

**ANALYSING FACTORS INFLUENCING
INTANGIBLE ASSET DISCLOSURE
(STUDY IN SOUTH-EAST ASIA AND
AUSTRALIA TELECOMMUNICATION
INDUSTRY)**



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CERTIFICATION OF ORIGINALITY

I, Sheila Ulfia Putri, hereby declared that this “skripsi”, title : Analysing Factors Influencing Intangible Asset Disclosure (Study in South-East Asia and Australia Telecommunication Industry) is my own work and that to the best of my knowledge, this study contains no material previously published or written by another nor material which to a substantial extent has been accepted for the award of any other degree or diploma of a university of institute of higher learning, except where due acknowledgment is made in the text of the thesis.

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ABSTRAK

Penelitian ini bertujuan untuk meneliti praktik pelaporan sukarela aktiva tak berwujud dalam laporan tahunan perusahaan telekomunikasi di Asia Tenggara dan Australia. Sample pada penelitian ini adalah 75 perusahaan telekomunikasi pada tahun 2007, 2008 dan 2009. Penelitian aktiva tak berwujud terdiri atas tiga kategori yaitu structural capital, relational capital, dan human capital, berdasarkan kategori dari Oliveira et al.

Penelitian ini dilakukan dengan metode content analysis pada annual report perusahaan sample dengan index penelitian yang dikembangkan oleh Oliveira et al. sebagai variabel terikat, dan dianalisis dengan regresi berganda. Variabel bebas, yaitu ukuran perusahaan, leverage, konsentrasi kepemilikan, marjin EBITDA, sistem hukum negara asal dan secrecy accounting value dianalisis sebagai faktor – faktor yang mempengaruhi praktik pelaporan sukarela aktiva tak berwujud.

Hasil penelitian menunjukkan bahwa ukuran perusahaan dan secrecy accounting value berpengaruh positif signifikan terhadap praktik pengungkapan sukarela aktiva tak berwujud. Sebaliknya, leverage, konsentrasi kepemilikan, marjin EBITDA dan sistem hukum negara asal tidak berpengaruh terhadap praktik pelaporan sukarela aktiva tak berwujud.

Kata Kunci : Pelaporan sukarela aktiva tak berwujud, ukuran perusahaan, leverage, konsentrasi kepemilikan, marjin EBITDA, sistem hukum negara asal, secrecy accounting value.

ABSTRACT

This study aims to examine intangible asset voluntary disclosure practices in annual report telecommunication company in South East Asia and Australia. This research sample is 75 telecommunication company at year 2007, 2008 dan 2009. Intangible asset disclosure study consist of three categories; structural capital, relational capital and human capital, based on Oliveira et al. categories.

This study using content analysis method in annual report sample companies with index developed by Oliveira et al. as dependent variable. Independent variable which are firm size, leverage, ownership concentration, EBITDA margin, legal system of home country and secrecy accounting value, are analysed as factors influencing intangible asset voluntary disclosure practices.

A significant positive relationship was observed between intangible asset voluntary disclosure and firm size and secrecy accounting value. However, leverage, ownership concentration, EBITDA margin and legal system of home country did not influence intangible asset voluntary disclosure practices.

Keywords : Intangible asset disclosure practices, firm size, leverage, ownership concentration, EBITDA margin, legal system of home country, secrecy accounting value.

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CHAPTER I

INTRODUCTION

1.1 Background

Nowadays, researchers and practitioners consider intangible assets to be key factors for company success and important levers for value creation (Montemari, 2010). The role of intangibles as value and growth creators is accepted among economist, investors and managers (Lev and Daum, 2004).

According to Ashton (2005) in Rashid *et al* (2009) it happens as the changing structure of global economy, as following :

The shift from industrial age to the information age is changing the structure of global economy, and highlighted the importance of intangibles or intellectual capital. There has been considerable agreement in academic and practical fields that intangible is central to the value creation process in knowledge economy.

Rashid et al., (2009) argue that intangibles would improve the informational relevance of financial statements to users in making economic decisions. However, traditional (accounting-based) information systems are not able to provide adequate information about corporate intangible assets and its economic impact (Lev and Daum, 2004), and there is lack of appropriate accounting framework for intangibles (Rashid et al., 2009).

