Journal of Economics and Business

The online version of this article can be found at:
https://www.asianinstituteofresearch.org/

The Asian Institute of Research *Journal of Economics and Business* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of Economics and Business, which includes, but not limited to, Business Economics (Micro and Macro), Finance, Management, Marketing, Business Law, Entrepreneurship, Behavioral and Health Economics, Government Taxation and Regulations, Financial Markets, International Economics, Investment, and Economic Development. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Journal of Economics and Business* aims to facilitate scholarly work on recent theoretical and practical aspects of Economics and Business.

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

Quality of Intellectual Capital Disclosures: The Role of Market Share and Financial Distress in Thai's Agricultural and Resource Sectors

Saarce Elsye Hatane[1], Andy William[2], Elenne Stefanie Kuanda[3], Elizabeth Cornelius[4]

[1] Accounting Program, Faculty of Business and Economics, Universitas Kristen Petra, Surabaya, Indonesia
[2] School of Economics, Peking University, Beijing, China

Correspondence: Saarce Elsye Hatane, Faculty of Business and Economics, Universitas Kristen Petra, Surabaya, Indonesia. Tel: -. E-mail: elsyehat@petra.ac.id

Abstract

This study aims to examine the factors that influence the quality of intellectual capital disclosure (ICD). This study contributes to research related to ICD by using the value of the market share and financial distress as independent variables, in addition to the level of firm size. This study also tests the ICD in each of its components. Firm size is indicated by the amount of assets owned by the company; while market share is measured by the proportion of company sales in the total sales of one industry. Financial distress is indicated by the Altman-Z score, where the greater the Z-score, the safer the company from the risk of bankruptcy. ICD are more qualified if disclosures are supplemented by numerical and monetary data. The sample used is 50 agricultural and resource sectors companies registered in the Thai Stock Exchange from 2013-2017. This study finds that the quality of HCD is increasing along with the company's high assets. Market share can improve the quality of RCD, but on the other hand, reduce the quality of HCD. The safer the company from the bankruptcy risk, the higher the quality of the HCD. There are a variety of ICD measurements that can be used by subsequent research and are complemented by various other independent variables that can enrich empirical findings in ICD cases.

Keywords: Intellectual Capital Disclosure, Firm Size, Market Share, Financial Distress

1. Introduction

1.1 Introduction

In the current era of knowledge-based economy, intellectual capital (IC) plays an important role in enhancing competitiveness and performance of companies (Lev, 2001; Seetharaman et al., 2002; Massaro et al., 2015). Some studies recognize that IC has become the most important strategic asset in evaluating organizational performance in developing and developed countries (Khalique et al., 2011; Amrizah & Rashidah 2013; Ngah & Ibrahim, 2012, Massaro et al., 2015). Bontis (2001) stated that IC is the main resource that supports company value. More broadly, several studies show that IC significantly influences the company's financial performance and market value; and IC can also be considered as a financial indicator of the company in the future (Tan, et al., 2007; Cabrita & Bontis, 2008; Zeghal & Malooul, 2010; Clarke et al., 2011; Dženopoljac et al., 2016). IC disclosure can reduce errors in indications of bankruptcy or the sustainability of a company that can cause errors in the allocation of company

resources (Cenciarelli et al., 2013). Because IC has the potential to be a competitive advantage and added value for the company, IC is usually expressed through annual reports to stakeholders. This voluntary disclosure is then called Intellectual Capital Disclosure (ICD) (Eddine et al., 2015).

Firm size has been considered the main contingency factor that affects many aspects of organizational structure. The larger the size of the company, the level of complexity of the company will also increase (Donaldson, 2001). Several previous studies related company size to the scale of work performed by employees (Armstrong & Taylor, 2014; Davis & Henrekson, 1999; Pagano & Schivardi, 2003; Winter-Ebmer & Zweimüller, 1999). Davis & Henrekson (1999) found that there was a strong and systematic relationship between firm size and human capital. Large companies are considered capable of paying higher wages, therefore large companies are able to obtain better human capital (Oi & Idson, 1999, Fox & Smeets, 2011; López-Bazo & Motellón, 2011).

In addition to firm size, this study chooses market share to be the second factor that affects the quality of ICD. Eddine et al. (2015) found that company size, profitability, and industry type positively affected ICD. Companies with a dominant market share will tend to maximize profits. Market share is the company's strength in competing in certain industrial sectors. The higher the market share, the more companies are motivated to gain trust from external parties (Khlif and Souissi, 2010). Companies with good reputation and performance will reveal more information than companies whose reputation is relatively lower (Khlif and Souissi, 2010). The third factor that affects the quality of ICD in this study is financial distress. Some studies such as Wruck (1990), Andrade and Kaplan (1998), Whitaker (1999), used the definition of financial distress as an implication of a company's failure to fulfill its obligations. One of the triggers of financial distress is the high use of debt in funding. White et al. (2007) revealed that companies that have high leverage would more often disclose information voluntarily in order to reduce agency costs arising from the debts used. On the other hand, Mehrotra et al. (2017) found that leverage does not have a significant effect on the number of IC disclosures. Driven by the gap in the results of research on the effect of leverage on ICD, this study tries to examine the effect of financial distress on IC disclosure.

