

Ownership Structure and the Likelihood of Financial Reporting Fraud

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Ownership structure can minimise the likelihood of financial reporting fraud. Previous studies have used a certain kind of ownership to assess the intention of cheating. This study simultaneously integrates types of ownership and aims to determine the influence of ownership structure on the likelihood of financial reporting fraud. It is a quantitative study with a sample of 353 firm-year companies listed in the Indonesian Stock Exchange (IDX) between 2013 and 2017. The sampling technique consists of purposive sampling, while the data collection method uses data from the company's financial report taken from the Indonesian Capital Market Directory or the company's official website. The results indicate that managerial, institutional and foreign ownership have a negative and significant effect on the likelihood of financial reporting fraud. On the other hand, family ownership and public ownership do not affect the possibility of financial reporting fraud.

Key words: *Ownership, Managerial, Institutional, Foreign, Family, Public, Fraud.*

Introduction

A financial report primarily includes the description of all accounting activities of a company which can be used as a reference by internal and external parties to make decisions (Affan, Rosidi, & Purwanti, 2017). Based on the statement of financial accounting concept, if a financial report meets the qualitative characteristics of being understandable, relevant, reliable, and comparable, then the use of financial reporting will be clearer. A financial statement has the primary objective to provide information regarding the financial position, performance and changes in the financial statement of a company. Moreover, according to Affan et. al., (2017), a good quality financial report indicates the actual state of the company and can be used to predict its state in the future. Thus, it is necessary for internal and external users to guide the company towards better directions.

Increasing competition amongst industries has encouraged several companies to window-dress their financial reports to be more presentable in the eyes of shareholders. This phenomenon takes place as there is a difference in interest between managers and shareholders. This difference will push the manager to commit earnings management to engineer the results of financial reporting which will ultimately affect the quality of financial reporting. When a financial report is window-dressed, then it will also affect the reliability of the financial statement, thus increasing the occurrence of fraudulent financial reporting that may influence the public, investors, creditors and other stakeholders.

Hayes, Wallage, & Gortemaker (2015) state that fraudulent financial reporting is an intentional misstatement that is relevant to the auditor. It is an act of omission of amounts and disclosures in financial statements to deceive financial statement users. According to Hayes et. al., (2015), fraudulent financial reporting is mainly caused by of the management's effort to deceive financial statement users by managing earnings, especially for the company's performance and profitability. Furthermore, inappropriate adjustment tends to increase until it can result in fraudulent financial reporting as the pressures to meet market expectations and the desire to maximise executive compensation to become higher. Huang, et. al. (2017) state that fraudulent financial reports are committed to increase the price of shares or to obtain loans from banks. As a developing country, Indonesia cannot be separated from the case of financial reporting with low integrity. Such incidents occur in mining companies such as PT Arutmin Indonesia, PT Kaltim Prima and its parent company. Those companies were suspected of creating their sales reports which created as much as USD 620.49 million loss for the country.

Ownership structure may influence the likelihood of financial reporting fraud since it is one of the most important corporate governance characteristics of public companies. According to agency theory (Jensen & Meckling, 1976), ownership structure may reduce the intention to commit fraud. However, empirical studies have revealed mixed results. For example, family ownership is found to be negatively significant to fraudulent financial reporting according to studies by Hashmi, Brahmana, & Lau, (2018), Hussain, et. al. , (2016), and Mardiana, (2015). However, Ghafoor, Zainudin, & Mahdzan (2018) found a positive insignificant effect of family ownership on financial reporting fraud. Subsequently, public ownership reduces the likelihood of financial reporting fraud Syamsudin, et. al. (2017) however Yasser, Mamun, & Hook (2017) found that ownership has a positive association with low financial reporting quality. Previous studies use a certain kind of ownership which may provide a possible explanation for such an inconsistent result. Therefore, this study integrates various ownership structures, including managerial, institutional and foreign ownership as well as family and public ownership to potential financial reporting frauds in Indonesia. To the best of our knowledge, there are no previous empirical results which comprehensively analyse these types of ownership.

