THE RELATIONSHIP OF AUDIT COMMITTEE AND COMPANY VALUE ADDED PERFORMANCE

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The purpose of this study is to examine the relationship of audit committee characteristics and company value added performance in the property, real estate, and building construction companies listed on Indonesia Stock Exchange in 2011. The study employs four characteristics of audit committee (audit committee size, frequency of audit committee meetings, number of independent commissioners in audit committee, and financial or accounting expert in audit committee) as independent variables and intellectual capital efficiency using The Pulic’s Value Added Intellectual Coefficient method has been employed to measure the company value added performance as dependent variable. The result suggests that the overall model is not significant. Furthermore, turning to the significance of each independent variable, the t-statistic and p-value suggest that all the coefficients for audit committee characteristics are not significant at the 5% level. The result of the study reveals that the establishment of audit committee is not an important driver of intellectual capital efficiency in the context of property, real estate, and building construction industry in Indonesia.

Keywords: Audit Committee, Corporate Governance, Intellectual Capital, Value Added Intellectual Coefficient

INTRODUCTION

Audit committee (AC) is viewed as a representative of investors’ interests (Deloitte Development LLC, 2012, November/December). A particular challenge for AC is to ensure the consistency in the reporting of performance (Goodfellow & Wilkinson, n.d.). The AC is expected to focus on high quality oversight, to work in practice as well as in theory to encourage the development of risk management processes, and to implement internal control system (PricewaterhouseCoopers, 2010, March).

There is a growing body of research literature on AC that seeks to understand their relevance to firm performance (e.g. Aldamen, Duncan, Kelly, McNamara, & Nagel, 2011; Ojulari, 2012) as the AC is the core monitoring mechanism for shareholders and other constituents and more specifically in light of the many accounting scandals. However, previous studies have investigated the relationship by measuring the firm’s performance using accounting and market measures that focus on returns of firm’s physical capital. Despite the important findings from previous investigations, this study provides initial evidence of the relationship between AC characteristics as a component of corporate governance to intellectual capital efficiency (ICE) using Value Added Intellectual Coefficient (VAIC™) method, as introduced by Pulic (1998).

The main consideration of investigating ICE is derived from the concern of Siegel and Borgia (2007) that in today’s economy, value is being created by intellectual capital. Moreover, Pulic (2008) argued that value is not generated by the
quantity of produced goods, but through the quality created by knowledge workers. Furthermore, the growing importance of the study is also referred to the findings of Razafindrambinina and Anggreni (2008) that Indonesian investors put less weight on intellectual capital potential in creating company value. A number of key reasons support the focus of this study on the listed Indonesian property, real estate, and building construction industry. To begin with, the robust economic growth in 2011 could have a positive impact to the property and real estate market in Indonesia by feeding into demand for commercial real estate as Indonesian’s disposable incomes rises. Moreover, due to the global economic crisis, many big foreign companies have reduced the size of their branches in European zone and the United States of America and expanded their businesses in Indonesia. This move boosts the demand of office space and retail space, while domestic demand for condominiums leads to the demand for residential segment (Oxford Business Group, 2012). In addition, according to the Indonesian Construction Association (AKI), the construction sector grew faster in 2011 compared to 2010 and making this industry one of the largest contributors to the national economy (Oxford Business Group, 2011). Therefore, the study about the relationship of AC and ICE of property, real estate, and building construction industry in Indonesia is important to boost up the confidence of investors in this industry, as AC is viewed as a representative of investors’ interests. The challenge for all public companies according to Goodfellow and Wilkinson (n.d.) is to strengthen and rebuild investors’ trust.

The primary contribution of this study to the literature is a comprehensive defensible analysis of the relation between audit committee characteristics and intellectual capital efficiency. Moreover, this study proposes a corporate governance measure namely, audit committee characteristics using four indicators (AC Size, frequency of AC meetings, number of independent commissioners in AC, and financial or accounting expert in AC). These measures are simple and less prone to measurement error. Consideration of this corporate governance measure by future researchers could improve the comparability of research findings.

