

# The Voluntary Disclosure of Intellectual Capital: A Longitudinal Study from Public Firms in Indonesia

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## Abstract

The purpose of this study is to examine the determinants of the voluntary disclosure of Intellectual Capital (IC) of public companies in Indonesia in the long term. Longitudinal studies were conducted over the past ten years from the years 2002-2011. The data were used, namely in 2011, 2008, 2005, and 2002. Samples of one hundred largest market capitalization company in 2011 were traced to ten years back. Analysis tool used is E views 7. The software uses a least squares estimation of the parameters pooled specifically designed for panel data. The results of analysis testing on observations in 2002, 2005, 2008, 2011, and the panel data were found the voluntary disclosure of IC to be influenced by firm size, industry type, and auditor reputation consistently at each observation. Inconsistent results were obtained by using the variable debt levels, ownership concentration, firm age, and profitability. The results of this analysis are expected to motivate the public company in Indonesia to do more voluntary disclosure of IC and encourage regulators to make regulations in a comprehensive manner so that all categories of IC must be disclosed by the company.

**Keywords:** determinants of voluntary disclosure of IC, longitudinal study

## 1. Introduction

New era in the field of economics which is often called new economy has emerged, in which intangible assets have a very important role (Firer and Williams, 2003; Bontis 1998). Intangible assets or Intellectual Capital (IC) are a future benefit that claims no physical form in the new era companies that base themselves on the emerging knowledge. Its characteristics are tangible assets much less than the intangible assets. The company's success depends on its competitive advantage indicators. Company underwent a change of information into tangible assets intangible assets. Changes in the nature of the company require changes to the information presented (Lev, 2001; Fincham and Roslender, 2003; Steenkamp, 2007).

According to Statement of Financial Accounting Concepts (SFAC), the purpose of financial reporting is to provide financial information about the reporting entity that is useful to potential investors and other creditors in making decisions about providing resources to the entity. However, the results of recent research indicate that the financial statements do not provide relevant information. Decrease in Earnings Response Coefisients (ERCs) occurred within a period of twenty years (Lev and Zarowin, 1999). Increased market to book ratio of 1.9 to nearly 6 shows disparities of company's market value and book value of the larger (Lev, 2001). The financial statements do not reflect the true value of the company anymore. Financial reports only focus on traditional cost, do not show differentiation, innovation companies, and the company's competitive advantage (Kaplan and Norton, 2004; Lev, Canibano, and Mar, 2005; Chen, Cheng, and Hwang, 2005).

IC disclosure is seen to reduce the information gap that has been happening. This information is expected to fill the gaps thus reducing the information of asymmetry in the capital market (Gutrie, Petty, Ferrier, and Wells, 1999). The companies listed in the stock market that enables IC disclosure are required to do. Benefits gained from market capitalization of the company are more accurate and make capital markets more efficient. IC disclosures term also affects the growth of market capitalization (Bontis, 2002; Carlin *et al.*, 2006; Sveiby, 2010). This study aims to examine the determinants of the voluntary disclosure of Intellectual Capital (IC). This study contributes to research on disclosure of IC increases relatively limited in Indonesia. Determinants motivate companies doing IC disclosure in the long term. This paper is organized as follows. Session 1 background of research. Session 2 review of literature and hypothesis development. Session 3 outlines the research methodology, session 4 describes the results of the study, session 5 conclusion and recommendations.

## 2. Review of Literature and Hypothesis Development

### 2.1 Determinants of Disclosure IC

The determinants of the voluntary disclosure of IC grouped into three, namely (1) the characteristics of the

structure, (2) the characteristics of performance, and (3) the characteristics of the market (Oliveira *et al.*, 2006; Alsaeed, 2006; Lang and Lundholm, 1993). Characteristics of the structure is stable and constant characteristics. Structural characteristics were tested using the variable firm size, debt level, ownership concentration, and firm age. Performance characteristics are characteristics that reflect the accounting information required by the user and uses a period of time (Wallace and Naser, 1995). Performance characteristics were tested using the variable profitability. Market characteristics are characteristics that are not categorized as a stable and use a period of time. Market characteristics are characteristics that can not be controlled by the company. Market characteristics variables were tested using industry type and auditor reputation.