The next section presents the literature review, including basic theory, research model and hypothesis development. Section 3 describes and discusses the method of research by including the explanation of variables, determining population and sample as well as data collection and statistical tools used to analyse data. Section 4 shows findings and discussions related to the research analysis. Finally, the last section summarises the research contents and suggests future studies.

Development of Hypotheses

This section discusses the development of hypothesis including the choice of type ownership (managerial, institutional, foreign, family and public) used to consider available data.

Managerial Ownership

Jensen & Meckling, (1976) explained that managerial ownership consists of shares which are owned by directors and commissioners who are active in the decision-making process and are believed to harmonise interests between management and shareholders. Numerous works of literature state that higher managerial ownership would encourage managers to enhance their performance and fulfil shareholders' expectations which include managers. Moreover, this situation made the managers want to have reliable information as it will affect their investments' return. Inevitably, managers will try to prevent any fraudulent behaviour by presenting proper information disclosure. Alves, (2012) found that the behaviour of engineering profit will be reduced by managerial ownership.

Meanwhile, by using agency theory, conflict of interest can be decreased by the mechanism of ownership structure such as managerial ownership (Affan, 2017). Several works of literature also explain that managerial ownership forces the manager to work as the company owner and focus on firm performance. Thus, there will be an alignment between managers' and shareholders' interests, while the agency problem can be minimised.

However, Fanani, Ningsih, & Hamidah (2009) state that managerial ownership may have no significant impact as there is high pressure from the capital market which induces managers to use accounting methods that can decrease the quality of financial reporting. This statement also supports the view that when a manager only holds a small percentage of ownership, it will induce him or her to manipulate earnings to receive interest. This is supported by Basuki & Yulia (2016) who found that there is a significant positive relationship between managerial ownership and financial statement fraud. On the other hand, Rosyida & Subowo (2016) and Fajaryani (2015) found no correlation between managerial ownership and the integrity of the financial statement. Therefore, based the agency theory, the hypothesis is as follows:

H_{A1}: Managerial ownership negatively affects the likelihood of financial reporting fraud.

Institutional Ownership

Institutional investment includes the number of ordinary shares available to banks, insurers, investment institutions and other institutions which are engaged in investment activities (Nia, Bahadori, & Hajalizadeh, 2016). This kind of investment is claimed to be comparatively advantageous due to its capability in information collection and processing of company performance and future earnings. According to Bushee (2001), managers' incentive is to satisfy their interests which can be reduced by institutional ownership. Velury & Jenkins (2006) state that agency theorists claim that institutional ownership could become a vital governance system for monitoring. This is due to the fact that ownership is the source of power which can be used to support or oppose management. Thus, the distribution of power will become more relevant in a company.

Moreover, institutional ownership can also minimise agency cost, which is proven by Nurdiniah & Pradika (2017) who state that institutional investors would encourage and monitor management to concentrate on efforts to enhance company's performance. Thus, this could reduce the likelihood of fraudulent behaviours. In addition, according to Syamsudin et. al., (2017), a significant amount of institutional ownership can monitor managerial behaviour in managing the company. As a result, there will be more efficiency in controlling actions that may not allow management manipulation. Management would be more attentive in using debt to anticipate financial distress and risk and minimise fraudulent behaviour.

Syamsudin et. al., (2017) found that there is a negative relationship between financial reporting fraud and institutional ownership. Through institutional ownership, company management performance can be optimal, and the manager tends to hinder decisions which can create loss to shareholders. Pamungkas, Ghozali, & Achmad (2018), Ghafoor et. al., (2018), Nia et. al., (2016), and Fajaryani (2015), Ghafoor et. al., (2018) found less percentage of institutional ownership in fraudulent companies. However, this differs from the findings of Affan et. al., (2017) and Nurdiniah & Pradika (2017). Affan et. al., (2017) found that institutional ownership tends to compromise financial reporting quality as the result of lack of supervision of manager behaviour of manipulating corporate profit by using real earnings management. Based on the literature of agency theory and the findings of previous studies:

H_{A2}: Institutional ownership negatively affects the likelihood of financial reporting fraud.

