, cash flow, and proportion demanded of a firm total resources. Dixon & Smith (1993) view SMA as one of such method of providing competitors and market place information that expand the role of management accounting. Furthermore, Tillmann & Goddard (2008) defined SMA as financial and non-financial accounting information to support decision making. In contrast to traditional Management Accounting, which only concerns on the internal financial factors of the company, SMA also takes into non-financial factors and business activities that occur outside the company including the activities of its competitors (Bromwich, 1990). Ma & Tayles (2009) conclude that SMA is the part of management accounting concerned with strategic information for decision making and control.

SMA has been known for more than 30 years in accounting literature (Carlsson-Wall, Kraus, & Lind, 2015). Since first publication of SMA (Simmond, 1981), there is a lot of research on these topics from conceptual to empirical investigation in public and private sectors (Cuganesan, Dunford, & Palmer, 2012; Modell, 2012). Despite the growth of number of publication in this area and has become an established accounting topic (Otley, 2016), the definition of SMA still lack consensus (Nixon & Burns, 2012). Moreover, Tillman & Goddard (2008) argue that SMA research conducted mostly throw little explanation of how SMA practices are implemented and used in practice and provide no theoretical explanation of such practices. However, several studies show that SMA is important in a business environment. There are two important roles of SMA (1) providing internal and external information related to decision making, and (2) expanding the role of management accounting to achieved competitive advantage (Hoque, 2006; Ma & Tayles, 2009; AlMaryani & Sadik, 2012).

Hence, SMA is important in the business environment, published SMA information becomes important information for investors and users of the company's annual report. SMA disclosures can provide some information to understand and judge the financial performance and position of the company in the market especially to measures their competitive advantage. Furthermore, SMA information can be used to monitor, evaluate and develop business strategies that have been undertaken by the company (Simmonds, 1981). The disclosure of information regarding the company's conditions and the strategies used to deal with future environmental developments is a part of the voluntary disclosure related to SMA. SMA information may be a company's secret, thus if it is published, it will be interesting and can use the information for decision-makers. Guidelines to be used as a standard for measuring the extent of SMA disclosure become a necessity for company management.

Agency theory is concerned with the principal-agent problem in the separation of ownership and control of firms, or in decision making and management functions (Jensen & Meckling, 1976; Morris, 1987). Agency theory is based on the central assumption of economics that all individual action is driven by self-interest and opportunistic behavior to increase their wealth. The central assumptions indicate that both principal and agent have their own interest and tend to maximize their individual utility, which results in agency conflict or agency problem (Berle & Means, 1932; Jensen & Meckling, 1976). Jensen & Meckling (1976) conclude that if the principal and agent are utility maximizers, this means that the agent will not always act in the best interest of the principal.

Probohudono (2012) argue that the conceptual framework of agency theory presents ideal mechanism in measuring the extent of disclosure practice in manufacturing companies because manufacturing companies perform a different kind of activities in order to develop an organizational culture to reduce agency problem. Furthermore, agency theory may well fit better in manufacturing companies setting, because of the easier to monitor performance (Noreen, 1988). Another study shows that manufacturing industry is a good choice to investigate the extent of disclosure because it represents a sector that face of a comprehensive set of risks to be managed (Dobler, Lajili, & Zéghal, 2011).

This study aims to measure the extent of SMA disclosure and examine potential determinant factors of SMA disclosure. Most of the previous research of SMA focused on the use of SMA technique and used survey and interview in the reviewing the level of SMA implementation (Honggowati, Rahmawati, Aryani, & Probohudono, 2017). Thus, this study focus to investigate the extent of SMA disclosure and investigate the impact of ownership structure and firm characteristics on SMA practices in annual reports of Indonesia manufacturing companies. This study used 42 items of weighted disclosure index, based on international guideline (e.g. GRI, 10 UN Global Compact, and Malcolm Baldrige) and SMA literature. This research is different from Honggowati, Rahmawati, Aryani, & Probohudono (2017), this research focused on the extent of SMA disclosure and other factors that have potential determinant factors on the extent of SMA disclosure.

