

# The Effect of Corporate Governance Quality, Firm Size, Leverage, and Financial Performance on Intellectual Capital Disclosure Empirical Study: Manufacturing Companies Listed on the IDX

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## Abstract

**Purpose** - This study aims to determine the effect of corporate governance quality, firm size, leverage, and financial performance on intellectual capital disclosure (ICD), in manufacturing companies listed on Indonesian Stock Exchange. **Methodology** - The observation period is from 2010 to 2015. The sample is chosen by purposive random sampling method so that 45 companies as sample are obtained. This study used a secondary data and multiple linear regression analysis method. Data tabulation was processed using SPSS version 19.0 for Windows. **Findings** - The corporate governance quality, firm size, and financial performance in which measured to ROA and EPS showed to have positive significant effect on the ICD. This is shown from the significant value smaller than  $\alpha$  of 0.05 and positive t value. Meanwhile, leverage has negative significant effect on the ICD with the result showed that leverage variable has the significant value smaller than  $\alpha$  of 0.05 and negative t value. **Contribution** - This study supports agency theory and signaling theory. The results of the research can be input for the accounting standards making body that the disclosure of intellectual capital in the financial statements is necessary because it can improve the performance of the company.

**Keywords:** *intellectual capital disclosure; corporate governance quality; firm size; leverage; ROA (return on assets); EPS (earnings per share).* .

## 1. Introduction

The phenomenon of intellectual capital in Indonesia began to develop after the emergence of Financial Accounting Standard in Indonesia (PSAK) No.19 (Revised 2000) on intangible assets. Intellectual capital is defined as the sum of the three main elements of the organization namely human capital, structural capital, and customer capital 1-3. These three elements are related to knowledge, human experience, and technology that can provide more value for the company in the form of competitive advantage of a company 4.

Intellectual capital becomes a very valuable asset in modern businesses. The financial statements, as a result of the accounting process, should be able to reflect the existence of intangible assets in the form of intellectual capital and the amount of recognized value. As a result, accountants are required to seek more detailed information on matters related to the management of intellectual

capital from identification, measurement, to disclosure in the company's financial statements.

Disclosures in financial statements and annual reports are grouped into two parts which are namely mandatory disclosure and voluntary disclosure. Mandatory disclosure shall be the minimum disclosure required by applicable accounting standards. Whereas, voluntary disclosure is a free choice of management to provide accounting information and other information beyond what is required by the accounting standards or regulatory body regulation. One of the voluntary disclosures is the disclosure of intellectual capital. Intellectual capital disclosure is the disclosure of non-physical capital or intangible or intangible capital related to human knowledge and experience as well as the technology used in value creation.

Research on intellectual capital disclosure is interesting in Indonesia because there is no standard guidance in measuring intellectual capital. Disclosure of intellectual capital is a new thing that has

not been applied by many companies in Indonesia<sup>6</sup>. In addition, many of the mandatory disclosures required by the accounting profession are related only to physical capital. Compulsory disclosures related to physical capital are inadequate to the needs of the user, thereby generating information gaps between users and management. As a result, disclosure of intellectual capital becomes an important issue that should also be disclosed in the company's annual report.

Factually, public companies in Indonesia are still low and less thorough in disclosing information about the company's intellectual capital. Research conducted by<sup>7</sup> found that the average number of attributes of intellectual capital disclosed in the annual report of public companies in Indonesia is by 56%. While the results of research conducted by <sup>8</sup> showed that the average level of intellectual capital disclosure companies in Indonesia is only amounted to 34.5%.

The theory in accounting literature that related to intellectual capital disclosure is so called the agency theory <sup>9</sup>. The core of agency theory is the separation of functions between investor ownership (principal) and control on the management (agent). This leads to a conflict of interest and information asymmetries between the principal and the agent that will increase agency costs <sup>10</sup>.

One instrument that can be used by companies to control agency costs is the implementation of corporate governance <sup>9</sup>, <sup>11</sup>. According to FCGI <sup>12</sup>, corporate governance is a set of rules governing relationships between shareholders, managers of companies, creditor parties, governments, employees, as well as other internal and external stakeholders related to their rights and obligations or in other words a system that controls company. The purpose of corporate governance is to create added value for all interested parties (stakeholders).

Many studies have proven that there is an influence between corporate governance and intellectual capital disclosure. Companies with good corporate governance have a high awareness to increase the level of intellectual capital disclosure. The quality of corporate governance in this study was measured by using a corporate governance disclosure index developed from <sup>13</sup>, <sup>14</sup>.

This study adds firm size and leverage as the variables of affecting intellectual capital disclosure. Based on agency theory, large companies have higher agency costs than small firms <sup>10</sup>. As a result, large companies will reveal more information than small companies. <sup>15</sup>, <sup>16</sup> found that firm size had a significant positive effect on intellectual capital disclosure. The larger the size of the company, the more disclosure of intellectual capital information published in the annual report

Leverage is used to measure a company's ability to meet its long-term liabilities and how much the company is financed with debt. Agency theory predicts that firms with high leverage will reveal more information as the cost of agency companies with such capital structures is higher. Firms with high leverage have an obligation to meet long term creditor information needed, so that the company will provide information comprehensively beyond those required by the standard concluded that leverage proved to have a significant effect on intellectual capital disclosure.

Another theory that can be used to explain intellectual capital disclosure is the signaling theory <sup>5</sup>. Management seeks to disclose information that investors consider highly desirable if the information is good news, even though it is not required by the standards. Disclosure of the intellectual capital of the company is expected to provide a signal to investors about the prospects of the company in the future.

Financial performance affects intellectual capital disclosure which is supported by signaling theory. The high financial performance is used to give credible cues that the company has the ability to lower the cost of capital. A well-performing company will differ in its disclosure compared to a poorly performing company by voluntarily disclosing non-financial information including intellectual capital <sup>8</sup>.

The financial performance in this study used return on assets (ROA) as a measurement of operating performance and earnings per share (EPS) as a measure of market performance. ROA is used to measure the company's ability to generate return on total assets. <sup>18</sup> while EPS is used to measure the amount of income earned per share for shareholders <sup>19</sup>. ROA and EPS are expected to provide a good assessment for investors on the information of company's performance.

Previous studies provide inconsistent conclusions about the effect of financial performance on intellectual capital disclosure. Research conducted by that companies with high financial performance will increase the intellectual capital disclosure. On the other hand, research conducted by concluded that well-performing companies will reduce intellectual capital disclosure compared to poorly performing companies.

This research is important because there is no standard rules of measurement and presentation of intellectual capital in Indonesia. Although there are regulations governing intangible assets i.e. PSAK No.19 (Revised 2000), but it does not regulate the measurement and items of intellectual capital that are needed to be disclosed in details. The condition is the concern and served as a challenge for accountants to seek information on how to identify, how to measure, and how to present intellectual capital <sup>6</sup>.

The importance of presentation and disclosure of the company's intellectual capital have prompted the authors to conduct research on manufacturing companies listed in Indonesia Stock Exchange in 2010 – 2015. Manufacturing companies are selected as a population because these group of companies have different characteristics with other industries and have the largest number of publicly traded exchanges compared to other companies.

## 2. Literature Review

### 2.1 Theoretical Review

Agency theory is the foundation used to understand corporate governance <sup>5</sup>, <sup>7</sup>, <sup>22</sup>. The concept of corporate governance arises as an attempt to control or to overcome self-serving management behaviors. One impact of corporate governance implementations is the disclosure of information to stakeholders. Better quality of corporate governance implementation will increase the disclosure of information by the management of the company and increase the funds invested by the investors <sup>10</sup>. Disclosure of information is mandatory and voluntary <sup>15</sup>. One of the voluntary disclosures is the disclosure of intellectual capital, i.e. disclosure of non-physical capital or intangible capital related to human knowledge and experience as well as technology used in the creation of corporate value <sup>16</sup>.

Agency theory can be used to explain the effect of firm size and leverage on intellectual capital disclosure <sup>23</sup>. In general, large-sized companies will disclose more information than the smaller companies. Based on agency theory, large companies have higher agency costs than small firms <sup>8</sup>. Large companies have large and more stockholder numbers in the spotlight in the capital market, so positive disclosure practices such as intellectual capital disclosure are predicted to occur if companies seek to minimize political costs. Meanwhile, firms with higher levels of leverage will dis-

close more information because of the high cost of agency. The company has an obligation to meet the long term creditor information needed so that the company will provide information more comprehensively beyond those required by the standard <sup>13, 14</sup>.

Based on signaling theory, a company with good performance will be motivated to disclose information about its intangible assets more on its annual report <sup>24</sup>. More disclosures of the company's intellectual capital are expected to provide a positive signal to investors about the good prospects the company that will be gained in the future <sup>6</sup>.

The relationship between the quality of corporate governance, firm size, leverage, and financial performance of intellectual capital disclosure can be illustrated in the theoretical framework as shown in Figure 1 below.

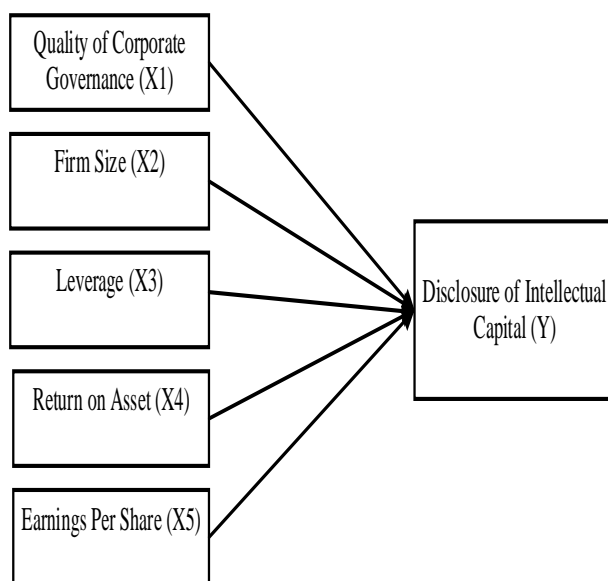


Fig.1: Model of Theoretical Framework

## Hypothesis Development

The quality of corporate governance is the extent to which a company implements a corporate governance mechanism within its enterprise. Some aspects to assess the quality of corporate governance based on research <sup>16, 25</sup> are:

- Access to information. Accessing company information, both financial and non-financial, is important to investors and potential investors for decision making.
- The content of public information and disclosure. The principle of transparency, responsibility, and accountability in corporate governance can be realized through information disclosure on corporate governance practices, future investment plans, compensation plans, as well as the actual efficiency indicators achieved by the company.
- The structure of the board of commissioners and directors. Information related to the structure of the board of commissioners and directors support the principles of transparency, independency and accountability. Information on the size of the board of commissioners and profiles of board members including established committees reflect the quality of corporate governance practices. The existence of independent commissioners, profiles of board members and committees of its formation such as audit committee, nomination com-

mittee, and remuneration committee, become the sources of information to support independency.

- Ownership structure and shareholder rights. Information regarding the company's ownership structure and shareholder rights illustrate the fulfillment of the principles of transparency, equality, and fairness. Such information may include a description of the company's stock classes, the voting rights for each, and the disclosure of shareholder ratings, including the percentage of ownership.

Better implementation of corporate governance will increase management disclosures about corporate management and funds invested by investors. The company will voluntarily increase its disclosure in order to protect investors and reduce agency conflicts. Research conducted by <sup>10, 26</sup> concluded that the implementation of corporate governance has a positive effect on intellectual capital disclosure. Research by <sup>5, 8, 15</sup> also resulted in the conclusion that the implementation of corporate governance significantly influences intellectual capital disclosure.

H<sub>1</sub>: The quality of corporate governance has a significant positive effect on intellectual capital disclosure.

The firm size is a scale that describes the size of the company as indicated by total assets, total sales, average selling rate, and average total assets. The greater the total asset, or the number of sales, or the average selling rate, and the average total asset are, the greater firm size is. Based on agency theory, large companies have greater agency costs than small firms <sup>16</sup> that will reveal more information than small firms <sup>17, 15, 16, 23</sup> have concluded that firm size has a significant positive effect on intellectual capital disclosure.

H<sub>2</sub>: Company size has a significant positive effect on intellectual capital disclosure.

Leverage shows the company's ability to meet long-term obligations and measures how much the company is financed with debt <sup>27</sup>. According to <sup>8</sup>, leverage is used to determine how much the company's dependence on debt is used to finance the company's operations. Agency theory predicts that firms with higher leverage ratios will reveal more information because the agency costs are higher with such capital structures. The study conducted by <sup>28, 29</sup> has proven that leverage significantly affects intellectual capital disclosure. Companies with high leverage will provide information more comprehensively beyond those required by the standards.

H<sub>3</sub>: Leverage has a significant positive effect on intellectual capital disclosure.

Based on signaling theory, firms with high profitability indicated by high ROA, tend to disclose more broadly. Companies that generate high profits tend to conduct more extensive disclosures. Corporate management wants to give a positive signal to investors that the company is in a strong competitive position and shows that the company is in good performance <sup>25</sup>. Research of <sup>13</sup> concluded that the level of corporate profitability, as measured by ROA, gives significant effect on disclosure of intellectual capital of the company.

H<sub>4</sub>: Return on assets (ROA) have a significant positive effect on intellectual capital disclosure.

Based on the signaling theory, companies that have a high EPS will increase the disclosure because it is a positive signal that the company has a good performance. Research conducted by <sup>14, 23</sup> shows that financial performance as measured by EPS has a positive effect on intellectual capital disclosure.

H5: Earnings per share (EPS) has a significant positive effect on intellectual capital disclosure.

### 3 Methodology

Research is a scientific curiosity or investigation which are organized, systematic, data-driven, critical, and objective, about a certain problem with the aim of obtaining answers or solutions. This research is empirical explanatory verified research, and is cross sectional. The population in the study are manufacturing companies listed on the Indonesia Stock Exchange from 2010 to 2015 which in total of 142 companies. Sample selections are based on certain criteria (purposive random sampling), they are the complete data required for analysis, and the financial statements are presented consistently throughout the study period and denominated in rupiah. Based on sample selection criteria that have been determined, the research sample is obtained as in table 1 below.

**Table 1:** Sample Selection Results.

Sample Selection Criteria	Amount
Number of companies listed on BEI until 2015	142
Companies are new listing	(11)
Companies are delisted	(6)
Number of companies whose financial data is incomplete	(29)
Number of companies with financial data in foreign currency	(17)
Number of companies that do not have the required data in research	(34)
Number of final samples	45
Total observations made during the 6 year study period	270

Source: Secondary data that have been processed (2016).

The data used in this research are secondary data obtained from Indonesian Capital Market Directory (ICMD), [www.idx.co.id](http://www.idx.co.id) and other relevant sources of information.

#### 3.1 Operationalization Of Research Variables

This study used 5 variables which are measured using measurement instruments that are adopted from previous studies and have been published in several research journals. The disclosure of intellectual capital as dependent variable was measured using the Intellectual Capital Disclosure Index developed by<sup>30</sup> of 78 items. The method of measurement uses content analysis.

This study uses 5 independent variables of Corporate Governance Quality, firm size, profitability, leverage, financial performance. The quality of corporate governance is measured using a corporate governance disclosure index developed from<sup>31, 32</sup>. The method of measurement uses content analysis. The firm size is measured by total assets<sup>32</sup>. Leverage is measured by the debt equity ratio (DER), dividing total debt and total equity<sup>32</sup>. Financial performance used two measures of return on assets (ROA) as operational performance and earnings per share (EPS) as market performance. Return on assets (ROA) is measured by dividing net income by total assets, while earnings per share (EPS) is measured by dividing net income and number of shares outstanding<sup>32</sup>.

## 4 Results and Findings

### 4.1 Descriptive Statistics

Descriptive statistic shows the total of data (N) that is used in this research to determine the maximum value, minimum value, mean and standard deviation. Standard deviation is used to find out how much variation / difference of average data are related to this re-

search. The greater the standard deviation score than the average is, the greater the sample or heterogeneous diversity will be. Otherwise, if the standard deviation obtained is smaller than the average, then the sample is not diverse or homogeneous. The following table 2 shows the results of descriptive statistical tests of 45 manufacturing companies that are being sampled.

**Table 2:** Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CG Quality	270	.4444	.8519	.613447	.1156943
Firm Size	270	7.82000E+10	2.45435E+14	9.79405E+12	3.71495E+13
Leverage	270	.0422	30.100	.518947	.3628235
ROA	270	-.2080	.7151	.104574	.1218397
EPS	270	8.3100E2	1.7621E4	5.628184E2	1.8856961E3
IC Disclosure	270	.1923	.7179	.459163	.1137821
Valid N (listwise)	270				

Source: Data processed with SPSS version 19

### 4.2 Classical Assumption Testing

Classical assumption testing is performed before hypothesis testing. This testing is important in the process of the multiple regressions to convince that the data are reliable<sup>32</sup>. Classical assumption is taken from normality testing, multicollinearity testing, heteroscedasticity testing, and autocorrelation testing. The consideration of the data as normal if the dots are spread out following the diagonal line. The data are assumed to be normal. Residual normality test is also done through Kolmogorov-Smirnov test which can be seen in Table 3.

**Table 3:** Result of Kolmogorov-Smirnov test

**One-Sample Kolmogorov-Smirnov Test**

	Unstandardized Residual
N	249
Normal Parameters a,b	
Mean	.0000000
Std. Deviation	.08553517
Most Extreme Differences	
Absolute	.075
Positive	.034
Negative	-.075
Kolmogorov-Smirnov Z	1,185
Asymp. Sig. (2-tailed)	.120

a. Test distribution is Normal.

b. Calculated from data.

The residual of normality test in Table 3 above is shown by transforming the data by natural logarithm (LN) of firm size because based on the normality test, the data distribution are not normal. Researchers also detect the presence of data outliers.<sup>32</sup> stated that data outliers are data which have unique characteristics that look very different from other observations that appear in extreme form. The remaining data after removing outlier data is 249. Table 3 above shows that the value of sig. > 0.05, i.e. 0.120 so it can be

concluded that the disturbing or residual variable has been normal-ly distributed.

Multicollinearity is indicated by comparing tolerance values and VIF (Variance Inflation Factor) <sup>32</sup>. VIF for corporate governance quality (X1) is 1.325 with tolerance of 0.755. LN\_ firm size (X2) has a VIF 1.367 with a tolerance value of 0.732. Leverage (X3) has a VIF 1.142 with a tolerance value of 0.876. Return on assets (X4) has a VIF1.279 with a tolerance of 0.782, while earnings per share (X5) has a VIF 1.129 with a tolerance of 0.886. Each independent variable has a VIF <10 and tolerance value> 0.10, so it can be concluded that there are no symptoms of multicollinearity among independent variables in the regression model.

Autocorrelation testing aims to test whether in a regression model, there is a correlation between errors factor in a period with errors factor in prior periods. Basis for making decision, whether auto-correlation exist or not, could be seen from the value of Durbin Watson (DW) that should not be less than -2 and should not be more than 2 (-2<DW<2) <sup>32</sup>. Based on the test, it can be found that the value of Durbin Watson is 1.826. Since the DW value of 1.826 is greater than the upper limit of (du) 1,770 and less than 4-du (4-1.770 = 2,230), it can be concluded that there is no autocorrelation.

Heteroscedasticity is detected by looking at the plot graph between the predicted values of the dependent variable (ZPRED) with the residual SRESID <sup>24</sup>. From Figure 2 below, it is seen that there is no clear pattern and the points are spread randomly above and below the zero on the Y axis. It can be concluded that there is no heteroscedasticity in the regression model.

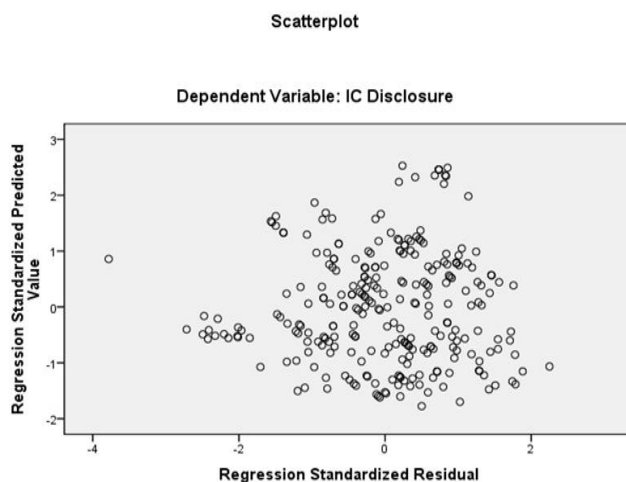


Fig.2: Results of Heteroscedasticity Test with Scatterplot.

### 4.3 Hypothesis Testing

To test the hypothesis, multiple linear regression method, the coefficient of determination (R<sub>2</sub>), and the test of significance of individual /partial parameters (t statistic test) are used (Gozhali, 2016). Results of Multiple Linear Regression Analysis can be seen in table 4.

Table 4: Results of Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.310	.094		-3.295	.001
	CG Quality	.444	.053	.451	8.359	.000
	LN_Firm Size	.018	.004	.263	4.813	.000
	Leverage	-.051	.016	-.162	-3.239	.001
	ROA	.122	.049	.130	2.465	.014
	EPS	.001	.000	.109	2.187	.030

a. Dependent Variable: IC Disclosure

From statistical data processing, we get multiple linear regression equation as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

$$Y = -0.310 + 0.444X_1 + 0.018X_2 - 0.051X_3 + 0.122X_4 + 0.001 X_5 + e$$

The coefficient of determination (R<sub>2</sub>) is used to measure how far the model is capable of explaining the variation of independent variables simultaneously to the dependent variable <sup>6</sup>. The value of adjusted R Square is 0.411. This means that 41.1% variations in intellectual capital disclosure variables are influenced by the five independent variables of corporate governance quality, firm size, leverage, return on assets, and earnings per share.