Foreign Ownership

Foreign ownership is ownership of shares possessed by multinationals (Mardiana, 2015). According to Syamsudin et. al., (2017), this means that the company has expanded its business into a larger area. Affan et. al., (2017) specified that the greater shares owned by foreign parties, the greater the number of the external party allocated to a significant position, such as board of directors in the company to align the interests of management and shareholders, resulting in improving the quality of financial reporting. Mardiana (2015) maintains that foreign companies have a better information system to meet internal needs as well as more substantial requests such as customers, suppliers etc. .This characteristic will make foreign ownership companies have less opportunity to commit fraud. Therefore, foreign ownership will demand management to be transparent in financial reporting to maximise control and minimise fraudulent actions.

Based on agency theory, foreign ownership will minimise agency conflict between two parties by aligning their interests. This is due to strong ownership or block-holders closely monitoring the behaviours of the managers and control their activities to improve company performance. According to Syamsudin et. al., (2017) and Mardiana (2015), this has a negative effect on financial reporting fraud. Mardiana (2015) maintains that foreign ownership would boost companies' implementation of high corporate governance standards and better protect minority shareholders who can ensure less occurrence of fraudulent behaviours. Syamsudin et. al., (2017) also support company control by foreign companies over the protection of shares management and financial reporting which obliges management to be more transparent in reporting. Shleifer and Vishny (1997) add that this corporate governance mechanism works to convince foreign parties concerning profit of capital investment given to the company as well as the manager's action by not embezzling or using capital for non-profitable projects.

Furthermore, Syamsudin (2017) also states that outside parties would be more capable of having qualified auditors to test the reliability of the financial report. Meanwhile, according to Affan (2017), there is no effect of foreign ownership and manipulative action through accrual earnings management, yet foreign ownership reacts positively to real earnings management, which is a new mean of earnings management. Foreign shareholders will be less able to supervise managers' behaviour due to geographical distance and lack of awareness regarding local conditions. Therefore, based on agency theory related to the remedies of the agency problem and previous findings:

H_{A3}: Foreign ownership negatively affects financial reporting fraud.

Family Ownership

Based on La Porta, Lopez-de-Silanes, & Shleifer (1999) family ownership is the most dominant type of ownership structure in developing countries, particularly Indonesia. Morck & Yeung (2003) state that family ownership refers to ownership by responsible heirs or by members of a family who are in the process of transferring controls to heirs. According to Cascino, et. al. (2010) agency theory predicts the concentration of family ownership which can lead to superior financial reporting quality, so that fraudulent actions can be hindered. The domination of family members in a family company will align private and company interest by closely monitoring the behaviours of managers to reduce agency cost and control company activities. The incentive of alignment will discourage family management from manipulating earnings which can hamper family reputation and long-term performance (Hashmi et. al., 2018). This is supported by alignment theory which states that there would be less likelihood of fraud as they will be robust monitoring by founding family members (Ghafoor et. al., 2018).

On the other hand, the entrenchment effect is of more concern. It is caused by conflict between controlling (majority) and non-controlling (minority) shareholders offering opportunities to family shareholders to expropriate the wealth of minority shareholders by control over management and decision policies. According to Jensen & Meckling (1976), this kind of company is less efficient as there will be incentives to expropriate wealth from minorities. This situation might be improper when the majority of shareholders try to maximise their wealth rather than others, due to significant shareholders having higher voting power and making decisions solely for their benefit.

Hussain et. al., (2016) and Mardiana (2015) found that there is a significant negative relationship between family ownership and financial reporting fraud. Hussain, et. al. (2016) explain that the presence of family ownership is has a negative significance to financial misstatement. The relationship will be positive when there is an interaction between family ownership and earnings management. Hussain, et. al. (2016) imply that family owners engage in aggressive financial reporting to sustain their reputation, which will increase financial misstatement. Another explanation is that the strong bond between family members and top management who can be family members creates the incentive to engage in opportunistic behaviour and earnings management. Mardiana (2015) clarified that the concentration of family ownership could actively monitor and discipline managers who will promote the quality of presentation of financial statements and reduce the likelihood of financial reporting fraud.