This study examines the quality of ICD 50 companies in the agriculture sector and resources listed in Stock Exchange Thailand (SET) in 2013 to 2017. Thailand was appointed as an agricultural country leader in Southeast Asia and incorporated in the IMT-GT or Indonesian Malaysia Thailand Growth Triangle. IMT-GT itself was established in 2013 with the aim of integration ahead of the ASEAN Economic Community (MEA). In accordance with a report from Forbes in 2017, the agricultural and resource sectors have become jobs for more than a third of Thailand's population. This research is expected to be able to reveal the quality of ICD in companies in the main sector industries in ASEAN's largest agricultural country, namely Thailand.

1.2   Literature Review

The legitimacy theory has the concept of a social relationship between the company and stakeholders. The company will voluntarily report its activities if management sees that this is what the people expect. Therefore, companies will be more responsive in their environment (Deegan, 2000). IC disclosure is closely related to this theory, where companies are more likely to express every activity carried out for human capital, structural or internal capital, and relational or external capital because they have a specific purpose. Any content from IC that is disclosed by management voluntarily has the purpose of gaining recognition from stakeholders (Kamath, 2017). The role of intangible assets, such as IC, in the current era of the knowledge economy, is becoming more prominent than tangible assets. More and more specialists support the argument that IC is an important element in achieving performance in an organization (Sydler et al., 2014).

1.3   Hypothesis Development

1.3.1 Firm Size and ICD
Bukh et al. (2005) and Bozzolan et al. (2006) concluded that firm size does not have a significant influence on IC content disclosed. In contrast to the two previous studies, Branco et al. (2011) state that company size is a determining factor in ICD. White et al. (2007); Yau et al. (2009); Ferreira et al. (2012); Utomo and Chariri (2015); and Mehrotra et al. (2017) found that there was a significant positive effect of firm size on the quality of IC disclosure. Singh and Zahn (2008) in their study, also found an influence of firm size on the quality of IC disclosure

in a case study in Australia. Specifically, Davis & Henrekson (1999) stated that there is a significant positive relationship between firm size and HC. Based on some empirical evidence, the first hypothesis in this study is: company size has a positive influence on the quality of ICD.

H1: Company size has a positive influence on the quality of ICD.

1.3.2 Market Share and ICD

Schwalbach (1991) states that market share affects the level of company competitive advantage. Market share is considered capable of being a representation of the number of consumers of a company. The greater the market share of a company, in accordance with the principle of ceteris paribus, then the needs of consumers will also be more complex as more and more diverse needs and types of consumers (Anderson et al., 1994; Hauser et al., 1994). Companies will also be increasingly difficult to meet customer needs, including the complexity of maximizing products and services due to diverse consumer demands (Griffin and Hauser, 1993). Thus, it is likely to be more difficult for companies with a larger market share to satisfy all customers because they face greater heterogeneous preferences (Fornell 1992; Griffin and Hauser 1993). Supporting those arguments, directors, management, and researchers still see market share as an important variable in determining customer loyalty, marketing effectiveness, and company performance (Farris et al. (2006); Baker & Sinkula (2005); Stank et al. (2003)). Rego et al. (2013) in their research stated that market share has a significant influence on relation capital as a part of ICD. At the last, this study determines the second hypothesis that market share has a positive affect on the quality of ICD.

H2: Market share has a positive effect on the quality of ICD.

1.3.3 Financial Distress and ICD

Webb and Cohen (2007) stated that companies in the pressure of financial distress pay more attention to the disclosure of information in company reports. According to Lo (2005), financial distress will affect the company's internal management to be more conservative. Be careful of uncertainty in recognizing an economic event so that the company's annual report will provide good benefits to all users of financial statements, including directors, consumers, shareholders, and other stakeholders. Wijantini (2006) revealed that companies that have higher financial distress would disclose more voluntary information in their annual report. Research on the effect of financial distress on ICD quality is still very limited, hence, this study takes financial distress to complement the results of empirical studies regarding factors that influence ICD quality. Therefore, the third hypothesis is that financial distress positively affects the quality of ICD.

H3: Financial distress positively affect the quality of ICD.

