Factors Affecting Intellectual Capital Disclosure

Introduction. The study was conducted to analyze the influence of audit committee, board of commissioners, type of auditor and leverage on intellectual capital disclosure. The sample in this study consisted of 20 property and real estate companies that listed on Indonesian Stock Exchange during the period 2016-2018. The data used in this study was secondary data obtained from the annual report of Property and Real estate companies that listed on Indonesia Stock Exchange and publications from previous related studies. Data were analyzed by panel data regression. The results of the study were expected to be a reference material for further research that related to intellectual capital disclosure.

Purpose. The purpose of this study was to analyze the influence of audit committee, board of commissioners, type of auditor and leverage on intellectual capital disclosure in Property and Real estate Companies listed on Indonesia Stock Exchange in 2016-2018.

Results. The result of this study indicated that the frequency of audit committee meetings, the financial expertise of audit committee, the frequency of board commissioner meetings, leverage and firm size as control variables provided empirically positive and significant impact on intellectual capital disclosure. In contrast to the size of audit committee, the independence of audit committee, the women of board commissioners and the type of auditor that indicated empirically no effect on intellectual capital disclosure.

Conclusion. The result of this study showed that the average value of intellectual capital disclosure on Property and Real estate companies in Indonesia was still low - 29.86%. Companies should disclose the information of intellectual capital to minimize information asymmetry in annual reports.

Keywords: Audit committee; Board of commissioners; type of auditor; leverage and intellectual capital disclosure.
Formulation of the problem. The recognition of the importance of intangible assets, especially intellectual capital (IC) to stimulate corporate value and competitive advantage was increasing (Bounfour, 2003; Chen et al., 2005; Kelewatalatenna and Gunaratne, 2010). So far, intellectual capital disclosure in the company’s annual report is still voluntary. Companies were expected to disclose their intellectual capital because it was unique and not easily imitated (Yaseen et al., 2016). Property and real estate companies are example of high IC intensive companies (Woodcock and Whiting, 2009). Following are the average intellectual capital disclosure data available in property and real estate companies in 2016-2018 (Table 1).

<table>
<thead>
<tr>
<th>Year</th>
<th>The average of intellectual capital disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>28%</td>
</tr>
<tr>
<td>2017</td>
<td>29%</td>
</tr>
<tr>
<td>2018</td>
<td>31%</td>
</tr>
</tbody>
</table>

Source: Author’s calculations

Overall, Table 1 displayed a slight increase it that indicated property and real estate companies were starting to realize that intellectual capital played a very important role and would be a competitive advantage if it is well developed. Then, the intellectual capital disclosure in property and real estate companies were still low, below 50%.

In minimizing the occurrence of information asymmetry and increasing transparency of financial statements, it is necessary to supervise the audit committee, board of commissioners and auditors to be able to disclose important information about intellectual capital. The authors were interested in researching this topic because there were problems found by Pricewaterhouse Coopers (PwC) accounting firm in some properties and real estate companies; unpopular brand and poor customer loyalty and relationships. Therefore, the lack of Consumer confidence could affect the Company’s growth prospects (Bisnis.com, 2019). Based on a survey conducted by PwC on this matter, property and real estate companies during 2016-2018 had not disclosed customer related information, such as the number of their customers, what type of customer they had, what the customers’ names were, their reputation and also perception.

In 2018, the weakening of Rupiah threatened property and real estate companies which had a large portion of dollar-denominated debt (Kompas.com, 2018). Companies possessing a high proportion of debt in their capital structure would bear higher agency costs. To reduce these problems, company management could disclose more information, one of which could be related to intellectual capital disclosure.

This study used the audit committee effectiveness characteristics from the study of Li et al. (2012), which were the size, frequency of meetings, independence, and financial expertise. However, unlike the later study, the audit committee in this research did no use share ownership because it would violate the Baapeam-LK regulation No. IX.1.5 regarding “the Establishment and Guidelines for the Implementation of Audit Committee Work”. This research also referred to Firmansa et al. (2018) in using the frequency of the board commissioners meeting and the women board of commissioners, and the types of auditors.

Analysis of recent research and publications. Agency theory provides a framework for linking disclosure behavior with corporate governance by considering both as the accountability mechanisms. Good governance mechanisms reduced the likelihood that management would try to advance their interests by misleading information and asymmetry (Jensen and Meckling, 1976). Based on resource and theory, resources were one of the most important capital and would be a competitive advantage of the company when it is used and develops properly (Barney, 1991).