#### 2.1.1. Company Size

Firm size is a determinant of the most commonly affects IC disclosure. Some researchers proposed the same thing for different reasons. Watson *et al.* (2002) stated that a larger firm will obtain greater benefits by doing more disclosure because it can reduce the uncertainty. Large firms more public attention and have higher political costs so much more done disclosure. Some theories are proving firm size affects firm conduct disclosure. Large firms have greater agency costs than smaller firms (agency theory). Large firms tend to obtain more attention from stakeholders so that should give more information to stakeholders (stakeholder theory). Funding sources are mainly large corporations capital markets so that large companies will increase disclosure in order to convey a positive signal to the capital market (signaling theory). Bozzolan *et al.* (2006) proved the firm size effect on IC disclosure. Purnomosidhi (2005) also prove the size of the company led to variations in IC disclosure. Numerous studies confirm and prove the firm size has a positive influence on the disclosure of IC (White *et al.*, 2007; Li *et al.*, 2007; Oliveira *et al.*, 2006). The hypothesis proposed by such predictions, and stated in the alternative hypothesis is as follows.

*Hypothesis 1: Firm size has a positive effect on IC disclosure.*

#### 2.1.2. Debt levels

Companies that have greater levels of debt are usually comply with requests for information that are higher than creditors and shareholders. High debt levels require a high monitoring costs as well. Voluntary disclosure by the company is expected to reduce the cost of monitoring is happening (Camfferman and Cooke, 2002; Jensen and Meckling, 1976). High debt levels make the distance between the two parties that have an interest, the bondholders and stockholders is widening. Monitoring costs to be higher so that more disclosure is needed to reduce (agency theory). High debt levels also make the stakeholders to motivate companies to do more disclosure. More information is needed so that companies with high debt levels can meet the information needs of stakeholders (stakeholder theory). White *et al.* (2007) found a positive effect of the level of debt to IC disclosure. Several studies confirm and demonstrate similar results, including Camfferman and Cooke (2002), Purnomosidhi (2005), and Dammak *et al.* (2008). Hypothesis based on these predictions and the alternative hypothesis is stated as follows.

*Hypothesis 2: The level of debt has a positive effect on IC disclosure.*

#### 2.1.3 Ownership Concentration

Companies with concentrated ownership tend to perform less disclosure than companies with dispersed ownership. Dispersed ownership led to increased monitoring costs so companies are encouraged to undertake disclosure. Companies with concentrated ownership possible conflict among them and lower (agency theory). Concentration of ownership and accountability led to pressure from stakeholders visibility is lower than the firm whose ownership is dispersed (stakeholder theory). Oliviera *et al.* (2006) proved that the lower the concentration of ownership the more voluntary IC disclosure is made. Li *et al.* (2007) also proves that companies based knowledge with concentrated ownership perform lower IC disclosure. The hypothesis proposed by such predictions, and stated in the alternative hypothesis is as follows.

*Hypothesis 3: Ownership concentration negatively affect on IC disclosure*

#### 2.1.4 Company Age

Age of the firm shows the maturity level of a company. The company will make improvements to the information conveyed from time to time. Increasing age of the firm indicates that disclosure is done growing. The rationale for choosing a firm age variable is the firm's long-standing will improve financial statements submitted from time to time. Stakeholders is increasing from time to time also motivate companies do increase disclosure (stakeholder theory). Carlin *et al.* (2006) found that the positive effect on the time variable trend of disclosure. Alsaeed (2006) also prove the age of the firm has a positive correlation with the level of disclosure. The hypothesis proposed by such predictions, and stated in the alternative hypothesis is as follows.

*Hypothesis 4: Age company's positive effect on IC disclosure.*

#### 2.1.5. Profitability

Companies that have high profitability will reveal more information to give a signal to the market and differentiate it from poorly performing companies. Disclosures work as a mechanism for monitoring the performance of managers. Motivated managers make voluntary disclosures to maintain the position and

compensation (agency theory). Shareholder and stakeholder managers monitor performance through information and disclosures by the company (stakeholder theory). Companies that have high profit disclosing more will perform as both a signal and to avoid stock valuation that is too low (signaling theory). Wang (2011) found the effect of human capital on the financial performance of the company. Some studies also support this, including Dammak et al. (2008), Wallace *et al.* (1995). The hypothesis proposed by such predictions, and stated in the alternative hypothesis is as follows:

*Hypothesis 5: Profitability positive effect on IC disclosure.*

#### 2.1.6 Type of Industry

Companies that have a high IC will disclosure IC be higher than low IC firms. Perceived lack of mandatory disclosure of information for companies that have investments in intangible assets is high. According to stakeholder theory, stakeholders are entitled to receive information about how the company's activities may affect them. High IC companies in order to provide for the disclosure of information will make knowledge assets. Voluntary disclosure because the financial statements do not provide enough information about the knowledge assets owned. Bruggen et al. (2009) found the type of industry is an important determinant IC disclosure. Some of these studies also proved, Kang and Gray (2011); Bozzolan *et al.* (2003), Carlin *et al.* (2006). Hipotesis proposed based on these predictions and the alternative hypothesis is stated as follows.