1.4 Control Variables

The control variables used in this study are return on assets (ROA) and leverage. Research conducted by Haji and Ghazali (2013) Eddine et al. (2015); Ousama et al. (2012) found that profitability has a significant effect on IC disclosure. Whereas Atan & Rahim (2012); Taliyang et al. (2011) argued that profitability has no significant effect on IC disclosure. Likewise with leverage, there are different results between the research by Ousama et al. (2012); Haji and Ghazali (2013) who found a significant relationship between leverage and quality of IC disclosure with research conducted by Whiting & Woodcock (2011); and Ferreira et al. (2012) which stated that leverage has proven to be insignificant in influencing the quality of IC disclosure.

2. Research Method

2.1 Samples

This study uses purposive sampling because the sample is not taken randomly but selected through certain specified criteria. The following are the criteria used during sample selection: (1). agricultural and resource sector companies that have been listed on the Thailand Stock Exchange (Stock Exchange of Thailand) in 2013-2017. (2). Annual reports on the company's website and Bloomberg data center must be completed for the period 2013-2017 and use English. Of a total of 59 agricultural sector companies and 65 resource sector companies, only 25 companies from the agricultural sector and 25 companies from the resource sector met the criteria for purposive

sampling. Thus the samples used in this study were 25 companies from the agricultural sector and 25 companies from the resource sector registered in SET in 2013-2017. The data used is complete panel data, with a total observation of 250 firm years.

2.2 Variable Measurement

The operational measurement of each variable is as follow:

a. Intellectual Capital Disclosure (ICD) as the dependent variable. The disclosures of intellectual capital in three components:
   1. Human Capital (26 items). Human capital is the knowledge capital owned by individual employees based on education, experience, attitudes, and personal characteristics practiced in organizational activities. Elements of human capital are generally identified in the form of attitudes, commitment, employee satisfaction, educational qualifications, experience, management team, skills and abilities of employees (Curado et al., 2014; Muhammad and Ismail, 2009).
   2. Structural Capital (22 items). Internal or structural capital can be obtained because the processes and procedures are adopted and run by the organization since business practices began. These processes and procedures include habits, practices, processes, routines, information systems, work cultures, and databases (Curado et al., 2014; Abhayawansa and Azim, 2014). This structural capital can also consist of the culture, capabilities, and processes inherent in a company (Ahangar, 2011).
   3. Relational Capital (19 items). External or relational capital in business is a combination of relationships with customers, suppliers, competitors, government, society, and indirect business-related reputation due to transactions, products and services provided (Curado et al., 2014; Daou et al., 2014).

$$ICD = \Sigma \, (xHCDi + xSCDi + xRCDi\,)$$

Where:
xHCDi   = the average scores of human capital disclosure of a company
xSCDi = the average scores of internal or structural capital disclosure of a company
xRCDi   = the average scores of external or relational capital disclosure of a company
Abeysekera (2008) formulated an intellectual capital disclosure index using a range of 0 to 3. A score of 0 if not disclosed. Score 1 if expressed only in narrative form. Score 2 if exipressed is in numerical form. A score of 3 if expressed is in monetary form, namely Baht (THB).

b. Firm Size (FSize) as an independent variable is measured by Log Total Assets. Companies that have large total assets certainly have greater resources, so they have the ability to finance IC disclosures (Mehrotra et al., 2017).

c. Market share is the company's strength in competing in certain industrial sectors. The higher market share supports companies to be more motivated to gain trust from external parties (Rego et al., 2013). The calculation of market share is measured by calculating the company's total sales of the total sales in the industry.

d. Financial Distress (FDIST) as another independent variable is measured by Altman-Z score. Guimòn (2005) and Al-Tamimi (2012) mentioned that ICD implies the companie's competitiveness which are red by the investors; therefore the higher the financial distress probability, the more information regarding the competitiveness should be disclosed in the annual report. Since the sample is part of the manufacturing sector, thus the formula is:

$$Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5$$

Where:
X_1 = *working capital / total assets* X_2 = *retained earnings / total assets*
X_3 = *earnings before interest and taxes / total assets* X_4 = *market value of equity / total liabilities*
X_5 = *sales / total assets*
The safe zone is when Z > 2.99; if 1.81 < Z < 2.99, it is a gray area; and if Z < 1.81, it is a distress area

e. There are two control variables employe in this study. First is profitability, which is measured by return on

assets (ROA). The second is leverage (LEV), which is the composititon of total debts on total equity.