Current financial statements in its present form only give a limited account of the real economic conditions of a company. It provides no information

about the growth and adaptation potential of a company, nor do they disclose how efficient the company is in utilizing its bundle of resources, assets and capabilities to generate future revenue and income (Lev and Daum, 2004). In financial reporting standards developed by standards-making bodies, such as the IAI (Indonesia Accounting Board) and the IASB (International Accounting Standart Board), the recognition of intangible asset is still not able to cover all intangible assets owned enterprise, intangible asset that can be recognized in the Financial Statement only intangible asset that qualifies for recognition. Not all intangible asset categories (such as innovation, human capital, customer loyalty, employee competences) can qualify for recognition in the Financial Statement. This makes the companies can not explore the disclosure of intangible asset to attract investors and banks, therefore intangible asset voluntary disclosure is needed, as expressed by Ricardis (2006) in Montemari (2010) as following :

Considering that many intangibles are not recognized in the financial statement, highly innovative companies where intangibles play a significant role have much greater difficulty attracting investors and banks. In these cases, voluntary disclosure of intangible assets can help reduce the uncertainties of investors and banks and, at the same time, it allows companies to have greater access to funds.

According to Andriessen (2004) in Montemari (2010), companies could have several reasons for disclosing information on its intangible assets. First, to improve information to stakeholders about the real value and future performance of the enterprise. Second, to reduce the information asymmetry between management, shareholders and investors. Third, to increase their ability to raise

capital, and to enhance their corporate reputation and affect the price of their stock.

This present study empirically explores intangible asset disclosure practices in firm's Annual Report for a sample of South-East Asia and Australia Telecommunication Industry. This focus on one single industry follows the prior work (Gerpott et al, 2008) that identified the need for industry-focused research on the level of intangible asset disclosure. Specifically, there is evidence to suggest that the competitive prospect of firms operating on *telecommunication services markets* are strongly affected by intangibles (Gerpott et al, 2008).

This study conducted not only in Indonesia companies but also in another country in South-East Asia and Australia because one of the purpose of this study is to examine association between country difference and intangible asset disclosure. According to world bank data, countries in South East Asia are emerging countries. Consequently, this research also explore intangible asset disclosure practices in emerging countries, furthermore this research will compare intangible asset practices in South East Asia with Australia. Therefore, this study analyses factors influencing intangible asset disclosure in South-East Asia and Australia telecommunication industry.

1.2 Problem Statement

The literature suggests that there are various reasons for big companies disclose more information than smaller companies. First, the disclosure of detailed information for large companies is relatively cheaper (less costly) because they

are already providing such information for internal purposes. Second, the annual report is the main source of information for competitors, smaller companies tend not to reveal details about their activities for fear that would cause competitive disadvantage (Widowati 2009). Third, larger companies in general are exposed to a high level of public interest, they cope with this interest by reporting more extensively on their assets (Gerpott et al., 2008).

Corporations with high debt are generally under greater scrutiny by creditors to ensure that they are not violating debt covenants, and consequently, this scrutiny would result in corporations disclosing more comprehensive information on different corporate items especially those relating to debt covenants (Kang, 2006). According to Oliveira et al (2006) firms with high leverage levels tend to lead to high agency costs. Consequently, companies with high levels of leverage tend to disclose more information voluntarily, including information on intangible assets in order to reduce agency costs.

According to Gerpott et al (2008), higher EBITDA margins are indicative of higher levels of operational efficiency. Intangible assets such as highly skilled employees or sophisticated organizational processes contribute to achieving a high level of efficiency.

Regional cultural differences can shape intangible asset disclosure quality, at least for specific intangible asset categories. For instance, a less (more) individualistic cultural might encourage more extensive human (investor) capital reporting. Similarly, disclosure patterns may be affected by a country's accounting culture, and legal system, which, in turn, either stems from a common

or code law context (Gerpott, 2008). According to Radebaugh and Gray (1997), corporate accounting and information disclosure practices are influenced by a variety of economic, social, and political factors. The environmental influences include the nature of legal system, and culture. Based on Mir et al (2009) intangible asset information disclosure in annual report may depend upon the level of secrecy in a culture.

Raffournier (1995) in Widowati (2009) suggest that the agency plays an important role in the policy of disclosure made by the company, as the annual report can be used to reduce monitoring costs. The separation between ownership and control causes agency cost of the conflict of interests between managers and shareholders. Singhvi and Desai (1971) in Widowati (2009) supports the evidence that there is positive among the large number of ownership on the level of disclosure.

In accordance with the above mentioned that the factors such as firm characteristic (size, leverage, ownership concentration), firm financial performance (ebitda margin) and country difference (legal system of home country and secrecy versus transparency) are expected influencing the practice of intangible assets voluntary disclosures in companies in the telecommunications industry in South-east Asia and Australia.

Therefore, the research question of this research is what the factors influencing the intangible asset disclosure are.

1.3 Research Objective

According to the problem, the purpose of this study are as follows :

1. To analyse the influence of firm size on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.
2. To analyse the influence of leverage on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.
3. To analyse the influence of ownership concentration on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.
4. To analyse the influence of EBITDA margin on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.
5. To analyse the influence of legal system of home country on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.
6. To analyse the influence of secrecy versus tranparency accounting value on intangible aset disclosure practice of companies in South-east Asia and Australia Telecommunication Industry.