The result of research conducted by Li et al. (2012) showed that overall intellectual capital disclosure was positively related to audit committee characteristics such as the size and frequency of meetings, and negatively related to the audit committee director’s stock ownership. Next, no significant relationship between intellectual capital disclosure with the independence of the audit committee and financial expertise was found. Based on research from Oba et al. (2013), the independence of the board, the independence of the audit committee, and the gender diversity of the board were not significant in predicting the quality of intellectual capital disclosure. However, board size, board nationality diversity and firm size were found to be relevant contributors to variations in the quality of intellectual capital disclosures.

Uzielawati (2015) in her research found that the size of the board of commissioners, independent commissioners, and the frequency of board meetings had a positive
relationship with intellectual capital disclosure. Firmansyah et al. (2018) explained that the frequency of board meetings, the frequency of audit committee meetings, and the type of auditor each had a positive and significant effect on intellectual capital disclosure. These results were consistent with corporate governance recommendations (UK Corporate Governance Code, 2010) which stated that audit committees must often conduct meetings, to minimize information asymmetry and increase company transparency. Gender diversity in the board of commissioners had a negative and significant effect on intellectual capital disclosure.

**Formulation of research goals.** The purpose of this study was to analyze the influence of audit committee, board of commissioners, type of auditor and leverage on intellectual capital disclosure in Property and Real estate Companies listed on Indonesia Stock Exchange in 2016-2018.

**Outline of the main research material.** Based on the literature review and previous studies, the framework of this study was shown in the following figure 1.

![Conceptual Framework](image)

*Figure 1 — Conceptual Framework*

**Source: Author's calculations**

Figure 1 is a conceptual framework that would be analyzed to see its effect on intellectual capital disclosure in property and real estate companies listed on the Indonesia Stock Exchange in 2016-2018. Based on the literature review, the hypotheses constructed from this research were:

1. Hypothesis 1: Audit committee size does not affect intellectual capital disclosure
2. Hypothesis 2: The frequency of audit committee meetings gives a positive effect on intellectual capital disclosure
3. Hypothesis 3: Audit committee independence does not affect intellectual capital disclosure
4. Hypothesis 4: Audit committee financial expertise has a positive effect on intellectual capital disclosure
5. Hypothesis 5: The frequency of board of commissioners meetings has a positive effect on intellectual capital disclosure
6. Hypothesis 6: The female board of commissioners has no effect on intellectual capital disclosure

7. Hypothesis 7: The type of auditor has no effect on intellectual capital disclosure
8. Hypothesis 8: Leverage has a positive effect on intellectual capital disclosure

**Model and Method Analysis.** Data used in this study was secondary data which was taken from Indonesian Stock Exchange from 2016 to 2018 and related previous studies. The data analysis technique used in this research was descriptive analysis technique and quantitative methods using panel data regression. The following is the analysis of the model used:

\[
ICD_{it} = \alpha + \beta_1UKA_{it} + \beta_2PKA_{it} + \beta_3IKA_{it} + \beta_4KKA_{it} + \beta_5PDK_{it} + \beta_6DKW_{it} + \beta_7TYP_AUD_{it} + \beta_8DER_{it} + \beta_9SIZE_{it} + \epsilon_{it}
\]

Where:
- ICD: Intellectual Capital Disclosure;
- \(\alpha\) and \(\beta\): Constants / Regression / Intercept Coefficients;
- \(i\): Company i in year \(t\);
UKA: Size of the Audit Committee;  
PKA: Frequency of Audit Committee Meetings;  
IKA: Independence of the Audit Committee;  
KKA: Audit Committee Financial Expertise;  
PDK: Frequency of Board of Commissioners' Meetings (Meetings);  
DKW: Women's Board of Commissioners;  
TYP_AUD: Auditor type;  
DER: Leverage;  
SIZE: Firm Size;  
: Error Term.

Intellectual capital disclosure is measured by using the intellectual capital disclosure index or known as ICDIndex to determine the level of intellectual capital disclosure in each company (Ulum and Wijayanti, 2019). After the coding is done by giving a score to each item, then the percentage of ICD index is calculated for each company for three periods, namely the comparison of the total score and the total cumulative score.

The size of the audit committee is measured by the number of audit committee members. The frequency of audit committee meetings is the number of audit committee meetings per period. The independence of the audit committee is measured by comparing the total independent audit committee with the total audit committee. The financial expertise of the audit committee meeting is measured by comparing the total audit committee that has financial expertise with the total audit committee. The frequency of board meetings is the number of board meetings. The women board of commissioners is measured by comparing the total of the women board of commissioners with the total board of commissioners. Furthermore, the type of auditor is measured using a dummy variable that is score 1 for companies audited by Public Accounting Firm affiliated with big four and 0 otherwise. Leverage is measured by comparing total liabilities with total equity. Firm size will be measured by the formula Ln (Total Assets).