2.3 Research Model

This study examines the research model by using panel data multiple regression. Each hypothesis is tested three times for each component of ICD. Thus, the statistical model in this study is:

$$HCD, SCD, RCDi, t = \beta0 + \beta1FSIZE_{i,t} + \beta2MSHARE_{i,t} + \beta3FDIST_{i,t} + \beta4ROA_{i,t} + \beta5Lev_{i,t} + e$$

(1)

Before answering the hypothesis, the test that needs to be done is to determine the type of data panel to be used. From the fixed estimator effect test, if the p-value is> 5%, then the right model is Ordinary Least Square (OLS). In the Breusch-Pagan test, if the p-value value shows less than 5%, then the right model is a random effect model. The last test is carried out if in the previous two tests shows that the data panel model leads to fixed effects and random effects, therefore a more appropriate model must be chosen. If the p-value of the Hausman test shows a value of less than 5%, then the right panel model is a fixed effect. Conversely, if more than 5%, then the right model is random effect.

3. Results and Discussion

3.1 Desriptive Analysis

High standard deviation (> 3) shows very high diversity. Table 1 shows the highest diversity of data in ROA; and the lowest diversity is in the Market Share. In addition, the average condition of the company in this observation is in the gray zone, because the average Z-score is more than 1.81 but less than 2.99. There is also a period where the company has no debt in funding and the period in which the company suffered losses.

Table 2 shows the average disclosure of each ICD component in criteria 0–3. From 2013-2017 it can be seen that most companies disclose HC, SC, and RC with a score of 1, in other words, the majority of items in the ICD are expressed in narrative form, especially in the SCD indicator. The highest quality of disclosure is in the RCD component, indicating that quite a number of items in the RCD are supported by monetary data. Most disclosures supported by numerical data are on the HCD indicator.

Table 1. Descriptive Statistic

Variabel	MEAN	STD	MIN	MAX
MShare	0.035314	0.0977722	0.0001	0.6066
Altman-Z	2.49761	2.57844	-16.577	14.7631
FSize	12.747162	0.7999686	11.286434	14.969066
Lev	0.9933116	2.5717752	0	38.9372
ROA	6.11924	6.8551972	-34.66	25.63

Tabel 2. The Total Score of ICD

	Score	HCD	SCD	RCD
	0	60.57	47.45	58.94
TOTAL	1	134.20	136.14	96.22
2013 - 2017	2	38.73	34.50	29.33
	3	16.46	31.91	65.44

3.2 Multiple Regression Analysis

Table 3. P-Values of Ordinary Least Square (OLS) and Panel Model Tests

	HCD	SCD	RCD	VIF
Firm Size	0.0003***	0.1437	0.1986	1.599
Market Share	0.0392**	0.6788	0.4327	1.581
Financial Distress	0.0017**	0.7496	0.6488	1.427
Profitability	0.4637	0.1352	0.3486	1.167
Leverage	0.0104**	0.0130**	0.6215	1.150
P-Value (F)	4.50e-06	0.035918	0.237777	
Adjusted R-square	0.111382	0.030197	0.008248	
Heterokedasticity (p-value of *chi-square*)	0.022128	0.582854	0.0335243	
Fixed Estimator	0.00028772	4.17E-16	1.04E-28	
Breusch-Pagan Test	0.000400313	7.45E-23	6.00E-40	
Hausman Test	0.293286	0.0914816	0.0195999	
Summary	Random Effect	Random Effect	Weighted Least Square	

*p-values < α =10%; ** p-values < α =5%; ***p-values < α =1%

Table 3 shows the test results with the basic model, namely OLS, which will be the basis for the classic assumption test and the determination of the panel model. The Variance Inflation Factor (VIF) value for each variable is at the level of less than 10, and then the variable is free from multicollinearity. The p-value values of the chi-square HCD and RCD models are at levels less than 0.05, indicating that the residuals of the two models contain heterocedasticity. Furthermore, the results of testing the panel model show that the model with the RCD variable depends on the fixed effect panel model, but because it contains heterocedasticity, the panel model testing uses weighted least square.

Table 4. Regression Models

Variabel	HCD	SCD	RCD
Constanta	−0.220591	0.07327	0.84049***
Firm Size	0.0894301***	0.08110	0.01477
Market Share	−0.440334*	−0.207082	0.71209***
Financial Distress	0.0225382***	−0.00190386	0.00151
Profitability	0.000353456***	−0.00230235	−0.000701923
Leverage	−0.000184726***	−0.000198590***	−6.98568e-06
Panel Model	Random	Random	WLS
F-test & Asymptotic test Statistic (p-value)	0.00028772	4.17E-16	1.04E-28
R-Square	13.06%	4.05%	5.48%