1.4 Contribution of the Research

The contribution of the study are as follows :

1. It responds to the call for further survey research that focuses on the cross cultural single industry of intangible asset voluntary disclosure.
2. To give contribution to accountings development, especially about intangible asset disclosure in the telecommunication industry in South-east Asia and Australia.

1.5 Research Outline

Chapter I explain about the main issue of this study that consist of research background, research question, research objectives and purposes, and research outline. Then Chapter II explain literature review. Based on literature review, researcher will establish conceptual framework, and then formulate the research hypotheses. Chapter III explain research design, population, sample and sampling, research variable and variable operational definition, data collect procedur, and analysis method. Chapter IV explain description of research object, quantitative analysis, result interpretation, and argumentation of research results. Then the last chapter, chapter V consist of conclusion, limitation of research and suggestion.

CHAPTER II

LITERATURE REVIEW

2.1 Grand Theory

This study explores factors influencing intangible asset disclosure. Factors examined in this study include : firm size, leverage, ownership concentration, EBITDA margin, legal system of country, and secrecy accounting value.

Theories taken to explain factors that will be examined in this study are agency theory, signalling theory and stakeholder theory.

2.1.1 Agency Theory

Agency relationship according to Jensen and Meckling (1976) is a contract under principal and agent. The principal engage the agent to perform some service on their behalf which involves delegating some decision making authority to the agent. In the company, shareholders as principal enter a contract to maximize her welfare by increasing profitability. Manager as the agent is motivated to maximize the economic and psychological needs, such as obtaining investment, loans, and compensation contracts. These relationships lead to agency costs caused by conflict of interest between principal and agent.

Jensen and Meckling (1976) argued that agency costs generated by the managers. Therefore, they are motivated to provide information voluntarily in order to reduce these agency costs.

Agency costs increase with increase of external capital which is likely to be higher in larger companies, in consequence, agency theory can explain the positive relationship between firm size and levels of disclosure (Widowati, 2009).

Agency theory is taken to explain relationship between ownership concentration and level of disclosure. Agency theory suggests that where there is a separation of ownership and control of a firm, the potential for agency costs arises due to conflicts of interest between the two contracting parties. Subsequently, the potential for conflicts between principal and agent is greater for companies whose share ownership is widely-held than in more closely-held companies.

Agency theory in the other hand, is taken to explain relationship between leverage and level of disclosure. Based on agency theory, a corporation with high leverage has an incentive to disclose more information. Since creditors can price protect themselves via restrictive debt covenants, managers have incentives to increase disclosures to reduce agency costs (Kang, 2006).

2.1.2 Signalling Theory

Signalling theory assumes that firms with superior performance (or good companies) use financial information to send signals to the market (Spence, 1973). The basic assumption of the signaling theory is information asymmetry problems that occur in the market. This theory shows how asymmetric information can be reduced by a party who has more information by sending a signal to other parties.

Signalling is a common symptom that can be applied to each market with asymmetric information (Widowati, 2009).

Various studies have shown that companies with an unfavorable financial information such as high leverage will give a signal to the market in the form of voluntary disclosure of information, including information about its intangible asset (Gerpott et al., 2008). Contrary, Oliveira et al. (2006) suggest that firms with a lower leverage might this signal via a favorable financial structure higher intangible asset disclosure quality.

2.1.3 Stakeholder Theory

Definition of stakeholder according to Freeman (1983) is “groups and individuals who benefit from or are harmed by, and whose rights are violated or respected by, corporate actions”. Stakeholder theory states that entire stakeholders have a right to be given information about the company's activities that affect them.

Stakeholders considered the party that affects or is affected by the company. The main role of company management is to assess the importance of meeting the demand of stakeholders in order to achieve corporate strategic objectives. When the degree of stakeholder power increases, the importance of meeting stakeholder demands increase in the same way, some of these request forms may be related to the provision of information on company activities (Ivada,2009).

Stakeholder Theory on the other hand, supports the notion that low concentration of ownership indicates the existence of a more diverse group of

stakeholders of the company, and subsequently, the company has more incentives to disclose information to respond to different perspectives of different stakeholders (Kang, 2006).

2.1.4 Intangible Asset

In Indonesia, in line with International Accounting Standard (IAS) 38, Intangible Asset, the definition of intangible asset under Indonesia Accounting Standard Statement (PSAK) 19 on Intangible Assets paragraph 08 is as follows:

Intangible assets are non-monetary assets that can be identified and has no physical form and held for use in produce or deliver goods or services, leased to other parties, or for administrative purposes (IAI, 2000).

An element called intangible assets when the definition of intangible assets as specified by paragraph 10 of SFAS 19 "identified, the control of resources and the future economic benefits" (IAI, 2000) is met.