Results. Criteria were set for companies used a research samples, namely:

1. Property and Real estate companies that listed on Indonesian Stock Exchange for the period of 2016-2018;  
2. Property and Real estate companies that does not have complete data related to the research variables used for the period of 2016-2018;  
3. Property and Real estate companies that does not have women board of commissioners.

The following table shows the sample selection process:

Table 1. Sample Selection Process

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Property and Real estate companies that listed on Indonesian Stock Exchange for the period of 2016-2018;</td>
<td>54</td>
</tr>
<tr>
<td>2. Property and Real estate companies that does not have complete data related to the research variables used for the period of 2016-2018;</td>
<td>(7)</td>
</tr>
<tr>
<td>3. Property and Real estate companies that does not have women board of commissioners for the period of 2016-2018.</td>
<td>(27)</td>
</tr>
<tr>
<td>Total of Unit Sample</td>
<td>20 Companies</td>
</tr>
<tr>
<td>Research period is 3 years, then the total of unit sample</td>
<td>60 Observation</td>
</tr>
<tr>
<td>(20 Companies × 3 years)</td>
<td></td>
</tr>
</tbody>
</table>

Source: processed by researcher, 2019

Based on Table 1, there were 20 property and real estate companies listed on Indonesia Stock Exchange (IDX) that met the criteria and could be used as samples.

Econometric Analysis. The strengths of research using panel data are that the data used becomes more informative, the variability is greater, the collinearity is lower among variables, many degrees of freedom and are more efficient (Ghozali, 2017; Gujarati, 2012). Panel data allows more complex study of the behavior that exists in the model thus that panel data testing does not use the classical assumption test (Gujarati, 2012). Gujarati (2012) and Ghozali (2017) note that the classical assumption problem can be overhauled using a random effect model. Therefore, if a selected study uses a common effect and fixed effect model, then classical assumptions must be done. This is because the common effect and fixed effect still use the Ordinary Least Square (OLS) approach while the random effect model already uses Generalize Least Square (GLS) which is one of the regression healing techniques. The model chosen in this research was the random effect model.

Based on Table 2, the panel data regression model equation is obtained as follows:

$$ICD_{\text{it}} = -0.3845 - 0.0026UKA_{\text{it}} + 0.0038PKA_{\text{it}} - 0.0011IKA_{\text{it}} + 0.0445KKA_{\text{it}} + 0.0027DKW_{\text{it}} + 0.0223DKW_{\text{it}} + 0.0075TYP\_AUD_{\text{it}} + 0.0204DER_{\text{it}} + 0.0199SIZE_{\text{it}} + \epsilon_{\text{it}}$$

From the calculation results, obtained Prob (F-Statistic) value was 0.000000. Thus, it can be concluded that the independent and control variables jointly affect the dependent variable. Processing results found that the value of R 2 is 0.58 or 58%, it means that the contribution of audit committee, board of Commissioners, the type of auditor, leverage and firms’ size as the control variable in intellectual capital disclosure was 58%, while the remaining 42% was caused by other factors.
The Relationship of Size of the Audit Committee with Discouring Intellectual Capital. Based on tests conducted, the t value was -0.634471 with a probability level of 0.5287 (p > \( \alpha = 0.05 \)) and a coefficient value of -0.002578. It shows that the size of the audit committee has no effect on intellectual capital disclosure. The results of this study are in line with research by Hasurungan and Muid (2015) which states that the size of the audit committee has no effect on intellectual capital disclosure. In this case, in assessing the effectiveness of an audit committee is not measured by the number of members yet from each individual who is capable of being responsible for their duties.

The Relationship of Frequency of Audit Committee Meetings to Intellectual Capital Disclosure. Based on tests conducted, the obtained t value was 3.142251 with a probability level of 0.0028 (p < \( \alpha = 0.05 \)) and a coefficient value of 0.003787. It shows that the frequency of audit committee meetings has positive and significant effect on intellectual capital disclosure. The results of this study are in line with Li et al. (2012) and Firmansa et al. (2018) who found the frequency of audit committee meetings has positive and significant effect on intellectual capital disclosure. The results implied that audit committee activity is an important factor in increasing intellectual capital disclosure to reduce asymmetry information.