*Hypothesis 6 : Industry type positive effect on IC disclosure*

#### 2.1.7 Auditor Reputation

Large audit firms tend to be encouraging clients to do more disclosure of information in the annual report. The goal is to maintain the reputation, develop skills, and retaining clients. Auditing is a mechanism to reduce agency costs, reduce the information gap, and improve the credibility of disclosure. Companies that use the firm with high reputation, is a signal that the firm is audited in good condition. Investors have more confidence in the companies audited by reputable accounting firm audited by the high compared with low-quality audited (Subroto, 2003). Woodcock and Whiting (2009) prove the auditor's reputation affect IC disclosure. Large audit firms have greater expertise than a small accounting firm to help clients do more disclosure. Some studies obtain the same result, namely Olivera *et al.* (2006); Dammak *et al.* (2008). The hypothesis proposed by these predictions and expressed in hipoteis alternatives are as follows:

*Hypothesis 7: Reputation auditor positive effect on IC disclosure.*

### 3 Research Methodology

#### 3.1 Population and Sample

The population was all public companies listed on the Indonesia Stock Exchange (IDX). The sampling design used is non probability, namely purposive sampling with the following criteria. (1) one hundred companies with the largest market capitalization in 2011, (2) remain in existence for ten years of observations of the years 2011, 2008, 2005 and 2002, (3) have complete data.

#### 3.2 Data Sources and Data Analysis Techniques

This study uses secondary data, in the form of annual reports published by companies. This study acquiring data from Capital Market Reference Center in Jakarta, Indonesian Business Data Center, Library of the Faculty of Economics and Business Brawijaya University, Library of the Faculty of Economics and Business Gadjah Mada University, Library of the Faculty of Economics Udayana University, Indonesian Capital Market Directory (ICMD), Indonesian Stock Exchange website.

And the ratio of data points can be obtained directly from the company's annual report. The index data obtained from content analysis. The unit of analysis used in this study is the sentence. IC framework (table 2) used has three categories with 25 items (Sujan and Abeysekera, 2007). How to do the calculations for each category of disclosure index was coded 0 = firms that do not conduct disclosure, code 1 = firm that performs qualitative disclosures, code 2 = firms that perform quantitative disclosure (Guthrie *et al.*, 2004; Guthrie and Abeysekera, 2006; Sujan and Abeysekera, 2007).

#### 3.3 Variables and Measurement

1. Company size is the size of the company, which in this study is proxied by the end of the year the total value of assets owned by the company. This study uses the logarithm of total assets to conduct the analysis, as is done by Oliviera *et al.* (2006) William (2001), Bruggen *et al.* (2009), Purnomosidhi (2005), Carlin *et al.* (2006), and Wallace and Naser (1995).
2. Debt levels is the level of the company's dependence on debt. In this study, the level of debt is proxied by the ratio of total debt and total assets. Ratio of total debt to total assets is used as a proxy for the level of debt in the research Oliveira *et al.* (2006). Camfferman and Coke (2002), Bozzolan *et al.* (2006), White *et al.* (2007), Bruggen *et al.* (2009), and Woodcock and Whiting (2009).
3. Concentrated Ownership indicates concentration whether a company's stock ownership. Concentration of ownership in this study was measured by the percentage of ownership of the three largest shareholders who