Prior studies argue that ownership structure related to the extent of company disclosure (Mokhtar & Mellet, 2013). The monitoring cost in a traded or listed company is greater than the closed company (Eng & Mak, 2003). Hence, traded companies are tending to present more information in their annual reports to confirm that management is acting in the best interest of shareholders (Depoers, 2000; Ghazali & Weetman, 2006). Prior researches indicate that managerial ownership, foreign ownership, and government ownership are associated with disclosure (Eng & Mak, 2003; Jiang & Habib, 2009; Akhtaruddin & Haron, 2010; Ahn Vu, Tower, & Scully, 2011; Samaha & Dahawy, 2011; Mokhtar & Mellet, 2013). Therefore, this research used managerial ownership, foreign ownership, and government ownership to investigate its effect on the extent of SMA disclosure.

Meek, Robert, & Gray (1995) identify several factors that have potential impact to the extent of voluntary disclosure in annual report (e.g. firm size, country, sub-industries, the extent of the multinational operation, profitability, leverage, and international listing status). Agency theory argues that a large firm has higher agency cost that small firm (Jensen & Meckling, 1976; Watss & Zimmerman, 1986). Moreover, larger firm is more sensitive to political costs (Watss & Zimmerman, 1986). Thus, large firms should have additional incentive for voluntary disclosure compares to small firm. Previous studies indicate that agency costs are higher for firms with more debt in their capital structure (Jensen & Meckling, 1976; Meek, Robert, & Gray, 1995). Therefore, voluntary disclosure can be expected to increase with leverage

Foster (1986) argue that more profitable firm has the incentive to distinguish themselves from less profitable firms in order to raise and maintain their position in the capital market, one way to do this is through voluntary disclosure. Prior studies show that firm size, leverage, and profitability are related to the extent of the disclosure (Ghazali & Weetman, 2006; Chu, Chatterjee, & Brown, 2013). Therefore, this research used firm size, leverage, and profitability to investigate its effect on the extent of SMA disclosure.

This study aims to examine the effect of ownership structure and company characteristics on the level of SMA disclosure in Indonesian manufacturing companies. The findings of this research regarding SMA disclosure in annual reports can be used to investors as consideration information to investment decisions. In addition, this result regarding SMA disclosure in annual reports should be on concern to regulatory authorities and standard-setters in Indonesia to evaluate their regulation in the capital market.

2. Hypotheses Development

This study examines the effect of ownership structure and firm characteristics on the level of SMA disclosure. The ownership structure is measured using managerial ownership, foreign ownership, and government ownership. Firm characteristics are measured using firm size, leverage, and profitability.

Prior studies argue that ownership structure associated with the extent of company disclosure (Mokhtar & Mellet, 2013). Managerial ownership is the percentage of ordinary shares held by CEO, executive directors, and management. Empirically, the results of several studies are mixed. Eng & Mak (2003) argues that lower managerial ownership may encourage the manager to consume more perk and against wealth maximization of shareholders. This action will increase monitoring cost to reduce the agency problem (Jensen & Meckling, 1976). This reason leads several studies to find a negative relationship between managerial ownership and the extent of voluntary disclosure (Eng & Mak, 2003; Akhtaruddin & Haron, 2010; Probohudono, 2012).

Agency theory argues that managerial ownership mitigates agency costs since managers have incentives to bear the consequences and gains from the reward of the firms (Jensen & Meckling, 1976). According to Ahn Vu et al. (2011) when managerial ownership is high, firms enable to align the incentives of managers with shareholders and encourage firms to provide more information. This reason leads several studies to find a positive relationship between managerial and the extent of voluntary disclosure (Ghazali & Weetman, 2006; Jiang & Habib, 2009; Ahn Vu et al., 2011). Thus, the first hypothesis as follows:

H_1: managerial ownership has an effect on the extent of SMA disclosure

La Porta, Lopez-de-Silanes, Shleifer, & Vishny (2000) identifies several risks related to foreign share, there are legal protection, political risk, and information asymmetry. Hence, foreign shareholder needs extra information in order to monitor the firm. Previous studies indicate that foreign shareholders have difficulty to control management because of geographical difference, and the barrier of language and culture (Bradbury, 1992). Therefore, firms with a higher level of foreign shareholders then there is a greater need for extra information.