The Relationship of Independence of Audit Committee to Intellectual Capital Disclosure. Based on tests conducted, the t value was -0.065157 with a probability level of 0.9483 (p > \( \alpha = 0.05 \)) a coefficient value of -0.001089. It shows that the independence of the audit committee has no effect on intellectual capital disclosure. The results of this study are in line with Li et al. (2012) and Oba et al. (2013) who found that audit committee independence had no significant effect on intellectual capital disclosure.

The Relationship of Financial Expertise of the Audit Committee to Intellectual Capital Disclosure. Based on the tests conducted, the t value was 3.735882 with a probability level of 0.0005 (p < \( \alpha = 0.05 \)) and a coefficient value of 0.044504. It shows that the audit committee's financial expertise has a positive and significant effect on intellectual capital disclosure. The results of this study are in line with Haji (2015) showing that financial expertise has a positive and significant effect on intellectual capital disclosure. This research is in line with agency theory which states that with the existence of financial expertise, the effectiveness of the audit committee will increase the system of deep supervision in its field.

The Relationship of Frequency of the Board of Commissioners' Meetings to Intellectual Capital Disclosure. Based on tests conducted, t value was 2.197942 with a probability level of 0.0326 (p < \( \alpha = 0.05 \)) and coefficient value of 0.002691. It shows that the frequency of board of commissioners meetings has a positive and significant effect on intellectual capital disclosure. The results of this study are in line with Uziawati (2015) and Firmansa et al. (2018). The results show that the frequency of board of commissioners meetings has a positive and significant effect on intellectual capital disclosure. Meetings can be used to measure the effectiveness of the company’s board of commissioners. This is because in the meeting, the board of commissioners will discuss strategic steps that need to be taken by companies to improve the quality of company in public.

The Relationship of Women of the Board of Commissioners to Intellectual Capital Disclosure. Based on the tests conducted, the t value was 1.172816 with a probability level of 0.2464 (p > \( \alpha = 0.05 \)) and coefficient value of 0.022259. It indicates that female board of commissioners has no influence on intellectual capital disclosure. In Indonesia, discrimination against women is still often found, there are still assumptions that men are more suitable to occupy important positions (Yusnaini and Saftiana, 2012). It is supported by the statement of Deaux
and Emswiler (1974) that the success of men is considered to be due to high ability while the success of women is considered only due to luck alone.

The Relationship of Type of Auditors to Intellectual Capital Disclosure. Based on the tests conducted, obtained value was 1.546239 with a probability level of 0.1284 (p > α = 0.05) and coefficient value of 0.007473. It indicates that the type of auditor has no influence on intellectual capital disclosure, the results of this study are in a line with Ousama et al. (2012). It further requires deeper analysis that auditors only audit the financial statements but not exclusively on voluntary disclosure thus this is logical why auditor’s types have no effect on the intellectual capital disclosure.

The Relationship of Leverage to Intellectual Capital Disclosure. Based on the tests conducted, the t value obtained was 2.258504 with a probability level of 0.0283 (p < α = 0.05) and a coefficient value of 0.020379. It shows that leverage has a positive and significant effect on intellectual capital disclosure, the results of this study are similar to Soebjakto et al. (2015). Therefore, these results prove that companies with high leverage ratios have an obligation to meet the information needs of long-term creditors.

The Relationship of Firms Size as Control Variable to Intellectual Capital Disclosure. The control variable used in this study was firm size. The size of the company can control the independent variable with the dependent variable. There are 4 variables that have a significant positive effect on the dependent variable. Based on tests conducted, t value obtained was 3.402736 with a probability level of 0.0013 (p < α = 0.05) and a coefficient value of 0.019916. It means that firm size has a positive and significant effect on intellectual capital disclosure.

Conclusions. Research results showed that the frequency of audit committee meetings, audit committee financial expertise, the frequency of board commissioners meetings, leverage and firm size gave positive and significant effect in improving intellectual capital disclosure of company property and real estate in Indonesia. Meanwhile, the size of the audit committee, the independence of the audit committee, the board of commissioners of women and the type of auditor had no effect in increasing intellectual capital disclosure. It is suggested that company management are expected to motivate the company to compete by making a complete and transparent annual report thus as to attract the attention of potential investors to invest to a company. It is also suggested that Capital Market Supervisory Agency which is intellectual capital disclosure needs to be regulated, because it will help to improve transparency and efficiency of financial markets as well as to support and to enforce market discipline. Further research is expected to consider other independent variables such as ownership structure, the structure of the board of commissioners, business complexity and can add control variables such as company age and type of industry. Besides, extending research duration makes enable to see trends in the level of intellectual capital disclosure.

References:


