THE EFFECT OF BOARD CHARACTERISTICS ON INTERNET FINANCIAL REPORTING: A META-ANALYSIS STUDY

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Abstract

Purpose of this study: This paper aims to examine the relationship between corporate governance, namely board characteristics and internet financial reporting.

Methodology: The method used is a meta-analysis technique developed by Hunter and Schmidt’s (1990) covering 26 previous articles published in 2004-2017.

Main Findings: Empirical evidence found that board characteristics represented by board size and board independence have a positive effect on internet financial reporting, while role duality does not correlate.

Implications of this study: This paper has important implications for regulators as it reports board size and board independence as important predictor variables to internet financial reporting. The paper is also of interest to investors and companies related to accountability and transparency.

Research limitations: In these studies, other characteristics of corporate governance such as audit committee board and ownership structure are not included due to the limited number of studies related to corporate governance and internet financial reporting.

Originality/Value: This study extends meta-analysis literature related to corporate governance characteristics on Internet Financial Reporting.

Keywords: Board Size, Board Independence, Role Duality, Internet Financial Reporting, Web-based Reporting.

INTRODUCTION

Financial reports play an important role because they can explain the efficiency and effectiveness of company management in managing firm resources. Financial report information is beneficial for all stakeholders including investors, creditors, the government, accountants, and the public in making business decisions. Thus, the financial statement information must be disclosed and disseminated accurately and on time. Since the era of globalization has encouraged rapid technological development, the impact of companies that traditionally reported the performance of paper-based firm began to undergo transformation by using technology, namely the ‘internet’. The internet as one of the media to disclose and disseminate firm information in the form of financial and non-financial information is used worldwide. The internet is a new alternative in website or internet-based financial reporting, which is known as Internet Financial Reporting (IFR).

IFR plays an important role in showing the transparency and accountability of management in conducting business. The existence of agency problems due to information asymmetry, through IFR as voluntary disclosure can reduce agency costs (Puspitaningrum & Atmini, 2012). IFR can enhance internal and external trust from the uncertainty of firm performance information. Disclosure and dissemination of information on financial performance and non-financial firms through the internet indicates a good image for the company and can attract investors and creditors (Ettredge, Richardson, & Scholz, 2002).

Debreceny, Gray, and Rahman (2002) asserted that internet usage causes financial reporting to be faster, easily accessible, more cost-effective because the firm does not incur costs to print financial reports or costs for the distribution of financial statements that are not in one geographical area, faster delivery, and can increase the frequency of testing. The positive impact of IFR encourages many companies to build and develop websites or internet-based reporting. However, in the practical development of IFR, not all companies do IFR (Xiao, Yang, & Chow, 2004). IFR is voluntary disclosure where no regulation explains the content of information that must be presented on the firm’s website (Kelton & Yang, 2008). Additionally, there is an apathy regarding security guarantees of misuse of corporate financial and non-financial performance information.

The development of IFR use is an interesting issue for researchers, academics, and accounting professionals. This can be seen from several studies related to factors that influence financial reporting. Testing is done by linking between firm characteristics and IFR (Ettredge et al., 2002; Xiao et al., 2004; Abdelsalam et al., 2007; Kelton & Yang, 2008; Alanezi, 2009).
Due to the existing different and mixed research results, it is important to conduct a meta-analysis approach to give a solution to better understand and provide insight into practical IFR. The meta-analysis technique becomes a popular synthesis approach in accounting research, generally, and financial reporting research, in particular (Khlif & Hussainey, 2016). Several meta-analysis studies were examined in association between voluntary disclosure (Ahmed & Courtis, 1999; Khlif & Souissi, 2010; Samaha et al., 2012; Samaha, Khlif, & Hussainey, 2015), corporate disclosure and the cost of capital (Khlif & Souissi, 2010), corporate social and environmental disclosure, IFR determinants (Mokhtar, 2017) on focus on firm characteristics.

LITERATURE REVIEW

Prior researches have been carried out to explain the factors that influence IFR. Many earlier studies have a strong focus on the economic aspects of the determinants of IFR. Several studies examined the firm characteristics on IFR (Xiao et al., 2004; Abdelsalam et al., 2007; Kelton & Yang, 2008; Al-Htaybat, 2011). Corporate governance mechanism (board characteristics, ownership structure, and audit committee) has been added in the latest studies of the determinants of IFR (Kelton & Yang, 2008). This study extends prior meta-analysis literature by examining board characteristics on IFR (Mokhtar, 2017).

Board Size

The number of directors on the board should play a critical role in monitoring the board and in taking strategic decisions. There are mixed theoretical perspectives concerning the size of the board. Some studies argue that a large board assists in performing more monitoring, providing companies with the diversity that help them in providing critical resources and eliminate environmental uncertainties, alleviating the dominance of the CEO, and increasing the pool of expertise that yields from the diversity of the board (Yermack, 1996).

Ezat & El-Masry (2008) tests the impact of firm characteristics and corporate governance variables on the timeliness of corporate internet reporting by the listed Egyptian corporations in the Egyptian Exchange. They developed a disclosure index to measure the timeliness of corporate internet reporting for the listed Egyptian corporations. The result shows a significant relationship between the timeliness of corporate internet reporting and board size, which is in line with the finding by Desoky & Mousa (2013). Therefore, the study suggests the following hypothesis:

**H1:** The board size is positively associated with Internet Financial Reporting.

Board Independence

The agency theory assumes that the presence of independent directors lead to a reduction agency problem between manager and shareholders, then the shareholders’ authority to the board of commissioners to monitor and control decisions made by the manager. A high percentage of independent directors on the board enhances the monitoring of managerial opportunism and reduces the management’s chances of withholding information (Kelton & Yang, 2008). Thus, the level of publishing firm’s financial reporting will enhance as the number of independent members increase in the management.

Studies conducted by Xiao et al. (2004); Kelton & Yang (2008); Abdelsalam et al. (2007); and Desoky & Mousa (2013) investigated the impact of corporate governance characteristics, namely board independence on level of IFR. The results found a significant association between board independence and IFR. Thus, the study suggests the following hypothesis:

**H2:** The board independence is positively associated with Internet Financial Reporting.

Role Duality

Role duality is a trait of phenomenon, which occurs when the Chief Executive Officer (CEO) is also chair of the board of directors. According to the agency theory, dual role creates a strong individual power base, which could impair board independence and the effectiveness of its governing function may thus be compromised (Abdelsalam et al., 2007). In the same context, Barako, Hancock, & Izan (2006) argued that duality can weaken the boards’ functions such as monitoring the CEO. This can result in less disclosure to outsider users of financial statements and ultimately threatens to disrupt IFR. The research conducted by Ezat & El-Masry (2008) found an insignificant association between role duality and IFR. Thus, the study suggests the following hypothesis:

**H3:** The role duality is negatively associated with Internet Financial Reporting.

**METHODOLOGY**

The research method used is meta-analysis approach. Meta-analysis is a quantitative method for standardization and aggregation of findings from all empirical studies. Meta-analysis is an effective way to summarize, integrate, and interpret the results of previous research with a statistical approach to a field of science such as Accounting Science, which states that meta-analysis is one of the standard statistical tools to synthesize various research results from studies that have the
same topic to provide more significant answers. The first step is to search published and unpublished studies related to board characteristics and IFR using keywords such as IFR antecedents, IFR determinants, internal corporate governance, board characteristic on IFR, on-line reporting, and web- based reporting (Ahmed & Courtis, 1999; Khlif & Hussainey, 2016).

This is followed by collection of several accounting and financial empirical studies from journals indexed by Elsevier, ProQuest, Emerald, Wiley and SSRN from 2004-2017. This search led to 25 published and unpublished papers. Table 1 summarizes the results of empirical studies, including meta-analysis.

The study focuses on examining board characteristics, relationships represented by board size, board independence, role duality, and IFR. Other corporate governance variables not tested in this study are due to limited papers related to the variables discussed. The second step is to measure variables to each paper. Variability measurements are shown in Table 2.