*p-values < α =10%; ** p-values < α =5%; ***p-values < α =1%

Hypothesis testing is done by looking at the existence of a partial relationship between the dependent variable and the independent variable. Table 4 shows that all hypotheses are accepted for certain ICD components. In the first hypothesis, FSize has a positive influence on all ICD components, but only has a significant effect on HCD. The more assets the company has, the more HCD items are supported by monetary data. The results of this study are supported by Davis & Henrekson (1999); White et al. (2010); Branco et al. (2011); Ferreira et al. (2012); Utomo and Chariri (2015); and Mehrotra et al. (2017) which states that companies will be better at disclosing items in the ICD when they have adequate resources, because voluntary disclosure also requires costs. Davis and Henrekson (1999) revealed a strong and systematic relationship between firm size and human capital. Large companies are able to pay higher wages, so they are able to get better human capital (Fox & Smeets, 2011; López-Bazo & Motellón, 2011). The HCD index used in this study seeks to express the quality, competence, achievements, and achievements of employees in the company. This research shows that large companies will tend to employ employees with relatively good quality. Indirectly the directors of the company will have the confidence to disclose HC in the annual report because they feel they have a reputation and good quality of employees.

In the second hypothesis, market share has a significant effect on HCD and RCD. However, MShare has a significant negative effect on HCD. Companies that have gained legitimacy from external parties, including customers, are likely to tend to reduce their voluntary disclosure to outsiders, because companies no longer have specific needs to convince the market of its reputation (Guthrie et al., 2004). Furthermore, it is shown that the high and low market share of a company does not affect the disclosure of structural capital information. The results of this study indicate that companies still limit SC disclosure as privacy, which only needs to be disclosed to certain boundaries or criteria. On the other hand, MShare has a significant positive effect on RCD. The RCD index in this study is indirectly related to the market share variable, because some items that need to be disclosed in an RCD are the company's efforts to increase market share. Examples include company relationships with customers, the ability to produce innovations or new products. Evident from Table 5, the index that is best expressed in succession in RCD is the value of the company's shares, profitable contracts, licensing agreements, business collaborations, and financial relations. Companies with a high market share tend to disclose information about market value, contracts, or relationships with interested parties. As a step to maintain strength in the industry, companies tend to disclose information about the company's strength compared to other companies in the same sector both in terms of market value and relations and contracts in the future.

Table 5. Ranking of the Quality of ICD

	Human Capital		Structural Capital		Relation Capital
1	Appreciate employee	1	Achievements	1	Value of the company's shares
2	Expert seniority	2	Information system	2	Profitable contracts
3	Expert teams	3	Corporate governance	3	Licensing agreement
4	Employee training	4	Research and development	4	Business collaborations
5	Training & development	5	Organizational flexibility	5	Financial relations
6	Work experience	6	Technology	6	Market share
7	Personnel	7	Strategy	7	Customers
8	Employee development	8	Organizational learning	8	Goodwill
9	Employee retention	9	Quality	9	Customer service
10	Employee safety and health	10	Organizational & management structure	10	Corporate image and reputation
11	Human resources	11	Intellectual property	11	Customer retention
12	Working environment	12	Innovation	12	Company's name
13	Employee performance	13	Organizational & business expertise	13	Customer appreciation
14	Division qualification	14	Management process	14	Brand development

15	Educational qualifications & management team	15	Network system	15	Brand recognition
16	Employee know-how	16	Management philosophy	16	Customer feedback system
17	Equality issues	17	Copyright	17	Brands
18	Performance and Results from Senior Executives	18	Corporate culture	18	Franchising agreements

Webb, and Cohen (2007) state that companies with poor financial performance will tend to reduce disclosure of information in annual reports with the aim of avoiding bankruptcy. Supporting the research, this study shows a significant positive impact of financial distress on HCD. Companies with Altman-Z scores that are high or closer to safety zones indicate that the company has good financial performance. The company has adequate resources to ensure the welfare of its employees, besides that the company also tends to complete the information in the annual report. This study did not find a significant relationship between financial distress on SCD and RCD. The company's height or low Altman-Z score does not affect SC and RC disclosures. Of the three types of variables tested, SC disclosure is not influenced by any variable. This hypothesis shows that in disclosures related to structural capital, companies tend to have been limited to certain criteria. Related to RC, the Altman-Z score will not affect the disclosure of information related to external parties. Because in essence RC disclosure is a form of corporate transparency to external parties.

Supporting previous research conducted by Taliyang, Latif, & Mustafa (2011), research shows that there is no significant relationship between profitability (ROA) and ICD components. ROA does not have a significant effect on the components of HCD and SCD, and RCD so it can be concluded that the high and low profitability of the company does not affect the high and low quality of ICD in the company's annual report. This study contrasts with the research conducted by Ousama et al. (2012); Haji & Ghazali (2013); and Khlif & Souissi (2010) who stated the influence of profitability on ICD.