Statistical test F (F test) is conducted to test the feasibility of the model whether the model used is significant or not <sup>33</sup>. The criterion for decision making is when the value of sig. is smaller than the degree of significance (α = 0.05), then the regression equation obtained is reliable and feasible to use. The result of the data processing shows the value of F is equal to 38.506 and sig. 0.000 (sig 0,000 <0,05). This means that the regression equation obtained is reliable or the model used is feasible.

Statistical test t is done to find out how big the influence of each independent variable to dependent variable <sup>25</sup>. The default is to compare the value of significance produced with α 0.05 and to compare t value with t table. The test results can be seen in table 4.

Based on the results of processed statistical data in Table above, the coefficient of corporate governance quality significant is at 0.000 <α 0.05 and t value > t table is 8.359> 1.6505. The firm size has sig value. 0.000 <α 0.05 and t count> t table is 4.813> 1.6505. The leverage variable has a sig value. 0.001 <α 0.05 and the value of t arithmetic <t table is -3.239 <1.6505. The variable return on assets has a sig value. 0.014 <α 0.05 and the value of t arithmetic> t table ie 2.465> 1.6505. This shows that corporate governance quality, firm size, return on assets, and earnings per share, have a significant positive effect on intellectual capital disclosure while the leverage has a significant negative effect on intellectual capital disclosure.

### 4.4 Discussion of Hypothesis Test Results.

#### 4.4.1 The Influence of The Quality Of Corporate Governance On Intellectual Capital Disclosure.

Based on the results of statistical analysis in this study, it is found that the first hypothesis (H1) is accepted. The results of data pro-

cessing concluded that the quality of corporate governance has a positive significant influence on the disclosure of intellectual capital. This means that the relationship between the qualities of corporate governance is in line with the disclosure of intellectual capital. Higher quality of corporate governance will increase the intellectual capital disclosure.

The results of this study are consistent with research conducted by <sup>11, 24</sup>. They found that the quality of corporate governance had a positive effect on intellectual capital disclosure. Research conducted by <sup>8, 15, 16, 26, 35, 36</sup> also supports the results of this study.

The results of this study support the agency theory. Companies with good corporate governance quality can work to reduce or decrease agency costs by increasing voluntary disclosure, one of which is intellectual capital disclosure<sup>5</sup>. The better the quality of corporate governance is, the more it will increase the awareness of the management to reveal more information that is not required by

#### 4.4.2 Effect Of Firm Size On Intellectual Capital Disclosure

The results of statistical processing concluded that firm size has a significant positive influence on intellectual capital disclosure. This means that the relationship between firm sizes is in the same direction as intellectual capital disclosure. The larger the size of the company is, the more it will increase intellectual capital disclosure. The results of this study are consistent with the research of <sup>10, 15</sup> which concluded that firm size had a significant positive effect on intellectual capital disclosure. The results of the study are also consistent with the overseas research conducted by <sup>16</sup>.

This research supports agency theory where large companies have bigger agency costs than smaller ones thus this will reveal more information if to be compared with smaller companies <sup>8</sup>. The reason big companies reveal more information than small companies is that namely: bigger companies are more likely to have lower information production costs than small companies. Large corporations have a wide range of ownership that reveal more information because of the demands of shareholders. Large companies are able to recruit highly qualified human resources needed to implement sophisticated reporting systems, while smaller companies are worried by more and more disclosure may jeopardize the company's competitive potential.

#### 4.4.3 Effect Of Leverage On Intellectual Capital Disclosure

Based on the results of statistical analysis in this study, it is found that the third hypothesis (H3) is rejected. The results of data processing can be concluded that leverage has a significant negative effect on the disclosure of intellectual capital. The results of this study are not consistent with agency theory told by<sup>8</sup>. Agency theory predicts that firms with higher leverage ratios will reveal more information because agency costs with such capital structures are higher. Additional information is needed to dispel the doubt of bondholders against the fulfillment of their rights as creditors.

The results of this study are different from those of <sup>5, 28</sup> which concluded that leverage has a positive effect on intellectual capital disclosure. However, this study supports the research of <sup>29</sup> which concluded that leverage has a significant negative impact on intellectual capital disclosure rates.

Leverage affects intellectual capital disclosure negatively because both creditors and investors are less attentive to the quality of corporate leverage. Companies which have higher debts indicated that the company gains higher trust, so management assumes no

need to expand the disclosure of information regarding intellectual capital.

#### 4.4.4 Effect Of Return On Assets (ROA) On Intellectual Capital Disclosure

The results of data processing concluded that ROA has a significant positive influence on intellectual capital disclosure. The greater the ROA, the more it will increase intellectual capital disclosure.

This research is in line with the research of<sup>19</sup> which concludes that the level of profitability of the company as measured by ROA has a significant effect on the level of intellectual capital disclosure of the company.

The results of this study support the signaling theory that firms with high profitability which tend to disclose more information. The company's management wants to give a positive signal of good news to investors that the company is positioned in a strong competitiveness and shows that the company's performance is good <sup>5</sup>.

#### 4.4.5 The Effect Of Earnings Per Share (EPS) On Intellectual Capital Disclosure.

The results of data processing conclude that the EPS has a positive significant effect on the disclosure of intellectual capital. The bigger the EPS is, the more it will increase intellectual capital disclosure. The results of this study is supported by<sup>28, 29</sup> research. The study shows that financial performance as measured by EPS has a positive effect on intellectual capital disclosure.

This study supports signaling theory because companies with high EPS will increase voluntary disclosure significantly. The goal is to give a positive signal that the company has a good performance and has the ability to distribute revenue earned to its shareholders <sup>19</sup>.

## 5. Conclusion

From the results of multiple linear regression testing, it can be concluded that: the quality of corporate governance, firm size, return on assets (ROA), and earnings per share (EPS) have a significant positive effect on intellectual capital disclosure. This indicates that the better the quality of corporate governance, the larger the size of the company, the higher the performance indicated by the higher return on assets (ROA) and earnings per share (EPS) in the company, it will further encourage management to reveal more information about intellectual capital voluntarily. Otherwise, leverage has a significant negative effect on the disclosure of intellectual capital. This shows that the higher the leverage, it will reduce the level of disclosure of intellectual capital.

### 5.1 Limitations of Research

The population in this study only sampled manufacturing companies, so the results cannot be generalized to all companies. Then the ability of independent variables affecting the dependent variable is quite small, shown by Adjusted R<sup>2</sup> of 41.1%. This means that other variables that are not used in this study have a greater influence on the disclosure of intellectual capital which is 58.9%. Data were collected by content analysis in which researchers' subjectivity cannot be ignored.

## 5.2 Suggestions

For further research, it is expected to use other variables suspected to influence intellectual capital disclosure such as type of industries and age of companies. Content analysis is also corroborated by overall observation as a validation of the index that has been analyzed previously.

For academic purpose, the results of this study should be able to add information, contribution of thought, and study in building theory related to subjects which related to variables in this research, such as good corporate governance, accounting theory, and financial management.

For the management of the company, it is expected to improve the disclosure of intellectual capital voluntarily as an added value for the company.

For investors, disclosure of intellectual capital in companies in Indonesia cannot be one factor that helps investors to consider in investing. Investors are more likely to see non-financial indicators such as disclosure without ignoring the fundamental side of the company itself. As for the government, the problem in this study opens the opportunity for policy makers to establish rules on the importance of intellectual capital information, so that regulation is needed on how to recognize, to measure, and to reveal intellectual capital.

## References

- [1] Abeysekera, I. (2010). The influence of board size on intellectual capital disclosure by Kenyan listed firms. *Journal of Intellectual Capital*, 11(4), 504–518. <https://doi.org/10.1108/14691931011085650>
- [2] Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*, 3(1), 41–60. <https://doi.org/10.1111/1468-2370.00053>
- [3] Bukh, N. P., Nielsen, C., Gormsen, P., & Mouritsen, J. (2005). Disclosure of information on intellectual capital in Danish IPO prospectuses. *Accounting, Auditing & Accountability Journal*, 18(No 6), 713–732. <https://doi.org/10.1108/09513570510627685>
- [4] Cerbioni, F., & Parbonetti, A. (2007). *Exploring the Effects of Corporate Governance on Intellectual Capital Disclosure: An Analysis of European Biotechnology Companies* Keywords : *Corporate governance , voluntary disclosure , intellectual capital , board characteristics , European companies , AIDEA Workshop on Disclosure and Capital Markets*.
- [5] Chang, Y.-C., Chang, H.-T., Chi, H.-R., & Chiu, W.-H. (2007). *Firm Attributes and Intellectual Capital Disclosure: Evidences From IPO Prospectuses in Taiwan*.
- [6] Fahmi, I. (2012). *Analisis Laporan Keuangan* (Edisi ke 2). Bandung: Alfabeta, Bandung.
- [7] Fitriani, A. E., & Purwanto, A. (2011). *Pengaruh Struktur Corporate Governance Terhadap Intellectual Capital Disclosure Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia*. Diponegoro.
- [8] Forum for Corporate Governance in Indonesia. (2001). *Seri Tata Kelola Perusahaan (Corporate Governance)* (Edisi ke 2). Jakarta.
- [9] Gozhali, I. (2016). *Aplikasi Analisis Multivariate dengan Program SPSS* (Edisi 8). Semarang: Badan Penerbit Universitas Diponegoro.
- [10] Haniffa, R., & Cooke, T. (2002). Culture, Corporate Governance, and Disclosure in Malaysian Corporations. *Abacus*, 38(3), 317–349.
- [11] Healy, P., & Palepu, K. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31, 405–440. [https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0)
- [12] Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- [13] Kasmir. (2010). *Analisis Laporan Keuangan*. Jakarta: Penerbit Raja Grafindo Persada.
- [14] Leal, R. P. C., & Carvalho da Silva, A. L. (2005). *Corporate Governance and Value in Brazil (and in Chile)*. *SSRN Electronic Journal* (Vol. 514). <https://doi.org/10.2139/ssrn.726261>
- [15] Meizaroh, & Lucyanda, J. (2012). Pengaruh Corporate Governance, Kinerja Perusahaan, dan Umur Perusahaan terhadap Pengungkapan Modal Intelektual. *Media Riset Akuntansi*, Vol 2(No. 1), 65–81.
- [16] Miller, M., DuPont, B. D., Fera, V., Jeffrey, R., Mahon, B., Payer, B. M., & Starr, A. (1999). Measuring and Reporting Intellectual Capital From a Diverse Canadian Industry Perspective: Experiences, Issues and Prospects. In *OECD Symposium* (pp. 1–60).
- [17] Oba, V. C., Ibikunle, J., & Damagum, Y. M. (2013). The impact of board mechanisms on intellectual capital disclosures in Nigeria. *Journal of Accounting and Management*, 3(1), 65–80.
- [18] Palepu, K. G., Healy, P. M., & Bernard, V. L. (2004). *Business Analysis & Valuation Using Financial Statement* (Third Edit). South-Western.
- [19] Pulic, A. (1998). Measuring the performance of intellectual potential in the knowledge economy. In *The 2nd " World Congress on the Management of Intellectual Capital "* (pp. 1–20).
- [20] Purnomosidhi, B. (2006). Analisis Empiris terhadap Diterminan Praktik Pengungkapan Modal Intelektual pada Perusahaan Publik di BEJ. *Jurnal Riset Akuntansi Indonesia*, 9(1), 1–20.
- [21] Ross, S. A., Randolph W, W., & Jordan, B. D. (2009). *Pengantar Keuangan Perusahaan, Corporate Finance Fundamentals*. (Ke 8). Penerbit Salemba Empat.
- [22] Saendy, G. A., & Anisykurillah, I. (2015). Pengaruh Good Corporate Governance, Kinerja Keuangan, Modal Intelektual Terhadap Pengungkapan Modal Intelektual. *Accounting Analysis Journal*, 4(3), 1–10. <https://doi.org/http://dx.doi.org/10.15294/aaaj.v4i3.8309>
- [23] Sawarjuwono, T., & Kadir, A. P. (2003). Intellectual Capital: Perilaku, Pengukuran Dan Pelaporan (Sebuah Library Research). *Jurnal Akuntansi Dan Keuangan*, 5(1), 35–57. <https://doi.org/10.1024/0301-1526.32.1.54>
- [24] Serrat, O. (2011). *A Primer on Intellectual Capital*.
- [25] Silverira, A. D. M. Da, & Barros, L. A. B. de C. (2006). *Corporate Governance Quality and Firm Value in Corporate Governance Quality and Firm Value in Brazil. Working Paper*. <https://doi.org/10.2139/ssrn.923310>
- [26] Sonnier, B. M., Carson, K. D., & Carson, P. P. (2007). Accounting for Intellectual Capital: The Relationship between Profitability and Disclosure. *Journal of Applied Management and Entrepreneurship*, 12(2), 3–14.
- [27] Sugiarto. (2009). *Struktur Modal, Struktur Kepemilikan Perusahaan, Permasalahan Keagenan, dan Informasi Asimetri*. Yogyakarta: Graha Ilmu.
- [28] Suhardjanto, D., & Wardhani, M. (2010). Praktik Intellectual Capital Disclosure Perusahaan. *Jurnal Akuntansi Dan Auditing Indonesia*, 14(1), 71–85.
- [29] Suwardjono. (2005). *Teori Akuntansi: Perekayasaan Pelaporan Keuangan* (Edisi ke 3). Yogyakarta: BPFE Yogyakarta.
- [30] Taliyang, S. M., & Jusop, M. (2011). Intellectual Capital Disclosure and Corporate Governance Structure: Evidence in Malaysia. *International Journal of Business and Management*, 6(12), 109–117. <https://doi.org/10.5539/ijbm.v6n12p109>
- [31] Ujjiyantho, M. A., & Agus Pramuka, B. (2007). Mekanisme Corporate Governance, Manajemen Laba dan Kinerja Keuangan (studi pada perusahaan go publik sektor manufaktur). In *Symposium Nasional Akuntansi X* (pp. 1–26).
- [32] Ulum, I., Suprapti, E., & Ariestiowaty. (2009). *Pengaruh Karakteristik Perusahaan terhadap Praktik Pengungkapan Intellectual Capital dalam Laporan Tahunan Perusahaan Publik di Indonesia*. Malang.
- [33] Watts, R. L., & Zimmerman, J. L. (1986). *Positive Accounting Theory*. Edgewood Cliffs, NJ: Prentice Hall.
- [34] White, G., Lee, A., & Tower, G. (2007). Drivers of voluntary intellectual capital disclosure in listed biotechnology companies. *Journal of Intellectual Capital*, 8(3), 517–537. <https://doi.org/10.1108/14691930710774894>
- [35] Wild, J. ., Subramanyam, K., & Hasley, R. F. (2005). *Analisis Laporan Keuangan* (Ed 8). Jakarta: Salemba Empat.
- [36] Bontis N. Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*. 2001;3(1):41-60.
- [37] Pulic A, editor Measuring the performance of intellectual potential in the knowledge economy1998.
- [38] Serrat O. A Primer on Intellectual Capital. 2011.

- [39] Sawarjuwono T, Kadir AP. Intellectual Capital: Perlakuan, Pengukuran Dan Pelaporan (Sebuah Library Research). *Jurnal Akuntansi dan Keuangan*. **2003**;5(1):35-57.
- [40] Suwardjono. Teori Akuntansi: Perencanaan Pelaporan Keuangan. Edisi ke 3 ed. Yogyakarta: BPFY Yogyakarta; **2005**. 776- p.
- [41] Meizaroh, Lucyanda J. Pengaruh Corporate Governance, Kinerja Perusahaan, dan Umur Perusahaan terhadap Pengungkapan Modal Intelektual. *Media Riset Akuntansi*. **2012**;Vol 2(No. 1):65-81.
- [42] Purnomosidhi B. Analisis Empiris terhadap Diterminan Praktik Pengungkapan Modal Intelektual pada Perusahaan Publik di BEJ. *Jurnal Riset Akuntansi Indonesia*. **2006**;9(1):1-20.
- [43] Suhardjanto D, Wardhani M. Praktik Intellectual Capital Disclosure Perusahaan. *Jurnal Akuntansi dan Auditing Indonesia*. **2010**;14(1):71-85.
- [44] Healy P, Palepu K. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*. **2001**;31:405-40.
- [45] Jensen MC, Meckling WH. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*. **1976**;3(4):305-60.
- [46] Cerbioni F, Parbonetti A. Exploring the Effects of Corporate Governance on Intellectual Capital Disclosure : An Analysis of European Biotechnology Companies Keywords : Corporate governance , voluntary disclosure , intellectual capital , board characteristics , European companies. 2007.
- [47] Forum for Corporate Governance in I. Seri Tata Kelola Perusahaan (Corporate Governance). Edisi ke 2 ed. Jakarta**2001**.
- [48] Leal RPC, Carvalho da Silva AL. Corporate Governance and Value in Brazil (and in Chile). 2005.
- [49] Silverira ADMD, Barros LABdC. Corporate Governance Quality and Firm Value in Corporate Governance Quality and Firm Value in Brazil. 2006.
- [50] Ulum I, Suprapti E, Ariestiwaty. Pengaruh Karakteristik Perusahaan terhadap Praktik Pengungkapan Intellectual Capital dalam Laporan Tahunan Perusahaan Publik di Indonesia. Malang: 2009.
- [51] White G, Lee A, Tower G. Drivers of voluntary intellectual capital disclosure in listed biotechnology companies. *Journal of Intellectual Capital*. **2007**;8(3):517-37.
- [52] Fahmi I. Analisis Laporan Keuangan. Edisi ke 2 ed. Bandung: Alfabeta, Bandung; **2012**.
- [53] Palepu KG, Healy PM, Bernard VL. Business Analysis & Valuation Using Financial Statement. Third Edit ed: South-Western; **2004**.
- [54] Kasmir. Analisis Laporan Keuangan. Jakarta: Penerbit Raja Grafindo Persada; **2010**.
- [55] Sonnier BM, Carson KD, Carson PP. Accounting for Intellectual Capital: The Relationship between Profitability and Disclosure. *Journal of Applied Management and Entrepreneurship*. **2007**;12(2):3-14.
- [56] Watts RL, Zimmerman JL. Positive Accounting Theory. Edgewood Cliffs: Prentice Hall; **1986**. 388- p.
- [57] Sugiarto. Struktur Modal, Struktur Kepemilikan Perusahaan, Permasalahan Keagenan, dan Informasi Asimetri. Yogyakarta: Graha Ilmu; **2009**. 178- p.
- [58] Fitriani AE, Purwanto A. Pengaruh Struktur Corporate Governance Terhadap Intellectual Capital Disclosure Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia: Diponegoro; **2011**.
- [59] Bukh NP, Nielsen C, Gormsen P, Mouritsen J. Disclosure of information on intellectual capital in Danish IPO prospectuses. *Accounting, Auditing & Accountability Journal*. **2005**;18(No 6):713-32.
- [60] Oba VC, Ibikunle J, Damagum YM. The impact of board mechanisms on intellectual capital disclosures in Nigeria. *Journal of Accounting and Management*. **2013**;3(1):65-80.
- [61] Miller M, DuPont BD, Fera V, Jeffrey R, Mahon B, Payer BM, et al., editors. Measuring and Reporting Intellectual Capital From a Diverse Canadian Industry Perspective: Experiences, Issues and Prospects 1999 1999.
- [62] Chang Y-C, Chang H-T, Chi H-R, Chiu W-H. Firm Attributes and Intellectual Capital Disclosure: Evidences From IPO Prospectuses in Taiwan. 2007 978-1-906638-30-6.
- [63] Saendy GA, Anisykurlillah I. Pengaruh Good Corporate Governance, Kinerja Keuangan, Modal Intelektual Terhadap Pengungkapan Modal Intelektual. *Accounting Analysis Journal*. **2015**;4(3):1-10.
- [64] Wild JJ, Subramanyam KR, Hasley RF. Analisis Laporan Keuangan. Ed 8 ed. Jakarta: Salemba Empat; **2005**.
- [65] Ross SA, Randolph W W, Jordan BD. Pengantar Keuangan Perusahaan, Corporate Finance Fundamentals. Ke 8 ed: Penerbit Salemba Empat; **2009**.
- [66] Gozhali I. Aplikasi Analisis Multivariate dengan Program SPSS. Edisi 8 ed. Semarang: Badan Penerbit Universitas Diponegoro.; **2016**.
- [67] Abeysekera I. The influence of board size on intellectual capital disclosure by Kenyan listed firms. *Journal of Intellectual Capital*. **2010**;11(4):504-18.
- [68] Haniffa R, Cooke T. Culture, Corporate Governance, and Disclosure in Malaysian Corporations. *Abacus*. **2002**;38(3):317-49.
- [69] Taliyang SM, Jusop M. Intellectual Capital Disclosure and Corporate Governance Structure: Evidence in Malaysia. *International Journal of Business and Management*. **2011**;6(12):109-17.
- [70] Ujjiyantho MA, Agus Pramuka B, editors. Mekanisme Corporate Governance, Manajemen Laba dan Kinerja Keuangan (studi pada perusahaan go publik sektor manufaktur)2007.