The proposed study of this paper considers the following hypothesis on intellectual capital efficiency (ICE), $H_0$: Audit committee characteristics have no significant relationship to intellectual capital efficiency.

**LITERATURE REVIEW**

**Audit Committee.** The establishment of audit committees is highly recommended by market regulators, commissions, and accounting bodies as an important step in improving corporate governance (Waweru & Kamau, 2008). An audit committee is not merely a group of persons, but a set of processes affecting the way a corporation is directed and controlled (Szczepankowzki, 2012). In Indonesia, the establishment of AC for a public company is stated in the attachment of Decision of Chairman of Capital Market Supervisory Agency Number: Kep-29/PM/2004. It states that audit committee is established by a Board of Commissioners to support the Board to do its duties and tasks. Audit Committee is responsible for providing advice to Board of Commissioners concerning reports or other issues that have been presented by Boards of Directors to Board of Commissioners (Capital Market Supervisory Agency, 2004). The core responsibility of AC is to ensure the integrity of the company’s financial reporting (KPMG’s Audit Committee Institute, 2013, January). Furthermore, National Audit Office (2012) affirmed that the fundamental role of AC is to ensure that organizations function according to good governance, accounting and auditing standards, and adopt appropriate risk management arrangements. In addition, as the key to effective corporate governance,
AC is an important component in the structure of organizations, particularly in publicly listed companies (Izma, 2013).

**Audit Committee Size.** The AC is at least comprise of three persons, one of whom will be the independent commissioner of the listed company who is also the chairman of the audit committee, while the other members are the external parties who are independent, and at least one of whom must be an expert in accounting and/or finance (Capital Market Supervisory Agency, 2004; Jakarta Stock Exchange Inc., 2004). As stated by National Committee on Governance (2006), the AC composition shall be such to facilitate the company complication by taking into account the effectiveness in decision making. According to Wallace and Zinkin (2005), an audit committee is likely to function most effectively with a small membership of three to six people. Moreover, according to Jakarta Stock Exchange Inc. (2004), the audit committee is at least comprised of three persons. Furthermore, Deloitte Development LLC (2012, May) asserted that even though audit committees must have at least three members, the board determines the appropriate number considering the company’s size and industry, as well as the business nature.

**Frequency of Audit Committee Meetings.** In Indonesia, the decision of chairman of capital market supervisory agency stated that the frequency of audit committee meetings must meet minimum requirements of commissioner meeting stipulated in the article of association and each meeting shall be noted on the minutes of meeting which must be signed by all attended members (Capital Market Supervisory Agency, 2004). Chen and Zhou as cited in Mohiuddin and Karbhari (2010) noted that the number of AC meetings is an important mechanism of corporate governance. In Australia, KPMG’s Audit Committee Institute in Australia (2008) found that on average, audit committees meet five times a year, and close to five times across all four countries with an insignificant difference between the UK, US, Australia and Canada. Where as in Polish practice according to Szczepankowski (2012), on average audit committee met 4.5 times a year. The audit committee invites the management board, chief financial officer, the certified external auditor and the head of internal audit in its meeting to discuss any matters deemed confidential by the parties. AC members’ diligence is extremely important in performing AC’s responsibilities effectively and reliability. Accordingly, most researchers use AC meeting frequency as a proxy of diligence (Raghunandan & Rama as cited in Mohiuddin & Karbhari, 2010). Furthermore, meeting schedules must be well organized in order that all important issues and key events are addressed throughout the year at the right time (National Audit Office, 2012).

**Number of Independent Commissioners in Audit Committee.** For a public company, the establishment of audit committee refers to the attachment of Capital Market Supervisory Agency (2004). Under this regulation, the audit committee must be composed of at least one independent commissioner as the head of committee and two independent members. Moreover, National Committee on Governance (2006) added that for publicly listed companies, state-owned enterprises, province and region-owned companies, companies that raise and manage public funds, companies of which products or services are widely used by public, and companies with extensive influence on environment, the audit committee is chaired by an independent commissioner and the members may consist of commissioners and or professionals from outside the company.

**Financial or Accounting Expert in Audit Committee.** The audit committee is at least comprised of three persons and at least one of the members should have an accounting and/or finance background (Capital Market Supervisory Agency, 2004; Jakarta Stock Exchange Inc., 2004; National Committee on Governance, 2006). In their study, Aldamen et al. (2011) found that having more members with financial
expertise resulted in better firm market performance during the global financial crisis when the decision making expertise was needed. In addition, according to Deloitte Development LLC (2012, May) to perform AC’s primary responsibilities effectively, all members should be financially literate and qualified of understanding the financial reporting issues and complexities evolving from the company’s business activities.

**Intellectual Capital Efficiency (ICE).** Intellectual Capital Efficiency (ICE) is the subordinate concept of VAIC™ (Pulic, 1998). It describes the efficient use of intellectual capital within a company. VAIC™ indicates the total efficiency of value creation from all resources employed, and ICE reflects the efficiency of value created by the intellectual capital employed. VAIC™ and its components of a firm can be calculated using the steps summarized below (based on Pulic, 2008; Nik Muhammad & Amin Ismail, 2009).

First, value added (VA) is calculated as output minus input. Where output is total income, realized by products and services sold on the market during the period of time and input is all costs and expenses except labor, taxation, interest, dividends, depreciation, and amortization. Then human capital (HC) is calculated as the overall employee expenses, including total salaries/wages, education and training, and the structural capital (SC) is calculated by subtracting the human capital from value added: SC = VA - HC.

Second, human capital efficiency (HCE) is calculated by dividing the value added by the human capital: HCE = VA/HC. The second component is the structural capital efficiency (SCE), which is calculated by dividing the structural capital by the value added: SCE = SC/VA. By adding up human capital efficiency and structural capital efficiency, the intellectual capital efficiency (ICE) is then obtained: ICE = HCE + SCE. Capital employed efficiency (CEE) is calculated by dividing value added by capital employed (CE): CEE = VA/CE, where CE is the book value of the net assets of a company.

Finally, the value added intellectual coefficient (VAIC™) is calculated as the overall value creation efficiency of all indicators: VAIC™ = ICE + CEE.

However, in this study, ICE is employed as company value added performance measure. ICE indicates the productivity of manual work and manual workers, in the same way that it represents the quantity of value added per invested monetary unit (efficiency of intellectual capital). ICE is an indicator for the productivity of knowledge workers (Pulic, 2008).

**Audit Committee and Value Added Performance.** There is no previous study found thus far with the aim of examining the relationship of AC to ICE as a subordinate concept of VAIC™ in particular. Aldamen et al. (2012) investigated the relationship of audit committee characteristics and firm performance during the global financial crisis. They employed percentage price change as market performance measure and return on assets as accounting performance measure. The result reveals that smaller ACs with more experience and financial expertise are more likely to be associated with positive firm market performance. Moreover, they found also that longer serving chairs of ACs negatively impacts accounting performance. However, ACs include blockholder representation, the chair of the board, whose members have more external directorships and whose chair has more years of managerial experience is positively impacted accounting performance.

Using both market and accounting based performance measures of 103 listed firms drawn from Ghana, South Africa, Nigeria and Kenya covering the five year period 1997-2001, Kyereboah-Coleman (2007, November) found that AC size has a positive influence on both accounting (ROA) and market performance measure (Tobin’s q). In the overall sample, however, the independence of the AC does not show
any significant relationship with the performance. However, the independence of AC has a significant negative effect on Tobin’s Q in the Ghanaian and Nigerian samples. Furthermore, the frequency of audit committee meetings has a positive and significant relationship with market based performance measured by Tobin’s Q, however, no relationship with ROA in the overall sample. Likewise, using a balanced panel of 79 New Zealand listed firms, Fauzi and Locke (2012) found that audit committee yield a significant positive relationship with firm performance using Tobin’s Q. Kajola (2008) asserted that the relationship between the audit committee and the two performance measures are not statistically significant. Audit committee being occupied by majority of outside members has no influence on the firm’s performance. On the other hand, the study of Mohd Saat, Karbhari, Xiao, and Heravi (2012) found that audit committee governing increased firm performance when there is high proportion of independent audit committee members with practicing accountant experience on the committee.

The followings examined the relationship of AC and company value added. National Audit Office (2012) stated that AC works will be effective by having good communication with board of directors and provides an important link between the board, management and the auditor. Open relationship with finance director, internal and external auditors are also important to add value to the organization. Using a sample of Fortune 200 companies, Chan and Li (2008) confirmed the presence of expert independent directors in the audit committee enhances company value. In addition, National Audit Office (2012, January) emphasized that as the key role of the AC is to analyze and advise on financial and corporate governance issues, the committee members must therefore be able to examine the accounts so as to enhance accountability and add value. Furthermore, Deloitte Development LLC (2013, September) asserted, in today’s economy, many consider that traditional financial metrics may not effectively capture a company’s long-term value creation potential, but to a certain extent serve as indicators of short-term performance. This shift in value drivers and a broader recognition of the importance of environmental, social, and governance. Audit committee as a component of corporate governance, is considered as stewards responsible for helping oversee the company by recognizing and mitigating risk to achieve long-term value creation.

**METHODOLOGY**

In this study, ICE is considered as a dependent variable and AC characteristics including AC Size, frequency of AC meetings, number of independent commissioners in audit committee, and financial or accounting expert in AC are considered as independent variables. This study dealt with testing the relationship of audit committee and intellectual capital efficiency to develop practical knowledge about the effectiveness of AC to predict ICE, therefore the study is considered as a causal study. Cross sectional study design was applied to describe the relationship because the information about audit committee characteristics and intellectual capital efficiency is going on at only one point in time, 2011. All the property, real estate, and building construction companies on Indonesia Stock Exchange (IDX) utilized as the population of this study, however for sampling purpose, the following characteristics were selected. 1.The 2011 annual report of the companies should be available on the IDX. 2.The required information should be available. Considering the above limitations, 34 companies were selected from the 49 companies listed in 2011 on IDX.

For testing the relationship of AC to ICE, the following regression model is used, 

\[
\text{ICE} = \beta_0 + \beta_1 \text{ACSize} + \beta_2 \text{FACMeet} + \beta_3 \text{ACIndp} + \beta_4 \text{ACFinExp} + \varepsilon
\]

Where ICE is the intellectual capital efficiency, ACSize represents number of
AC members, FACMeet denotes frequency of AC meetings, ACIndp is a proportion of independent commissioners in the composition of audit committee, ACFinExp represents proportion of financial or accounting expert in audit committee, \( \beta \) denotes the variables’ coefficient, and \( \varepsilon \) is error term.

Linearity assumption was verified through examination of scatter plots of residuals that indicates linear relationship between the independent variable (s) and the dependent variable. Moreover, normality of the error term distribution was used to check if the data are normally distributed. According to Chan (2003), small sample sizes of \( n<30 \) are always assumed as not normal and moderate sample size is in between 30 to 100. Therefore, the sample size of this study is assumed as normal. In addition, multicollinearity between the independent variables was checked and no multicollinearity problem was found. A formal method used for detecting multicollinearity involves the calculation of variance inflation factors (VIF) and tolerance value (TOL). A VIF for a \( \beta \) parameter greater than 10 or TOL value < 0.10 indicates that a serious multicollinearity problem exist and the independent variable will not be allowed to enter into the model (Mendenhall & Sincich, 1996). Furthermore, the plot of ICE has no pattern, which implies that there was no heteroscedasticity caused by this variable. Heteroscedasticity implies that the variances of the residuals are not constant (Gupta, 2000).

**Results and Discussion**

**Descriptive Statistics.** Table 1 shows the descriptive statistics of all the variables used in this study. The mean of ACSIZE of the sample companies is about 3 members indicates that on average the companies in this study met the requirements of Capital Market Supervisory Agency (2004) and Jakarta Stock Exchange Inc. (2004) for the minimum of three persons of audit committee members. However, there is one company that did not meet the recommendation by only having 2 members in audit committee.

The mean of FACMeet is about 5.85 times a year specifies that the average of 5.85 number of meetings were held by the audit committee and as required by Capital Market Supervisory Agency (2004) that the frequency of audit committee meetings must meet minimum requirements of commissioner meeting stipulated in the article of association. Table 1 showed the minimum number of meetings held by audit committee is one and the maximum of 24. It should be noted that AC meeting frequency is a proxy of diligence as stated by Raghunandan and Rama (as cited in Mohiuddin & Karbhari, 2010). AC members’ diligence as must be revealed by the number of meetings is important in performing AC’s responsibilities effectively. Due to the limited number of AC meetings of several companies indicates the lack of commitment to oversee the important issues and challenges facing the company.

The mean of ACIndp is about 35%, taking into consideration the average of three AC members in the committee, this result indicates that on average the property, real estate, and building construction companies listed on IDX met the minimum standard stipulated by Capital Market Supervisory Agency (2004), Jakarta Stock Exchange Inc. (2004), and National Committee on Governance (2006). However, with the minimum of 0% indicates that not all companies in this study comply with the recommendation that at least one of the AC members should have an accounting and/or finance background. As asserted by Aldamen et al. (2011) that having more members with financial expertise resulted in better firm market
performance when the decision making expertise was needed. The mean of ICE is about 7.02 implied that on average there is 7.02 quantity of value added given by the intellectual capital per invested monetary unit. It is an indicator of the productivity of knowledge workers according to Pulic (2008).

### Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACSize</td>
<td>34</td>
<td>2.00</td>
<td>4.00</td>
<td>3.0294</td>
<td>.30003</td>
</tr>
<tr>
<td>FACMeet</td>
<td>34</td>
<td>1.00</td>
<td>24.00</td>
<td>5.8529</td>
<td>5.25203</td>
</tr>
<tr>
<td>ACIndp</td>
<td>34</td>
<td>0.25</td>
<td>0.67</td>
<td>0.3503</td>
<td>0.08857</td>
</tr>
<tr>
<td>ACFinExp</td>
<td>34</td>
<td>0.00</td>
<td>1.00</td>
<td>0.5962</td>
<td>0.27201</td>
</tr>
<tr>
<td>ICE</td>
<td>34</td>
<td>1.89</td>
<td>23.41</td>
<td>7.0156</td>
<td>5.18869</td>
</tr>
</tbody>
</table>

### Multiple Regression Result. Table 2 shows the calculated value of F-statistic is 0.211 and the significant F at p-value of 0.930. This result suggests that the overall model is not significant. Furthermore, turning to the significance of each independent variable, the t-statistic and p-value suggest that all the coefficients for audit committee characteristics are not significant at the 5% level. This reveals that there is no sufficient evidence to infer that there is a linear relationship between audit committee characteristics and the intellectual capital efficiency of the companies. Hence, this result has failed to reject the null hypothesis (H₀) and reject the predesigned model.