- can be identified as that of Woodcock and Whiting (2009). Studies that use the determinants of ownership concentration by; Oliviera *et al.* (2006), Li *et al.* (2007), Bozzolan *et al.* (2006), and White *et al.* (2007).
4. Company Age is the level of maturity of a company. In this study, a proxy for firm age is the age of the company since the company registered until observation. Studies that use age as a determinant of corporate disclosures made by Alsaeed IC (2006), Woodcock and Whiting (2009), Li *et al.* (2007), Bukh *et al.* (2005), and White *et al.* (2007).
  5. Profitability is the level of financial success achieved by the company. In this study, profitability is proxied by the ratio of profits to total assets. The higher percentage of income than assets exhibit higher success achieved by the company. Bozzolan *et al.* (2006) conducted a study using the IC disclosure determinants of profitability. The studies were also performed by using the determinants of profitability Oliveira *et al.* (2006) and Purnomosidhi (2005).
  6. Based on the Global Industry Classification Standard (GICS) industry classification can be divided into two namely High-IC Intensive Industries and Low-IC Intensive Industries. Industry variables in this study is a dummy variable and based on GICS industry classification (Table 1). Several studies using this is Woodcock and Whiting (2009) and Bozzolan *et al.* (2006).
  7. Auditor reputation shows the quality of a company's auditor (public accounting firm). In this study, the auditor's reputation is a proxy for the firm that audited the company's reputation is as sample. The auditor's reputation variable is a dummy variable. The auditor's reputation categorized into two classifications, namely the Big Four and non-Big Four. Woodcock and Whiting (2009) conducted a study using the determinant of the firm's reputation. The studies also using the determinant of the firm's reputation by; Oliviera *et al.* (2006) and Alsaeed (2006).
  8. The level of disclosure in this study is voluntary IC disclosure level of the company. This study uses the framework of IC disclosure Sujana and Abeysekera (2007) with a total of 25 disclosure items (Table 2). Number of voluntary IC disclosure under investigation in this study are nineteen items, because as some items are mandatory disclosure. This framework is used because it is still relatively new and is a modification of the framework research conducted by Sveiby (1997), Guthrie and Petty (2000), Guthrie *et al.* (2004), and Carlin *et al.* (2006).

### 3.4 Empirical Models

This study uses analysis Ordinary Least Square (OLS) for cross-sectional data and Pooling Least Square (PLS) for panel data with the following equation.

$$DIC = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Lev} + \beta_3 \text{Own} + \beta_4 \text{Age} + \beta_5 \text{Prof} + \beta_6 \text{Ind} + \beta_7 \text{Aud} + \varepsilon + \dots \dots \dots (1)$$

Where:

- $\beta_0$  = Intercept of regression
- $\beta_1, \beta_2 \dots$  = Slope
- DIC = IC voluntary disclosure, measured by index numbers
- Size = Company size as measured by log total year-end assets.
- Lev = Debt levels are measured ratio of total debt to total assets
- Own = Ownership concentration as measured by the percentage of third the most important stakeholders are identified.
- Age = Company age as measured by the number of years the company registered until the year since the start of observation
- Prof = Profitability is measured by the ratio of profit to total assets
- Ind = Industry type is measured using a dummy variable, 1 = for High-IC Intensive Industries, 0= for Low -IC Intensive Industries
- Aud = Reputation auditor is measured using a dummy variable, 1 for Big Four auditors, 0 = for non-Big Four auditors
- e = Error term

The analytical tool used is panel data regression analysis with the software Eviews 7.

## 4. Results and Discussion

### 4.1 Sample Description

The observation of a hundred companies with the largest market capitalization in 2011 found as many as 22 new companies listed in Indonesia Stock Exchange between the years 2008-2011, 13 new companies listed between the years 2005-2008, and 9 new companies registered between the years 2002-2005. Based on these criteria was selected 56 companies that still exist in every year observation period. Annual report data can not be obtained in full during the period of observation is the two companies so that the final sample is selected sample of 54 firms for each year 2002, 2005, 2008, and 2011. The overall number of samples in this study were 216 companies.

#### 4.2 Data Description

Description of the data shown in table 3 shows the variation of the dependent and independent variable data on each observation period. Testing content analysis using Cronbach's Alpha reliability coefficient showed a value of 0.870 is greater than 0.70, so the IC viable framework used.

#### 4.3 Regression Analysis Result

Regression results interpreted based on the estimation of fixed effect model for p-value of Ramsey reset test is significant or less than  $\alpha = 5\%$ . Classical assumption test (Table 4) were undertaken before the regression analysis.

##### 4.3.1 The Effect of Company Size

The test results showed a positive and firm size is statistically significant on the level of disclosure in 2002, 2005, 2008, 2011, and panel data. Slope coefficient of firm size is shown in the test years 2002, 2005, 2008, 2011, and panel data is at 0.164, 0.149, 0.141, 0.103, and 0.152. Some theories that support and provide positive direction to build a hypothesis in this study is stakeholder theory, agency theory, and signaling theory. Some studies obtain the same result (Bruggen *et al.*, 2009, White *et al.*, 2007, Oliveira *et al.*, 2006; Guthrie and Petty, 2004; Dammak *et al.*, 2008; Carlin *et al.*, 2006).

##### 4.3.2 The Effect of Debt

The results show a positive effect of debt levels and statistically significant on the level of disclosure in 2005 and 2008. Slope coefficient debt levels shown in testing in 2005 and 2008 was 0.099% and 0.132%. Otherwise the results obtained by using the data of 2002, 2011, and panel data that indicates the level of debt is not a positive and significant effect. This study does not provide evidence of the level of debt affects IC disclosures consistently. Agency theory and stakeholder theory underlying determinants is not always consistent provable. Higher IC disclosure does not always provide positive benefits for management, but it also can negatively impact due to excellence and the company's strategy can be replicated competitors. According to Woodcock and Whiting (2009), it is likely also due to the relationship of shareholders, bondholders, and management control of the company has a different quality than those written in the literature.

##### 4.3.3 The Effect of Ownership Concentration

The results show a negative effect of ownership concentration and statistically significant on the level of disclosure in 2002 and 2008. Slope coefficient of ownership concentration are shown in tests in 2002 and 2008 was -0.189 and -0.245. Otherwise the results obtained by using the data of 2005, 2011, and a panel data showed no effect of ownership concentration and is negative and significant. The test results showed the concentration of ownership is not consistently proven effect on IC disclosure. Stakeholder theory and agency theory underlying determinants is not always consistent provable.

Several studies have also shown inconsistent results. Research Oliviera *et al.* (2006) showed that the more concentrated ownership, the lower the IC disclosure is made. Alsaeed research results (2006) show that the more concentrated ownership of the company by the government, the higher the IC disclosure. Research conducted Bozzolan *et al.* (2006) and Woodcock and Whiting (2009) have failed to prove ownership concentration affects IC disclosure.

##### 4.3.4 The Effect of Age Company

The test results showed a positive and firm age effect was statistically significant on the level of disclosure for panel data. Slope coefficient of firm age is shown in the overall test year is 0.0037. Otherwise the results obtained by using the data of 2002, 2005, 2008, and 2011, which shows its age is not positive and significant effect. Firm age is not consistently proven effect on IC disclosure. The underlying determinants

Several studies have also shown inconsistent results. Alsaeed (2006) who conducted a study in Saudi Arabia found firm age is positively related to the level of disclosure only if the company has a high ranking (electricity) is not included in the testing. Carlin *et al.* (2006) conducted a longitudinal study in Hong Kong found similar results, the time variable has a positive effect on the trend disclosure. Woodcock and Whiting (2009) research in Australia found no effect of age on the disclosure of IC. Company in Australia doing continuous disclosure acquiring legitimacy for the operation of the company regardless of age.

##### 4.3.5 The Effect of Profitability

The test results showed a positive effect of profitability and statistically significant on the level of disclosure for 2008. Slope coefficient profitability shown in testing year 2008 amounted to 0.489. Otherwise the results obtained by using the data of 2002, 2005, 2011, and the data panel are showing the positive effect of profitability which is not significant. This study does not provide evidence of IC disclosure affects profitability consistently. Signaling theory, agency theory, and stakeholder theory underlying determinants is not always consistent provable.

Several studies have shown inconsistent results. Research conducted Oliviera *et al.* (2006), Alsaeed (2006), and Purnomosidhi (2005) proved not affect the profitability of IC disclosure. Research conducted Watson *et al.* (2002) in the UK found a relationship between firm performance and disclosure ratio. Some research found the effect of profitability with disclosure, including Dammak *et al.* (2008), Wallace *et al.* (1995).

#### 4.3.6 The Effect of Industrial Type

The test results showed the type of industry and the positive effect is statistically significant on the level of disclosure in 2002, 2005, 2008, 2011, and panel data. Slope coefficient of the type shown in the testing industry since 2002, 2005, 2008, 2011, and is a panel data of 0,082, 0.133, 0.089, 0.154, and 0.111. Some theories that support and provide positive direction to build a hypothesis in this study are stakeholder theory and legitimacy theory. The results show that each test consistently supports theories that have been used to construct hypotheses. Bruggen *et al.* (2009) conducted a study with a sample IC disclosure determinant 125 companies in Australia. IC framework used is a modification research Vergauwen and Alem (2005). The result shows that the type of industry is the main determinant of IC disclosure. Some studies obtain the same result (Woodcock and Whiting, 2009; Kang and Gray, 2011; Boedy, 2009; Oliveira *et al.*, 2006; Carlin *et al.*, 2006; Bozzolan *et al.*, 2006).

#### 4.3.7 The Effect of Reputation Auditor

The test results showed a positive effect auditor reputation and statistically significant on the level of disclosure in 2002, 2005, 2008, 2011, and panel data. Slope coefficient indicated auditor reputation on testing in 2002, 2005, 2008, 2011, and is a panel data of 0,082, 0.074, 0.098, 0.159, and 0.117. Signaling theory and agency theory are used to support and provide positive direction to build a hypothesis in this study. At each testing results shown consistent support theories that have been used to construct hypotheses.

Audited company with high reputation will be motivated to take a higher disclosure (Subroto, 2005). Audited company with high reputation have a higher ability to help its clients to make the disclosure of IC (Oliveira *et al.*, 2006) Research conducted Woodcock and Whiting (2009) in Australia using IC framework totaling eighteen items, which is a modified framework used Gutrie *et al.* (2004). The selection of the samples using a stratified random sample, the sample size was selected seventy companies. The results show that the firm with a high reputation affects the level of disclosure of IC companies.

### 5. Conclusion and Recommendation

This research can provide theoretical implications, providing empirical evidence applying stakeholder theory, agency theory, legitimacy theory, and the theory of signal in Indonesia. The results showed variable firm size, industry type, and auditor reputation consistently affect IC disclosure. Other variables, namely the level of debt, ownership concentration, firm age, and profitability may prove inconsistent effect though.

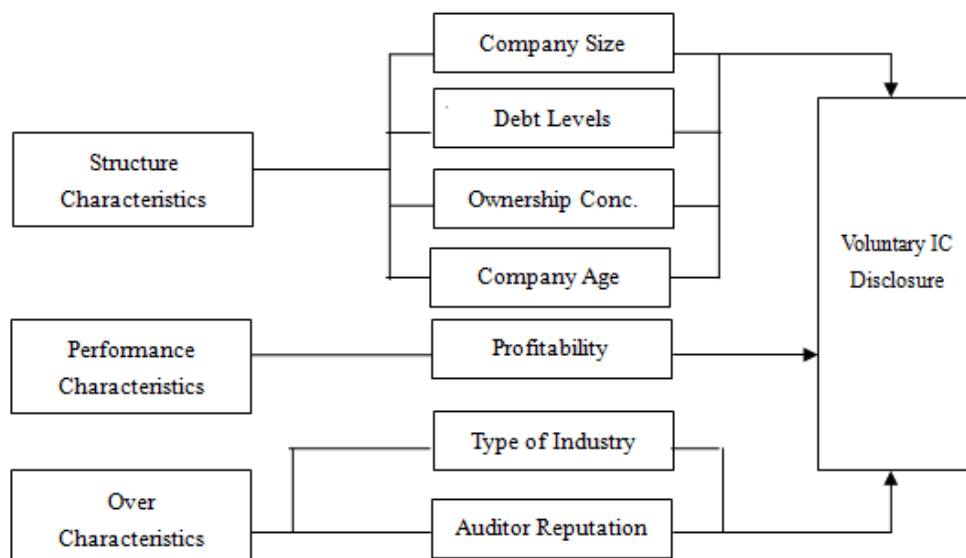
Increasing knowledge based companies that practical implications are pushing companies to do more public disclosure of IC. Future research is expected to use a questionnaire (primary data) by making observations cross-sectional. The use of questionnaires is expected to obtain additional cultural variables which affect IC disclosures that occur in each company. The use of sample firms that are not listed on the Stock Exchange which has a dominant knowledge assets, such as universities, law firm, accounting firm, and consultant offices and will provide an understanding of the breadth of the IC.