Regarding leverage, previous research found that leverage cannot influence the overall components of the ICD (Whiting & Woodcock, 2011; Ferreira et al., 2012). In this study, RCD is the only ICD component that is not influenced by leverage. These results indicate that debtors are more interested in information related to human capital and structural capital, which are the components most closely related to a company's ability to generate profits and cash (Ferreira et al., 2012). This study shows a significant negative relationship between leverage against HCD and SCD. Bakar & Isaac (2017); Ousama et al. (2012); Haji and Ghazali (2013) support the results of this study. The smaller level of leverage indicates that a company is able to operate with its own funds. Companies with good financial performance have the potential to increase HC and SC disclosures.

4. Conclusion

Intellectual capital disclosure is an intangible asset that is considered by stakeholders as an aspect of today's modern economy. The purpose of this study is to determine the relationship between firm size, market share, and financial distress to intellectual capital disclosure. The sample from this study is 50 companies listed in the Thai Stock Exchange. This study finds that HCD components are influenced by firm size, market share, and financial distress. Whereas RCD is only influenced by market share, and SCD is only influenced by the leverage, which is a control variable.

The company is expected to be able to answer the questions of investor needs through an informative annual report. Intellectual capital disclosure is a new requirement as a provision of knowledge for external parties to the company. Presenting informative annual reports through good IC disclosure can be a positive signal for investors in the market. This study finds that the highest quality of ICD is disclosure in the form of narration, which was 49%. In the future, the company is expected to be able to reveal indexes of ICDs more complex in the form of numerical or monetary data. Investors are expected to be able to analyze carefully the signals provided by the company

through ICD disclosures. Informative reports regarding ICD information can be a good signal for investors because companies are more transparent to external parties. ICD quality is expected to be a reference for investors in making decisions before investing. It can be seen that the market share variable is the only variable that affects RCD. This proves that the company's ability to control the market will actually encourage management to disclose its activities related to external parties, even equipped with numerical and monetary data. But the overall informative IC disclosure is able to describe the company's transparent situation. Companies that are transparent in presenting their financial information will make it easier for investors to make investment decisions.

The limitation in this study is the use of secondary data with a scoring method that is limited to the company's annual report. The method in this study is limited to the completeness and language of the company's annual report. Thus it is expected that further research can use the method of using primary resources by conducting interviews or questionnaires to the directors regarding the application of ICDs to complement the qualitative results of the statistical method. The R-Squared values of the three independent variables are HCD 12.86%, SCD 4.2%, and RCD 5.48%. Future studies are expected to expand empirical ICD research by examining the relationship of other variables to the ICD and are expected to be able to obtain greater R-squared. Development of research on the ICD can be done using different time framing, diverse company sectors, and different countries.

References

Abeysekera, I. (2008). Intellectual capital disclosure trends: Singapore and Sri Lanka. *Journal of Intellectual Capital*, *9*(4), 723-737.

Abhayawansa, S., & Azim, M. (2014). Corporate reporting of intellectual capital: Evidence from the Bangladeshi pharmaceutical sector. *Asian Review of Accounting*, *22*(2), 98-127.

Ahangar, R. G. (2011). The relationship between intellectual capital and financial performance: An empirical investigation in an Iranian company. *African Journal of Business Management*, *5*(1), 88 – 95.

Al-Tamimi, H.A.H. (2012). The effects of corporate governance on performance and financial distress: the experience of UAE national banks. *Journal of Financial Regulation and Compliance*, *20*(2), 169-181.

Amrizah, K., & Rashidah, A. R. (2013). Intellectual capital profiles: Empirical evidence of Malaysian companies Kamaluddin & Rahman. *International Review of Business Research Papers*, *9*(6), 83–101. Retrieved December 18, 2018, from http://irbrp.com/static/documents/November/2013/6.Amrizah. pdf

Anderson, E. W., Fornell C., & Lehmann D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, *58*(7), 53–66.

Andrade, G., & Kaplan, S. N. (1998). How costly is financial (not economic) distress? Evidence from highly leveraged transactions that became distressed. *The Journal of Finance*, *53*(5), 1443-1493.

Armstrong, M. & Taylor, S. (2014). *Armstrong's handbook of human resource management practice*. London: Kogan Page Publishers.

Atan, R. & Rahim, A. (2012). Corporate reporting of intellectual capital: Evidence from Ace Market of Bursa Malaysia. SHUSER 2012 - 2012 IEEE Symposium on Humanities, Science and Engineering Research. 1021-1026. 10.1109/SHUSER.2012.6268779.

Baker, W.E., & Sinkula, J.M. (2005). Market orientation and the new product paradox. *Product Innovation Management*, *22*(6), 483-502.

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.

Bozzolan, S., O'Regan, P., & Ricceri, F. (2006). Intellectual capital disclosure (ICD). *Journal of Human Resource Costing & Accounting*, *10*(2), 92–113.