The third stage is to calculate the effect size to show the relationship between the dependent variable and the independent variables. Based on the meta-analysis literature, the effect size value uses the Pearson correlation coefficient value (r) of each paper sample. However, not all research samples used Pearson correlation coefficient (r) but also used other statistics value, like t-statistics, F-statistics, p-value, Z score, and X2. These values can be calculated using excel or software. The software used in this study is Comprehensive Meta-Analysis (CMA). This study uses the t-statistic value. The results of calculating the value (r) are shown in Tables 3, 4, and 5. Hunter and Schmidt (2004) stated that there are three steps to analysis. First, to determine the population mean correlation (r) by calculating the weighted effect size.

\[
\bar{r} = \frac{\sum (r_i \cdot N_i)}{\sum N_i} \tag{1}
\]

where \(N_i\) is the sample size for the study i and \(r_i\) is the Pearson correlation coefficient for study i. Step two, after calculating the effect size, it is important to identify whether the mean effect size is statistically significant. Hunter and Schmidt (2004) stated that the variance of effect sizes across the sample consists of the observed correlation variance (variation of effect sizes in the population) and the sampling error. Therefore, it is necessary to calculate the observed correlation variance \(S_r^2\) and sampling error variance \(S_e^2\).

\[
S_e^2 = \frac{\sum N_i (r_i - \bar{r})^2}{\sum N_i} \tag{2}
\]

\[
S_r^2 = \frac{(1 - \bar{r})^2 \cdot K}{\sum N_i} \tag{3}
\]

where \(K\) is the number of effect sizes included in the meta-analysis and \(N_i\) is the total number of sample size of all studies.

RESULT AND DISCUSSION

Board Size on IFR
The overall sample results in Table 3 show a significant positive relationship between board size and IFR, the average correlation coefficient (r) is 0.091 (Z = 2.991, \(p < 0.003\)) and the confidence interval (0.150:0.031). Therefore, H1 is supported. The result is consistent with the prediction of Resource Dependency theory, which argues that large board size has a variety of knowledge and more ability to manage the capital resource of the company. The number of directors on the firm’s board plays a critical role in monitoring the board and in taking strategic decisions, even though there are differences and arguments on the issue of board size.

Board Independence on IFR
Table 4 shows the results for the overall samples revealing a significant positive relationship between board independence and IFR. The mean coefficient is 0.063 (Z = 3.155, \(p < 0.0002\)). Therefore, H2 is supported. The agency theory assumes that the existence of board independence can reduce the cost agency by reducing information asymmetry. This implies independent director to be more effective in encouraging IFR. Board independence is linked to firmer transparency. The results of this analysis are in line with the assumption of agency theory that the existence of board independence can reduce the agency cost by reducing information asymmetry.

Role Duality on IFR
Table 5 shows the results of the overall relationship between role duality and IFR. The results document a non-significant and positive association between role duality and IFR. The role duality has a mean correlation of 0.008 (Z-value = 0.263) with 95% CI (0.051 - 0.067). Therefore, the results do not support H3, which hypothesizes negative correlation between role duality and IFR. However, these results indicate a high degree of heterogeneity across studies. To reduce heterogeneity, further research is needed to test for moderating variables.
CONCLUSION, LIMITATIONS AND SUGGESTIONS

This study examines the association between board size, board independence, role duality, and IFR through a meta-analytic literature review of 25 research papers. The results indicate a significant relationship of board size and board independence with IFR and insignificant relationship between role duality and IFR. These results are consistent with the prediction of agency theory, the signaling theory.

This study suffers from some limitations. Firstly, it examines the association between some corporate governance characteristics and IFR, while corporate governance variables like board committee, board meeting, and board experience are not included in the analysis due to the limited number of studies that discuss the association between corporate governance and internet reporting. Secondly, the study did not examine the effect of audit committee characteristics and ownership structure on internet reporting. Future meta-analysis studies may cover this gap. Thirdly, the problem of bias related to the inclusion/exclusion criteria, methods selected in synthesizing the literature, and the problem of combining “apples and oranges”.

Future research should consider the moderating effects of economic development on the association between corporate characteristics and internet reporting.

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