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**Figure 1**  
**Research Framework**



**Table 1. Classification of GICS Sectors by IC intensity**

High-IC Intensive Industries	Low-IC Intensive Industries
Automobile and Components	Commercial Services and Supplies
Banks	Consumer Durables and Apparels
Capital Goods	Consumer Services
Commercial Services and Supplies	Energy
Consumer Services	Food, Beverage, and Tobacco
Diversified Financials	Food Staples and Retailing
Health Care Equipment and Services	Materials
Insurance	Retail
Media	Transportation
Pharmaceuticals, Biotechnology, and Life Sciences	Utilities
Real Estate	
Semi Conductors and Semi Conductors Equipment	
Software and Services	
Technology, Hardware and Equipment	
Telecommunication service	

Source: Woodcock dan Whiting (2009)

**Table 2. The Intellectual Capital Framework**

No	Internal Capital	No	External Capital	No	Human Capital
1	Patents	10	Brands	19	Know-How
2	Copyrights	11	Costumers	20	Education
3	Trademarks	12	Costumer loyalty	21	Vocational qualifications
4	Management philosophy	13	Company names	22	Training
5	Corporate culture	14	Distrbution channels	23	Work-related knowledge
6	Management Processes	15	Business Collaborations	24	Work-related competencies
7	Information systems	16	Licensing agreements	25	Entrepreneurial spirit
8	Networking systems	17	Franchising agreements		
9	Financial relations	18	Favourable contracts		

Source: Sujan dan Abeysekera (2007)



**Table 3. Statistic Descriptive Test Results**

Variable	Number of Sample	Minimum Value	Maximum Value	Average Value	Standard Deviation
		Year. 02/05/08/11	Year. 02/05/08/11	Year. 02/05/08/11	Year. 02/05/08/11
Size	216	5,4/4,8/4,2/6	8,1/8,2/8,4/8,6	6,7/6,8/7/7,3	0,64/0,65/0,73/0,6
Lev - %	216	17/15/3/10/3	147/97/100/212/212	63/59/55/55/58	28/23/26/32
Own- %	216	23/16/22/18/16	100/99/98/99/100	67/65/66/66/66	20/18/18/21
Age - %	216	0/0/0/0/0	20/23/26/29	9/12/15/18/	4/4/4/4
Prof - %	216	-2/-4/-6/0/-6	92/38/40/46/92	11/7/8/12/10	15/9/9/12
Ind	216	0/0/0/0	1/1/1/1	0.56/0.56/0.56/0.56	0,5/0,5/0,5/0,5
Aud	216	0/0/0/0	1/1/1/1	0.57/0.63/0.78/0.81	0,5/0,5/0,4/0,4
PIC - %	216	5/5/8/18	63/66/74/71	26/35/42/49	14/16/16/15

Source: Data processed, 2013

**Table 4. Classic Assumptions Test Results**

Variable	Multicollinearity Test	Linearity	Heteroskedasticity Test	Normality Test	Autocorrelation Test
	VIF				
Size	1,024				
Lev	1,025				
Own	1,036				
Age	1,144				
Prof	1,080				
Ind	1,058				
Aud	1,043				
Ramsey Reset Test		0,0529			
Breus Pagan Godfey			0,0808		
Jarque-Bera-model				0,456	
Durbin-Watson-model					1.757

Source: Data processed, 2013

**Table 5. Regression Analysis Results**

Variable	Coefficient	All Year	Partial Time (Year)			
			2002	2005	2008	2011
Size	$\beta_1$	0,152 (13,442)*	0,164 (8,098)*	0,150 (8,359)*	0,141 (8,488)*	0,103 (5,065)*
Lev	$\beta_2$	0,033 (1,163)	0,020 (0,377)	0,099 (2,627)*	0,132 (2,504)*	0,031 (0,664)
Own	$\beta_3$	-0,05 (-1,247)	-0,189 (-2,643)*	-0,016 (-0,269)	-0,245 (-3,325)*	-0,066 (-1,024)
Age	$\beta_4$	0,004 (2,425)*	0,001 (0,391)	-0,001 (-0,293)	0,002 (0,715)	0,02 (0,896)
Prof	$\beta_5$	0,071 (1,041)	0,043 (0,346)	0,0290 (0,335)	0,490 (3,086)*	0,033 (0,309)
Ind	$\beta_6$	0,111 (6,991)*	0,082 (2,868)*	0,133 (5,634)*	0,089 (3,269)*	0,154 (5,936)*
Aud	$\beta_7$	0,117 (6,872)*	0,082 (3,176)*	0,074 (3,016)*	0,098 (3,024)*	0,159 (5,014)*

**Description:** \* significance at  $\alpha = 5\%$

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