Meanwhile, Ghafoor, et. al. (2018) found a positive but not significant relationship between family ownership and fraudulent companies. As stated earlier, there are numerous family firms in developing countries, including Indonesia, and these families will try to retain their

reputations . According to the perspective of alignment in agency theory and previous findings:

H_{A4}: Family ownership negatively affects the likelihood of financial reporting fraud.

Public Ownership

Public ownership is represented by the comparison of the number of shares owned by public investors (other outside parties instead of management which do not have any special relationship). Yasser, Mamun, & Ahmed (2016) state that public ownership will positively affect firm value and can stipulate class financial reporting. Numerous studies claim that the higher the public ownership, the more pressure for management to disclose detailed information to hinder the effect of information asymmetry. Moreover, Jensen & Meckling (1976) state that public ownership would cause better management systems because the monitoring function is conducted by numerous shareholders. Agency theory also claims that one of the remedies to minimising the agency problem is strong ownership. In Indonesia, the concentration of public ownership in several public listed companies is considered high. Thus, it is expected that it can act as another monitoring tool to reduce agency costs.

Otherwise, management will be constantly pushed to perform well to maintain investors' trust. Therefore, due to high pressure from the public, management can conduct any fraudulent behaviour to cover bad performance by manipulation, which highlights the perspective of pressure in the fraud triangle model. Syamsudin (2017) states that ownership structure is contrary to financial statement fraud. Therefore, the greater the public ownership company, the stronger the outside power to control company activity. Public ownership has a reliable power in the company through the use of mass media. It can represent the public's voice regarding critiques of company performance. An ineffective critique can reduce the trust of other shareholders/ investors.

Furthermore, Fama & Jensen (1983) also state that the company's management system will improved as there will be supervision from numerous shareholders. Consequently, public ownership will force managers to provide complete and transparent information promptly to be useful in decision making. Therefore, fraudulent behaviour in financial statements can be decreased. This contradict the finding by Yasser et. al., (2017) which stated that it can reduce the quality of financial reporting as investors do not have the ability to analyse financial statements that are based on unusual accruals. Hence, there will be no reaction. Based on the theory explained above and the previous study conducted in Indonesia:

H_{A5}: Public ownership negatively affects the likelihood of financial reporting fraud.

Research Method

The target population of this research consist of companies listed on the Indonesian Stock Exchange for the fiscal years between 2013 and 2017. The purposive sampling method is used by considering the following characteristics:

1. Manufacturing companies
2. Annual financial reports published as of 31 December
3. Using IDR (Indonesian Rupiah) currency

This criterion yields 75 firms or 375 firm-year observations. However, the study processed 353 data consisting of 74 firm-year observations for fraud and 279 data for non-fraud. The rest of the 22 firm-year observations are excluded because of outliers or extreme data. In addition, sources of data originate from firms' websites and Indonesian Stock Exchange websites. The types of data and measurements of each variable are summarised in table 1.

This study applies a logistic regression method to test the hypotheses, as the dependent variable is included as non-metric data, collected through the binary scales. The logistic regression equation is as follow:

$$\text{FFR} = \alpha + \beta_1(\text{MO}) + \beta_2(\text{IO}) + \beta_3(\text{FO}) + \beta_4(\text{FAO}) + \beta_5(\text{PO}) + \beta_6(\text{ROA}) + \beta_7(\text{Size}) + \beta_8(\text{Indp}) + \beta_9(\text{AR}) + e \quad (1)$$

Where:

- FFR = Financial Reporting Fraud
MO = Managerial Ownership
IO = Institutional Ownership
FO = Foreign Ownership
FAO = Family Ownership
PO = Public Ownership
ROA = Return on Asset
Size = Company Size
Indp = Independence of Board of Directors, A
AR = Audit Firm Reputation
 α = Constant;
 e = error

Table 1: Variables and their measurements

Variables	Measurements	References
Dependent:		
Likelihood of Fraudulent Financial Reporting (FFR)	Dummy 1 if Altman Z-Score is less than 1.81	Bhavani & Amponsah (2017)
Ownership structure:		
Managerial ownership (MO)	Percentage of shares held by management	Alzeaideen & Al-rawash (2018)
Institutional ownership (IO)	Percentage of shares held by institutions	Alzeaideen & Al-rawash (2018) and Pamungkas et al., (2018)
Foreign ownership (FO)	Percentage of shares held by foreign companies	Alzeaideen & Al-rawash (2018)
Family ownership (FAO)	Percentage of shares held by the family	Affan et. al., (2017)
Public ownership (PO)	Percentage of shares held by the public	Syamsudin et. al., (2017) and Yasser et. al., (2017)
Control Variables		
Profitability (ROA)	Return on assets (ROA)	Mahboub (2017)
Company Size (SIZE)	Log total Assets	Yasser et. al., (2017) and Mahboub (2017)
Independence of Board of Director (Indp)	Percentage of the number of independent directors on a Board	Yasser et. al., (2017), Smaili & Labelle, (2016)
Audit Firm Reputation (AR)	Dummy 1 if auditor from Big 4	Smaili & Labelle, (2016)

Results and Discussions

Descriptive Statistics Analysis

A descriptive statistics analysis describes the data. This study used this type of analysis to represent the minimum and maximum value, mean (average) and standard deviation. Table 2 shows the result of descriptive statistics:

Table 2: Descriptive Data

Variables	Minimum	Maximum	Mean	Std. Deviation
FFR	0.00000	1.00000	NA	NA
MO	0.00000	0.89450	0.0514574	0.14105449
IO	0.00000	1.05336	0.4306587	0.32155156
FO	0.00000	0.98960	0.3442834	0.33450795
FAO	0.00000	0.87320	0.2695071	0.32194418
PO	0.01040	0.81870	0.2487548	0.15127941
ROA	-0.22230	0.40184	0.0596031	0.09598985
Size	10.98563	14.47077	12.3387069	0.72918962
Indp	0.00000	0.66667	0.2002765	0.14754500
AR	0.00000	1.00000	NA	NA

Results of Hypothesis Tests

The hypothesis tests were completed simultaneously and partially. This study utilises Omnibus Tests to assess whether the data used fits the model of equation one. The result shows that the significance value of the Chi-Square is 0.000, implying that at least one of the independent variables contributes to the prediction of the outcome or the current model outperforms the null model. The test to examine the effect of all independent variables simultaneously was completed through the overall model fit test. The partial hypothesis testing was conducted by using the *Wald* test and to determine whether any independent variable impacts the likelihood of financial reporting fraud. Table 3 shows the results.

As shown in table 3 , the data supports the hypotheses related to managerial, institutional and foreign ownerships and fails to reject the premises of family and public ownerships. Two control variables of profit and firm size also improve the likelihood of financial reporting fraud.

Discussions

Managerial Ownership

Managerial ownership has a negative and significant effect on financial reporting fraud. It indicates that the higher the percentage of managerial ownership, the lower the company's likelihood of committing financial reporting fraud. In the context of this research, managerial ownership refers to the ownership of shares which is possessed by management (a member of the Board of Directors and Commissioners) who is actively involved in the decision-making process (Fajaryani, 2015). Management has responsibilities for the company's day to day operation. Based on agency theory, the agency problem occurs as the result of the separation

of ownership from control, duration of managerial involvement, information asymmetry and moral hazard (Panda & Leepsa (2017)). The managers' responsibility is to look after the company which makes them aware of all relevant business information. Meanwhile, the owners depend on managers for information; as a consequence, the information may not reach the owners as it was originally intended.

Table 3: Coefficient (Wald value) Variables

	Coefficients	Hypotheses
Main Variables:		
MO	-12.018 (9.200)*	supported
IO	-5.182 (4.435)**	supported
FO	-7.465 (8.070)*	supported
FAO	-0.399 (0.329)	unsupported
PO	-3.359 (1.680)	unsupported
Control Variables		
ROA	-41.955 (47.208)*	
Size	1.712 (13.284)*	
Indp	2.048 (2.392)	
AR	0.085 (0.024)	
Constant	-16.238 (7.691)*	
Nagelkerke R Square	0.659	

* p<0.01, ** p<0.05

On the other hand, Panda & Leepsa (2017) state that rational behaviour explains the agent's self-satisfying behaviour as the rationality of human action to maximise their own needs. Thus, the separation of ownership from control can lead to the misalignment of interests between principals and agents due to lack of proper monitoring. Managerial ownership can become one of the remedies of agency problems as it will increase managers' affiliation with the firm. Managerial ownership makes the manager work as the company owner and focuses on firm performance. Accordingly, it will encourage managers to enhance their performance and fulfil

shareholders' expectations which includes managers. Moreover, this situation prompts managers to want to obtain reliable information as it will affect their investments' return. It is Unavoidable that managers will try to improve control and prevent any fraudulent behaviour from presenting useful information disclosure. Thus, there will be an alignment between managers' and shareholders' interests, and the problem of agency can be minimised.

Accordingly, this research analysis reported the opposite findings from previous studies that resulted in a positive correlation and no significant relationship. Subsequently, this negative correlation also contradicts the result of studies conducted by Yulia & Basuki (2016), Rosyida & Subowo (2016) and Fajaryani (2015). Yulia & Basuki (2016) found that there is a significant positive relationship between managerial ownership and the likelihood of financial reporting fraud in the Indonesian banking sector. They explain that it would affect managerial discretion, which will be applied by the company. Rosyida & Subowo (2016) and Fajaryani (2015) found that there is no relationship between managerial ownership and the integrity of the financial statement, as there is only a small percentage of managerial ownership. Hence, managers tend to make less contribution to the decision making process.

Institutional Ownership

Institutional ownership has a negative and significant effect on financial reporting fraud. It indicates that the higher the percentage of institutional ownership, the lower the company's likelihood of committing financial reporting fraud. According to Nia, et. al. (2016), institutional ownership refers to the number of company shares percentage which is owned by banks, insurances, financial institutions, holding firms, as well as state-owned organisations, institutions, and firms. In comparison with other investors, institutional ownership relates to professional investors who have an advantage in data collection and analysis. These investors usually quickly collect and investigate information on companies and their future earnings. Based on Panda & Leepsa (2017), the solution to minimising agency problems can be the presence of a reliable owner or block-holder which can closely monitor management behaviour and control their activities to improve firm value. The causes of agency problems between principal and agent include separation of ownership and control, information asymmetry, and risk preference (Panda & Leepsa, 2017). The presence of institutional ownership can lower information asymmetry, and increase the understanding of risk preference as most professional investors will have a comparative advantage to collect and process the investee (company). Thus, it can improve control within the company as stated by Bushee (2001), according to whom managers' incentive is to satisfy their interests which can be reduced by institutional ownership. Yasser et. al. (2016) state that agency theorists claim that institutional ownership could become a vital governance system for monitoring. This is supported through the study of Panda & Leepsa (2017) who state that ownership structure has a significant role in reducing agency cost.

Agency cost is also known as internal cost which is attached to the agent due to the misalignment of interest between principal and agent. One of the components in agency cost is monitoring cost. Thus, institutional ownership cost is effective in reducing agency costs as it will improve a company's monitoring function. In addition, as explained by Syamsudin et. al., (2017), a significant amount of institutional ownership has the capability to monitor managerial behaviour in company management. They will be more efficient in controlling actions that maybe not useful for management to manipulate a financial report. Management performance in a company can be observed optimally, and the manager will tend to hinder decisions which can bring loss to shareholders.

This negatively-significant correlation of institutional ownership and financial reporting fraud is consistent with the findings of Pamungkas et. al., (2018), Ghafoor et. al., (2018), Nia et. al., (2016), and Fajaryani (2015). Studied from abroad such as Nia, et. al. (2016) confirm their findings regarding agency theory. They also add that the existence of institutional ownership would reduce the factors of earning management which will subsequently reduce the likelihood of fraud. Furthermore, due to their risk preference, large institutions tend to demand more oversight on managers. This view is supported by Fajaryani (2015) according to whom institutional investors can optimise management performance which can minimise opportunistic action by management. However, this contradicts the findings by Affan et. al., (2017) and Nurdiniah & Pradika, (2017). Affan et. al., (2017) maintain that institutional ownership tends to compromise financial reporting quality as a result of lack of supervision of manager behaviour.

Foreign Ownership

Foreign ownership has a negative and significant impact on financial reporting fraud. The higher the percentage of foreign ownership, the lower the company's likelihood of committing financial reporting fraud. According to Mardiana (2015), foreign ownership is ownership of shares owned by overseas investors. Yasser et. al., (2016) state that in this emerging market, overseas investors can be effective monitors of managers due to their demand of higher standards of financial disclosure. This kind of ownership structure has characteristics of having a better information system to meet internal needs (Mardiana, 2015) and a greater possibility to occupy management position in a company if the ownership percentage is high (Affan, 2017). These characteristics will force companies with foreign ownership have less opportunity to commit fraud. Moreover, Mardiana (2015) explains that foreign ownership would boost companies to implement high corporate governance standards and better protect minority shareholders which can result in less fraudulent behaviour.

Based on agency theory, foreign ownership will minimise agency conflict between agents and principals by aligning their interests, due to strong ownership or block-holders thoroughly

monitoring management behaviour and controlling their activities to improvise company performance (Panda & Leepsa, 2017). Thus, it should also reduce agency cost due to its monitoring function. Shleifer and Vishny (1997) add that this corporate governance mechanism works to convince foreign parties concerning profit on capital investment given to the company as well as management action by not embezzling or using capital for non-profitable projects.

This negatively-significant correlation of foreign ownership and financial reporting fraud is consistent with the findings by Syamsudin et. al., (2017), Yasser, et. al. (2016) and Mardiana (2015). Yasser, et. al. (2016) state that institutional ownership is positively associated with financial reporting quality in developing countries. Meanwhile, Mardiana (2015) explains that foreign ownership demands companies to implement better corporate governance standards and protect minority shareholders. Thus, companies will be less likely to commit fraud. However, it contradicts the findings by Affan, et. al. (2017) according to which significant influence of foreign ownership and real earnings management can indicate the likelihood of fraud. Foreign shareholders will be less able to supervise manager behaviours due to geographical distance and lack of awareness regarding local conditions.

Family Ownership

Family ownership has no effect on financial reporting fraud. Higher percentage of family ownership would not have any influence on the likelihood of committing financial reporting fraud. Morck and Yeung (2003) state that family ownership in a company is owned by responsible successors or by members of a family who are in the process of transferring control to the successors. Also, the characteristics involved in a family company consist of large portions of shares that are owned by an individual or several family members or other companies controlled by family members and the assignment of management occupation to family members. Based on agency theory, ownership structure can become the solution to the problem of agency, a type of family ownership (Panda & Leepsa, 2017). Ownership of shares by family members in a family company will align private interest with company interest by closely monitoring the behaviour of managers which can reduce agency cost and control company activities. Consequently, the incentive of alignment will discourage family management from manipulating financial information which can hamper family reputation and long-term performance (Hashmi et. al., 2018). Ghafoor, et. al.'s (2018) statement supports the previous contention that "alignment theory claimed that the likelihood of fraud would be reduced as management will be monitored by founding family members."

The agency problem between principals reveals the conflict between controlling (majority) and non-controlling (minority) shareholders offering the opportunities of family shareholders to expropriate the wealth of minority shareholders by controlling management and decision

policies. This situation may be inappropriate when the majority of shareholders try to maximise their wealth over the others as the result of having higher voting power to make any decision for their own benefit. In this context, the result shows a negative sign, but it is non-significant. Affan et. al., (2017) explain that the implementation of IFRS required management to provide a more detailed disclosure: “the reported disclosure should follow actual data and information which can be used for decision making; accordingly, it is expected to reduce information asymmetry (Affan et. al., 2017). As a result, it will minimise the opportunity for management to create policies that can easily lead to opportunistic action. Furthermore, Affan et. al., (2017) state that family ownership structure in manufacturing companies listed in IDX could not control the activities of management in running the company.