Branco, M. C., Delgado, C., Sousa, C., & Sá, M. (2011). Intellectual capital disclosure media in Portugal. *Corporate Communications*, *16*(1), 38–52.

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*(6), 713–732.

Cabrita, M. D. R., & Bontis, N. (2008). Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology Management*, *43*(1-3), 212-237.

Cenciarelli.V.G, Greco.G & Allegrini.M. (2013). Does intellectual capital help predict bankruptcy? *Journal of Intellectual Capital, 19*(2), 321-337.

Clarke, M., Seng, D., & Whiting, R. H. (2011). Intellectual capital and firm performance in Australia. *Journal of Intellectual Capital*, *12*(4), 505-530.

Curado, C., Guedes,M.J. and Bontis, N. (2014). The financial crisis of banks (before, during and after): an intellectual Capital perspective. *Knowledge and Process Management*, *21*(2), 103-111.

Daou, Alain, Karuranga, Egide, and Su, Z. (2014). Towards a better understanding of intellectual capital in Mexican SMEs', *Journal of Intellectual Capital*, *15*(2), 316-32.

Davis, S. J., & Henrekson, M. (1999). Explaining national differences in the size and industry distribution employment. *Small Business Economics*, *12*(1), 59-83.

Deegan, C.M. (2000). *Financial Accounting Theory*. Sydney, NSW: McGraw-Hill Book Company.

Donaldson, L. (2001). The Contingency Theory of Organizations. Sage: Thousand Oaks, CA.

Dženopoljac, V., Janošević, S., & Bontis, N. (2016). Intellectual capital and financial performance in the Serbian ICT industry. *Journal of Intellectual Capital*, *17*(2), 373-396.

Eddine, C. O. H., Abdullah, S. N., Hamid, F. A., & Hossain, D. M. (2015). The determinants of intellectual capital disclosure: A meta-analysis review. *Journal of Asia Business Studies*, *9*(3), 232–250.

Farris, P.W., Bendle, N.T., Pfeifer, P.E., Reibstein, D.J.(2006). Metrics: The definitive guide to measuring marketing performance. Retrieved March 22, 2019, from http://ptgmedia.pearsoncmg.com/images/9780137058297/sam plepages/9780137058297.pdf.

Ferreira, A.L., Branco, M.C., Moreira, J.A. (2012). Factors influencing intellectual capital disclosure by Portuguese companies. *International Journal of Accounting and Financial Reporting*, *2*, 278-298.

Forbes. (2017). Best countries for business. *Thailand*. Retrieved January 10, 2019 from https://www.forbes.com/places/thailand/

Fornell, C. (1992). A national customer satisfaction barometer. *Journal of Marketing*, *56* (January), 6–21.

Fox, J. T., & Smeets, V. (2011). Does input quality drive measured differences in firm productivity*? International Economic Review*, *52*(4), 961-989.

Griffin, A. and Hauser J. R. (1993). The voice of the customer. *Marketing science*, *12* (Winter), 1–25.

Guimón, J. (2005). Intellectual capital reporting and credit risk analysis. *Journal of Intellectual Capital*, *6*(1), 28-42.

Guthrie, James., Petty, R. and Yongvanich, K. (2004). Using content analysis as a research method to inquire into intellectual capital reporting. *Journal of Intellectual Capital*, *5*(2), 282-293.

Haji, A. A., & Ghazali, N. A. M. (2013). A longitudinal examination of intellectual capital disclosures and corporate governance attributes in Malaysia. *Asian Review of Accounting*, *21*(1), 27-52

Hauser J. R.,.Simester D. I., & Wernerfelt B. (1994). Customer satisfaction incentives*. Marketing Science*, *13* (Fall), 327–50.

Kamath, B. (2017). Determinants of intellectual capital disclosure: Evidence from India*. Journal of Financial Reporting and Accounting*, *15*(3), 367–391.

Khalique, M., Shaari, J. A. N., Md. Isa, A. H., & Ageel, A. (2011). Role of intellectual capital on the organizational performance of electrical and electronic SMEs in Pakistan. *International Journal of Business and Management*, 6(9), 253–257. doi:10.5539/ijbm.v6n9p253

Khlif, H. and Souissi, M. (2010). The determinants of corporate disclosure: A meta-analysis. *International Journal of Accounting & Information Management*, *18*(3), 198-219.

Lev, B. (2001). *Intangibles: Management, measurement, and reporting.* Washington, D.C.: Brookings Institution Press. Retrieved from http://www.jstor.org/stable/10.7864/j.ctvcj2rf2

Lo, E.W.(2005). Pengaruh tingkat kesulitan keuangan terhadap konservatisme akuntansi. Retrieved March 25, 2019, from: https://smartaccounting.files.wo rdpress.com/2 011/03/kakpm-25.pdf.