The results of prior studies find that there is a positive relationship between foreign ownership and the level of voluntary disclosure (Alhazaimeh, Palaniappan, & Almsafir, 2014; Haniffa & Cooke, 2002; Mangena & Tauringana, 2007). Therefore, the second hypothesis to be explored is:

H_2: foreign ownership has an effect on the extent of SMA disclosure

According to Alnabsha et al. (2018), high levels of government ownership with a strong political connection can offer protection against greater scrutiny by a weak regulatory framework. The firm with higher government ownership tends to attract investor with less incentive to disclose extra information. Ahn Vu et al. (2011) argue that the presence of government ownership in a firm weakens the incentive to disclose information. However, the firms are under pressure by public scrutiny, consequently this reason lead firm to disclose more information.

Empirically, the findings of previous research are mixed. The results of previous studies find that there is a positive relationship between government ownership and voluntary disclosure (Ntim, Opong, & Danbolt, 2012; Alhazaimeh, Palaniappan, & Almsafir, 2014). Alnabsha et al. (2018) and Ghazali & Weetman (2008) find an insignificant effect of government ownership on the extent of voluntary disclosure. However, Ebrahim & Fattah (2015) and Ahn Vu et al. (2011) report a negative effect of government ownership on the extent of voluntary disclosure. Based on these arguments and several studies, the third hypothesis as follows:

H_3: government ownership has an effect on the extent of SMA disclosure

In general, large firms disclose more information than small firms (Meek, Robert, & Gray, 1995). The larger firm is more complex and has wider ownership than a smaller firm (Hassan, 2009). Agency theory argues that a large firm has higher agency cost that small firm (Jensen & Meckling, 1976; Watss & Zimmerman, 1986). Thus, large firms should have additional incentive for voluntary disclosure compares to small firm. The results of several studies indicate that firm size has positive effect on the extent of voluntary disclosure (Ghazali & Weetman, 2006; Ahn Vu et al., 2011; Chu et al., 2013). Therefore, the fourth hypothesis to be tested is:

H_4: firm size has an effect on the extent of SMA disclosure

Agency costs are higher for firms with more debt in their capital structure, this indicates that voluntary disclosure can be expected to increase with leverage (Jensen & Meckling, 1976; Meek, Robert, & Gray, 1995). Kent & Zunker (2017) argue that highly leveraged companies have incentives to reduce their cost of capital by improving their extent of disclosure. Previous studies show that leverage related to the extent of voluntary disclosure (Clarkson, Overell, & Chapple, 2011; Hummel & Schlick, 2016). Based on these arguments and several studies, the fifth hypothesis as follows:

H_5: leverage has an effect on the extent of SMA disclosure

Foster (1986) argue that more profitable firm has the incentive to distinguish themselves from less profitable firms in order to raise and maintain their position in the capital market, one way to do this is through voluntary disclosure. Ahn Vu et al. (2011) argue that managers of very profitable firm may to disclose more voluntary disclosure to maximize shareholder value and to attract additional capital. Thus, more profitable firm can be expected to disclose more voluntary information. Previous studies indicate that profitability has positive relationship with the extent of voluntary disclosure (Haniffa & Cooke, 2002; Hummel & Schlick, 2016). Therefore, the sixth hypothesis to be tested is:

H_6: profitability has an effect on the extent of SMA disclosure

3. Method, Data, and Analysis

The samples used were manufacturing companies listed on the Indonesia Stock Exchange from 2012 to 2016. This time frame was selected because in 2012 Indonesia received recognition from developing countries that Indonesia is a country that is able to manage its economy well (www.bi.go.id). The sampling technique used was purposive sampling with the criteria of companies that published complete and consecutive annual reports during the five years of the study period. These criteria were formulated to obtain analysis results that really describe the disclosure presented by the companies during the period of observation, and not only momentary disclosures under certain conditions. Based on these criteria, the number of samples obtained was 109 companies.

Table 1. Sample criteria

Year	Population	Valid Sample based on the criteria
2012	132	109
2013	135	109
2014	140	109
2015	141	109
2016	142	109
Total		575

Formulation of SMA Voluntary Disclosure Index

The SMA voluntary disclosure in this study is defined as a disclosure of the implementation of strategic management accounting. We formulated the Index (Probohudono, 2012) as the standard to measure the voluntary SMA disclosure level. The SMA Voluntary Disclosure Index was formulated through several stages. First, collecting the SMA definitions from previous studies (Simmonds, 1981; Bromwich, 1990; Dixon & Smith 1993; Hoque, 2006; Langfield-Smith, 2008; Ma & Tayles 2009; AlMaryani & Sadik, 2012). Second, analyzing for any elements of the definition that correspond to the disclosure items of the sustainability reporting guidelines of The Global Reporting Initiative (GRI). The obtained

Table 2. Type of information

Information Types and Groups	Number of Indicators
A. Strategic Information	
• Company Objectives and Strategies	8
• Research and Development	5
• Company Management	5
• Business Strategy Model	1
• Corporate Culture	1
Total Indicators of Strategic Information	**20**
B. Non-Financial Information	
• Information of Director Board and Commissioner Board	2
• Employee Information	2
• Company Supply Chain	6
• Material Aspects and Limitations	2
• Anti-corruption	1
• Product Management	4
• Consumer Management	1
Total Indicators of Non-Financial Information	**18**
C. Financial Information	
• Company Performance	1
• Board of Director Performance	3
Total Indicators of Financial Information	**4**
Total Indicators of SMA Disclosure	**42**

disclosure items were supplemented with disclosure items from the 10 UN Global Compact reporting guidelines and from Baldrige (2013). 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 of this stage is 83 items. Fourth, from 83 items were simplified to 44 items (34 indicators from GRI; 1 indicator from 10 UN Global Compact; and 9 indicators from Baldrige). 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 information of SMA. They are categorized into three groups of information types, there are Strategic Information, Non-Financial Information and, Financial Information.

Variables measurement and statistical model

In order to investigate ownership structure (managerial ownership, foreign ownership, government ownership), firm characteristics (firm size, leverage, profitability), 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 guideline (e.g. GRI, 10 UN Global Compact, and Malcolm Baldrige) and SMA literature. In this research, we used the dichotomous score to measure the SMA disclosure ("1" if companies disclose the information and "0" for otherwise). Weighted SMA disclosure is developed to obtain views on the importance of each disclosure items from scholars and practitioners. Weighted disclosure index for each item disclosure is calculated by the mean score of each item provided by scholars and practitioners.

The independent variables in this study are managerial ownership, managerial ownership, foreign ownership, government ownership, firm size, leverage, and profitability. Table 3 shows the measurement of dependent and independent variables.

The data used in this research were secondary data obtained from the annual report of manufacturing companies listed on the Indonesia Stock Exchange from 2012 to 2016. The Company Annual Reports were obtained from the Indonesia Stock Exchange website (http://www.idx.co.id). In order to examine the effect of ownership structure and firm characteristics on the SMA disclosure, this study used panel data analysis (GLS – Generalized 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:

Table 3. Measurement of dependent and independent variables

Variables	Measurement
SMA disclosure	A weighted index of total) core to the total item of SMA index (42 items)
Managerial ownership	The percentage of managerial' shares over the total shares
Foreign ownership	The percentage of foreign' shares over the total shares
Government ownership	The percentage of government' shares over the total shares
Firm size	Natural logarithm of total assets
Leverage	Total debt / total assets
Profitability	Return of Assets (ROA)

$$SMAD = \alpha + \beta_1 MO + \beta_2 FO + \beta_3 GO + \beta_4 SIZE + \beta_5 LEV + \beta_6 PROFIT + \varepsilon \quad (1)$$

Where: SMAD = the extent of SMA Voluntary Disclosure; MO = Managerial Ownership; FO = Foreign Ownership; GO = Government Ownership; SIZE = Firm Size; LEV: Leverage; PROFIT = Profitability.

4. Results

Descriptive statistics

Table 4 reports the descriptive statistics. This table shows the extent of SMA voluntary disclosures in annual reports of Indonesia manufacturing companies. The results of the analysis on 109 companies over 5 years or with 545 data show that the highest SMA disclosure was 72.0 percent and the lowest was 16.0 percent of 42 index items.

The average of the SMA information published kept increasing although the increase was not significant from 2012 to 2016. The level of the SMA Disclosure is presented in Table 3. During the 5 years of observation, the average number of SMA information published in annual reports was 16 items (39.40 percent) of the total 42 indicator items. These results illustrate that companies had benefited from a wider and more complete disclosure of information so that the disclosure of SMA information has been increasingly expressed from year to year. Table 5 shows the descriptive statistics of independent variables.

Multiple regression results

This study used panel data analysis (GLS – Generalized Least Square) to explores the effect

Table 4. Descriptive statistics of dependent variable (SMA Disclosure)

Dependent Variable (SMA Disclosure)	Minimum	Maximum	Mean	Std. Deviation
2012	0.160	0.670	0.390	0.142
2013	0.164	0.694	0.390	0.144
2014	0.164	0.694	0.390	0.144
2015	0.164	0.720	0.399	0.152
2016	0.164	0.720	0.401	0.153
Pooled	0.160	0.720	0.394	0.147

Table 5. Descriptive statistics of independent variable

Independent Variables	Minimum	Maximum	Mean	Std. Deviation
MO	0.000	0.894	0.041	0.105
FO	0.000	0.998	0.380	0.324
GO	0.000	0.900	0.032	0.150
SIZE	0.462	12.843	7.651	1.670
LEV	-32.065	70.831	1.151	4.869
PROFIT	-0.548	90.646	0.512	6.143
n = 545				

MO = Managerial Ownership; FO = Foreign Ownership; GO = Government Ownership;
SIZE = Firm Size; LEV = Leverage; PROFIT = Profitability

of ownership structure (managerial ownership, foreign ownership, and government ownership) and firm characteristic (firm size, leverage, and profitability) on the SMA disclosure. The results of the regression analysis are showed in Table 6.

The results in Table 6 indicate ownership structure (managerial ownership, foreign ownership, and government ownership), firm size, and profitability have a positive effect on the extent of SMA disclosure. Thus, H_1, H_2, H_3, H_4, and H_6 are supported. Meanwhile, only leverage has an insignificant effect on the level of SMA disclosure. Consequently, H_5 is not supported.

5. Discussion

The results in Table 6 indicate that managerial ownership has a positive effect on the SMA disclosure (H_1 supported). This result is consistent with prior research that with higher managerial ownership, firms enable to align the incentives of managers with shareholders and encourage firms to provide extra information. Ghazali & Weetman (2006) show that when managerial ownership low is associated with a low level of voluntary disclosure. Consistent with these result, Jiang & Habib (2009) found that higher managerial ownership is related to a higher level of voluntary disclosure. Ahn Vu et al. (2011) show that managerial ownership has positive effect on voluntary disclosure, although these impact insignificant. In contrast, this result difference with several studies that find negative association between managerial ownership and the extent of voluntary disclosure (e.g. Akhtaruddin & Haron, 2010; Eng & Mak, 2003; Probohudono, 2012). Thus, managerial ownership is significant determinant that explains variation in SMA disclosure.

Foreign ownership has a significant effect on SMA disclosure (H_2 supported). This finding similar to the result of previous studies that positive foreign ownership is related to the extent of voluntary disclosure. Alhazaimeh, Palaniappan, & Almsafir (2014) indicate that higher foreign ownership urges the firm to disclose more information voluntarily. Haniffa & Cooke (2002) emphasize that higher foreign ownership is related to a higher level of voluntary disclosure since greater foreign shareholders it means a greater need for disclosure to monitoring management. This result is consistent with Mangena & Tauringana (2007) argument that foreign shareholders participate in companies for which more information is available. Thus, a firm with a high level of foreign ownership there is greater need for extra information.

Government ownership has a positive effect on SMA disclosure (H3 supported). This is consistent with previously studied that there is a positive association between government ownership and

Table 6. Multiple regression results

Variable	Coefficient	t-Statistic	Sig.
Constant	0.041	1.469	0.142
MO	0.121	2.530	0.012**
FO	0.061	4.046	0.000***
GO	0.188	5.527	0.000***
SIZE	0.041	13.006	0.000***
LEV	0.000	0.035	0.972
PROFIT	0.003	3.980	0.000***
Adjusted R-squared			0.275
F-statistic			35.320
Prob. (F-statistic)			0.000

Note:*** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.1 level
MO = Managerial Ownership; FO = Foreign Ownership; GO = Government Ownership;SIZE = Firm Size; LEV = Leverage; PROFIT = Profitability

voluntary disclosure. Alhazaimeh, Palaniappan, & Almsafir (2014) findings show that government has a positive impact on the extent of voluntary disclosure. This result is different from Ahn Vu et al. (2011) argument that the presence of government ownership in a firm weakens incentive to disclose information. However, the firms are under pressure by public scrutiny, consequently this reason lead firm to disclose more information

Firm size has a positive effect on the SMA disclosure (H_4 supported). This is results consistent with agency theory that large firm has higher agency cost that small firm (Jensen & Meckling, 1976; Watss & Zimmerman, 1986). This is lead larger firm to disclose more voluntary information than smaller firms. These findings similar to several studies, Hossain, Perera, & Rahman (1995) argue that large firm tends to have more analyst than small firm, thus the needs of greater information. The significance of this result implies that larger manufacturing firms are associated with higher levels of SMA disclosure.

Leverage has an insignificant effect on the SMA disclosure (H_5 not supported). This result consistent with the prior study that a non-significant association between leverage and the extent of SMA disclosure (Chow & Wong-Boren, 1987; Meek, Robert, & Gray, 1995; Amran, Bin, & Hasan, 2009; Rajab & Handley-Schachler, 2009).

At last, profitability has a significant effect on the SMA disclosure (H_6 supported). Prior studies indicate that profitability has a positive association with the extent of voluntary disclosure (Haniffa & Cooke, 2002; Hummel & Schlick, 2016). Haniffa & Cooke (2002) find that In line with the signaling hypothesis, Ross (1979) argues that companies with good news tend to disclose more information than companies with bad news. Other views why profitability has impact on the extent of voluntary disclosure are managers of very profitable firm may to disclose more voluntary disclosure to maximize shareholder value and to attract additional capital (Ahn Vu et al., 2011). Companies with more profit have more public scrutiny than companies with less profit. This leads companies to disclose more information to avoid future external regulation (Ng & Koh, 1994)

6. Conclusion, Limitations, and Suggestions

Conclusion

This result shows that ownership structure (managerial ownership, foreign ownership, and government ownership) firm size, and profitability is significantly and positively related to the extent of SMA disclosure. Firm characteristics, only leverage has an insignificant effect on the extent of SMA disclosure. Meanwhile, firm size and profitability have a significant effect on the extent of SMA disclosure. These findings have important implications not only for top management teams (TMTs) of manufacturing companies in Indonesia but also in other countries. TMTs of companies need to communicate more effectively for corporate image and reputation. This research also has important implications for scholars and practitioners in the area for further investigation. We expect that the SMA Voluntary Disclosure Index can be used on future research a part of other studies to enhance the benefits of SMA Information Disclosure. Finally, in future, we hope that regulator dan standard setters as the institution that regulates the capital market in Indonesia considers the SMA information as information that must be disclosed by companies listed on the Indonesia Stock Exchanges.

Limitations and suggestions

This study has several limitations. First, the scoring and classification of SMA index have inherent judgment limitations and subjectivity. This limitation cannot be entirely eradicated. Second, our study only focuses on strategic management accounting disclosure (SMA) practices in manufacturing companies in Indonesia through annual reports, even though it is known that management may use other communication mechanisms. Future studies may consider strategic management accounting disclosures in other media such as newspapers, and company website. Since this research to only manufacturing companies in Indonesia, further research can be extended to manufacturing companies in other countries with a similar culture or another sector. Third, in our study SMA disclosure is measured using an index of 42 items derived from the international guideline (e.g. GRI, 10 UN Global Compact, and Malcolm Baldrige) and strategic management accounting literature. Future studies may consider other methodological approaches and also improve the list of SMA disclosure.

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