### Table 2: Audit Committee Characteristics and ICE

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Beta</th>
<th>t</th>
<th>Sig.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>10,810</td>
<td></td>
<td>.839</td>
<td>.408</td>
</tr>
<tr>
<td>ACSize</td>
<td>.157</td>
<td>.009</td>
<td>.045</td>
<td>.965</td>
</tr>
<tr>
<td>FACMeet</td>
<td>-.015</td>
<td>-.015</td>
<td>-.082</td>
<td>.935</td>
</tr>
<tr>
<td>ACIndp</td>
<td>-.7,646</td>
<td>-.131</td>
<td>-.647</td>
<td>.523</td>
</tr>
<tr>
<td>ACFinExp</td>
<td>3,701</td>
<td>-.132</td>
<td>-.681</td>
<td>.501</td>
</tr>
</tbody>
</table>

R² = .028  
Adj. R² = .106  
F – value = .211  
Prob. (F) = .930  
No. of companies/observations = 34

* Significant at the 0.05 level

The insignificant coefficients in this study may imply that audit committee in Indonesian property, real estate, and building construction industry is not motivated in evaluating the intellectual capital efficiency of the company. It can be assumed that Indonesian investors put less weight on intellectual capital potential in creating value, as indicated by Razafindrambinina and Anggreni (2008). The result of the study reveals that the establishment of AC is not an important
driver of intellectual capital efficiency in the context of property, real estate, and building construction industry in Indonesia. Although the number of AC members, the number of independent commissioners in AC met the recommendation of Capital Market Supervisory Agency (2004) and Jakarta Stock Exchange Inc. (2004), the committee did not perform effectively to drive the intellectual capital efficiency. Due to the limited number of AC meetings of several companies indicates the lack of commitment to oversee the important issues and challenges facing the company. While the more frequently meetings held, the number of AC members, the number of independent commissioners in AC could possibly just to comply with requirements. In addition, the financial illiteracy of the audit committee members might also be an additional factor of non-significant relationship of audit committee characteristics to ICE as found by KPMG Audit Committee Institute (2013, January), the rising complexity of the global risk environment and technology change, the audit committee’s composition and effectiveness would be better by additional expertise, greater diversity of thinking, background, perspectives, and experiences. Furthermore, The Institute of Internal Auditor (n.d) emphasized that in today’s world audit committee must deal with comprehensive and various issues and ever-increasing tasks.

CONCLUSION AND RECOMMENDATIONS

Using data of 2011 from 34 property, real estate, and building construction companies listed on, empirical findings could not provide a significant relationship between audit committee characteristics and intellectual capital efficiency. The overall lack of significant relationship may potentially result from limited human capacity, the lack of financial expertise, inadequate knowledge about the role of audit committee to add value to the business. Moreover, while the intellectual capital perspective has been broadly applied to research in knowledge-intensive industries, less attention has been paid to Indonesian property, real estate, and building construction industry. This result may imply that Indonesian investors put less weight on intellectual capital potential in creating value. Consequently, audit committee is not motivated in evaluating the intellectual capital efficiency as company value added performance. The result of the study reveals that the establishment of AC is not an important driver of intellectual capital efficiency in the context of property, real estate, and building construction industry in Indonesia.

The limited number of AC meetings of several companies indicates the lack of commitment to oversee the important issues and challenges facing the company. While the more frequently meetings held, the sufficient number of AC members, and the existence of independent commissioners in AC could possibly just to comply with requirements. In fact, AC should have a clear understanding of the role, to enhance accountability and to add value to the business.

Therefore, company’s Board of Commissioners must evaluate the effectiveness of AC in providing advice to the board as this committee is established by the Board of Commissioners with aim of supporting the board to do its duties and tasks. The board must strengthen its principles in establishing the audit committee’s composition as the rising complexity of the global risk environment and technology change, the audit committee’s composition and effectiveness would be better by additional expertise, greater diversity of thinking, background, perspectives, and experiences. The qualifications and expertise of members should meet the requirements set out in the committee’s terms of reference.

The results of this study can be used by the policymakers to take further steps related to strengthening corporate governance systems. The comprehensive
evidence from this study should help the policy makers and regulators make relevant policies and assess the effectiveness of audit committee to these policies. The challenge for policymakers is to reach an appropriate balance of legislative and regulatory reform, taking into consideration international best practice to promote business, enhance competitiveness, and stimulate investments.

REFERENCES


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