López-Bazo, E., & Motellón, E. (2011). *Human capital and regional wage gaps. Regional Studies*, *46*(10), 1347-1365.

Massaro, M., Dumay, J., & Bagnoli, C. (2015). Where there is a will there is a way: IC, strategic intent, diversification and firm performance. *Journal of Intellectual Capital*, *16*(34), 90-517.

Mehrotra, V., Malhotra, A. K., & Pant, R. (2017). Intellectual capital disclosure by the Indian corporate sector. *Global Business Review, 19*(2), 1-17.

Muhammad, N.M.N. and Ismail, M.K.A. (2009). Intellectual capital efficiency and firm's performance: Study on Malaysian financial sectors. *International Journal of Economics and Finance*, *1*(2), 206-212.

Ngah, R., & Ibrahim, A. R. (2012). The relationship of intellectual capital, innovation and organizational performance: A preliminary study in Malaysian SMEs. *9th World Congress of the Academy for Global Business Advancement (AGBA*), *9*(1), 593–596.

Oi, W. Y., & Idson, T. L. (1999). Firm size and wages. *Handbook of Labor Economics*, *3*, 2165 -2214.

Ousama, A.A., Fatima, A., Hafiz-Majdi, A. (2012). Determinants of intellectual capital reporting: Evidence from annual reports of Malaysian listed companies. *Journal of Accounting in Emerging Economies*, *2*(2), 119-139.

Pagano, P., & Schivardi, F. (2003). Firm size distribution and growth. *The Scandinavian Journal of Economics*, *105*(2), 255-274.

Rego, L. L., Morgan, N. A., & Fornell, C. (2013). Rexamining the market share–customer satisfaction relationship. *Journal of Marketing*, *77*(5), 1–20.

Schwalbach, J. (1991). Profitability and market share: A reflection on the functional relationship. *Strategic Management Journal*, *12*(4), 299–306.

Seetharaman, A., Helmi B. Z. S. H., & Saravanan, A. S. (2002). Intellectual capital accounting and reporting in the knowledge economy. *Journal of Intellectual capital*, *3*(2), 128-148.

Singh, I., & Van der Zahn, M. (2008). Determinants of intellectual capital disclosure in prospectuses of initial public offerings. *Accounting and Business Research*, *38*(5), 409-431.

Stank, T.P., Goldsby, T.J., Vickery, S.K., & Savitskie, K. (2003). Logistics service performance: Estimating its influence on market share. *Journal of Business Logistics*, *24*(1), 27–55.

Sydler, R., Haefliger, S., & Pruksa, R. (2014). Measuring intellectual capital with financial figures: Can we predict firm profitability*? European Management Journal*, *32*(2), 244–259.

Tan, P. H., Plowman, D., & Hancock, P. (2007). Intellectual capital and financial returns of companies. *Journal of Intellectual Capital*, *8*(1), 76-95.

Taliyang, S. M., Latif, R. A., dan Mustafa, N. H. (2011). The determinants of intellectual capital disclosure among Malaysian listed companies. *International Journal of Management and Marketing Research*, *4*(3), 25–33

Utomo, A. I., & Chariri, A. (2015). Faktor-faktor yang mempengaruhi pengungkapan modal intelektual dan dampaknya terhadap nilai perusahaan. *Simposium Nasional Akuntansi XVIII*.

Webb, L. H., & Cohen, J. R. (2007). The association between disclosure,distress, and failure. *Journal of Business Ethics*, *75*, 301–314.

Whitaker, R. B. (1999). The early stages of financial distress. *Journal of Economics and Finance*, *23*(2), 123-132.

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.

Whiting, R. H., & Woodcock, J. (2011). Firm characteristics and intellectual capital disclosure by Australian companies. *Journal of Human Resource Costing & Accounting*, *15*(2), 102–126.

Winter-Ebmer, R., & Zweimüller, J. (1999). Firm-size wage differentials in Switzerland: Evidence from job-changers. *American Economic Review*, *89*, 89-93

Wijantini (2006). Voluntary disclosure in the annual reports of financially distressed companies in Indonesia. *Gadjah Mada International Journal of Business, 8*(3), 343-365.

Wruck, K. H. (1990). Financial distress, reorganization, and organizational efficiency. *Journal of Financial Economics*, *27*(2), 419-444.

Yau, F.S., Chun, L.S., & Balaraman, R. (2009). Intellectual capital reporting and corporate characteristic of public-listed companies in Malaysia. *Journal of Financial Reporting & Accounting*, *7*(1), 17-35.

Zeghal, D., & Maaloul, A. (2010). Analysing value added as an indicator of intellectual capital and its consequences on company performance. *Journal of Intellectual Capital*, *11*(1), 39– 60.

Notes
Note 1. Multiple Regression Formula