This negatively-insignificant correlation of family ownership and financial reporting fraud is consistent with findings by Affan et. al., (2017) which state that there is no relationship between family ownership to both accrual and real earnings management, which can affect the quality of financial reporting and indicate the likelihood of manipulating financial information. They maintain that shares held by the family are quite low. However, this finding contradicts the results of Ghafoor et. al., (2018), Hussain et. al., (2016) and Mardiana (2015). Hussain, et.al. (2016) and Mardiana (2015) found that there is a significant negative relationship between family ownership and financial reporting fraud. Hussain et. al., (2016) explained that family owners consider their reputation which discourages them from aggressively managing financial information. Mardiana (2015) supports the contention that family ownership can promote the quality of financial statements because they can freely monitor and discipline managers. Meanwhile, Ghafoor et. al., (2018) found an insignificant positive relation which is due to the difference in ethical behaviour between family companies and non-family companies. Thus, Ghafoor et. al., (2018) state that the nature of fraud is different in various governance systems.

Public Ownership

Public ownership does not affect financial reporting fraud. Higher percentage of public ownership would not have any influence on the likelihood of committing financial reporting fraud. Yulia & Basuki (2016) explain that public ownership is represented by the comparison of the number of shares owned by public investors (other outside parties instead of management which do not have any distinct relationship). According to Panda & Leepsa (2017), the solution to conquering the agency problem is through having a keen owner, concentrated ownership or block-holders, or outside ownership to closely monitor management behaviour which can reduce agency cost. Therefore, management will be pressured to disclose more detailed information which can prevent the effect of information asymmetry. Public ownership is considered to be a strong form of ownership due to the high concentration of ownership for this type of ownership structure. Thus, it is expected that it can also function as a strong monitor

for management. Additionally, Syamsudin et. al., (2017) state that public ownership has reliable influence in the company through the use of mass media. It can represent the voice of the public regarding critiques of company's performance. A negative critique can reduce the trust of other shareholders/ investors.

Accordingly, this research analysis reports the opposite results of previous studies which show a negative correlation and significant positive relationship. Subsequently, this non-significant correlation also contradicts the result the studies conducted by Yasser et. al., (2017) and Syamsudin et. al., (2017). Yasser et. al., (2017) found a negative correlation between public ownership and financial reporting quality in Pakistan. They stated that managers are best informed regarding alternative uses for funds from investors. They add that the absence of the ability to analyse financial statements would ensure that the public does not react to unusual accruals. Meanwhile, Syamsudin et. al., (2017) have found a negative correlation because there is pressure from public investors to provide information in a transparent way. The reason for these could be the fact that public ownership consists mostly of shareholders with the percentage of share ownership below 5% and/or 10%. Thus, it does not have any significant influence on decision making by management. Another reason is that there could be an absence of ability by many public investors to analyse financial information provided by the company in which they invested.

Conclusions and Recommendations

This research outlined the relationship between ownership structure and the likelihood of financial reporting fraud. By using the logistic regression method, data from 353 firm-year observations reveal that managerial, institutional and foreign ownership decreases the likelihood of financial reporting fraud, while family and public ownership does not .

The findings have significant implications. It is recommended to conduct further research regarding factors influencing the likelihood of financial reporting fraud to obtain more updated information. It is noted that currently no research exists that examines the relationship between types of ownership structure and the likelihood of financial reporting fraud. Thus, the results of this study are useful in contributing to the growing literature in financial reporting fraud and forensic accounting. Hopefully, these findings of ownership structures can also assist internal auditors in considering the establishment of effective monitoring systems referenced from the company ownership structure which can reduce agency cost. Furthermore, policymakers can expand the implementation and effectiveness of corporate governance related to ownership types. Finally, considering ownership can become an effective tool to monitor the company to disclose reliable information.



This study applies Altman Z-score to measure the likelihood of financial reporting fraud; future studies could be extended by considering another proxy such as p-score and earning management to confirm the results of this study. Considering other independent variables such as financial ratios and corporate governance can also be useful to assess the likelihood of financial reporting fraud. Finally, future research can use different types of data collection methods such as interviews to obtain more reliable and accurate data.

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