PSAK 19 paragraph 85 explains that a group of intangible assets is a set of assets that it characteristic and use in similar operations. Examples of intangible assets are: (a) brand name, (b) computer software, (c) licensing and franchising; (d) copyright, patent and other intellectual property rights, (e) recipes, formulas, models, design, and prototype, and (f) intangible asset under development.

The Work Group "Accounting and Reporting of Intangible Assets" of the Deutsche Schmalenbach Gesellschaft fu'r Betriebswirtschaft eV (DSG) in Gerpott et al (2008) developed intangible asset to seven general intangible classes. According to Gerpott et al (2008) taking into account the peculiarities of the

telecommunications sector, which was chosen as the study's focal industry, the seven intangible categories can be profiled as follows:

- 1) Human capital. This category highlights the employee-based value drivers of a firm. It reflects the inherent knowledge and skills of the employees, but also entails a firm's culture and working climate. Operational human capital indicators include company and job tenure structures of a firm's employees, employee turnover rates, and job satisfaction levels. Frequently, special knowledge and skills required to design and operate complex networks are found to be important intangible assets to telecommunications firms.
- 2) Customer capital. Customer capital consists of market-related variables such as a firm's current customer base, market share, customer satisfaction or brand strength. For TNOs, long-term relationships to contractually or emotionally bonded customers or both are among their key intangibles.
- 3) Supplier capital. This category relates to the procurement processes and outcomes of a company. Supplier capital indicators include statements on radio license allocations or key suppliers. Radio spectrum licenses are particularly important intangible assets for mobile network operators (MNOs) since their number is very limited due to technical constraints. MNOs frequently tend to overpay in order to obtain radio spectrum licenses if they are allocated via auctions.
- 4) Process capital. This intangible asset category focuses on the level of sophistication of a firm's internal work sequences such as its quality management. Pertinent indicators include information on a firm's sales network, planning and maintenance, or complaint management processes.
- 5) Innovation capital. Innovation capital deals with a company's R&D capitalization as reflected in a firm's number and quality of patents or other intellectual property rights. Further, absolute and relative R&D expenditures, patent portfolio structure variables, or the ratio of sales generated with new products introduced within the last x years to total sales are common innovation capital proxies.
- 6) Location capital. This category deals with advantages associated with the spatial location of the company. It includes valuable transport routes or a low geographical distance to universities with excellent graduates. For TNOs, location advantages often arise from the possibility of exclusively offering telecommunications services in economically highly attractive places (e.g. airports, shopping centers).
- 7) Investor capital. This category deals with assets improving a firm's position on international equity and/or debt markets. Investor capital information examples include a company's (credit) rating, shareholder structure (e.g. positions of private and institutional investors), systematic

risk, or the mere number of investor relations roadshows/analyst meetings during a reporting period.

There are three categories of framework of intangible asset that is often used by several researchers. The three categories include structural capital, relational capital, and human capital. The three categories have been used in Oliveira et al. (2006); Bozzolan et al. (2003), and Widowati (2009) research.

Each component in the category of intangible assets described in more detail as follows (Widowati, 2009):

1. Structural capital : is components that reflects the company's ability that derived from the system, process, structural, culture, strategy, policy, and the ability to innovate. Components in the category of structural capital are management philosophy, corporate culture, management processes, information system, network system, R&D activities, patents, copyright, dan trademark.
2. Relational Capital : is component that reflects the company's ability that derived from relationship with extern parties. Component of relational capital are : brands and perception of thr firm's product and service, customers, customers lyalty, portfolio order, company image, distribution chanel and structure, business collaboration contract, agreement and favorable contracts, suppliers, competitors, investors, community involvement, environmental activities, dan financial entities.
3. Human capital : human capital shows employee competency in success the companies. Human capital include employee, know how and experince, education, training, incentive and remunation, initiative, motivation, and dedication, teamwork capacitty and spirit, flexibility, productivity, occupational health and safety.

2.1.5 Intangible Asset Disclosure Factors

This study examines factors influencing intangible asset disclosure practices by the companies, which are explained below.

2.1.5.1 Firm Size

Agency theory is taken to explain the positive relationship between firm size and disclosure level. Jensen and Meckling (1976) in Widowati (2009) explains that the agency costs increases when the proportion of external capital increased, which is likely to be higher for large companies. The use of external capital is likely to increase for large companies. Therefore, agency theory predicts a positive influence between firm size and level of disclosure.

2.1.5.2 Leverage

Agency theory explains association between leverage and intangible asset disclosure. According to Kang (2006), corporations with high debt are generally under greater scrutiny by creditors to ensure that they are not violating debt covenants, and consequently, this scrutiny would result in corporations disclosing more comprehensive information on different corporate items especially those relating to debt covenants. Consequently, companies with high levels of leverage is likely to disclose more information voluntarily, including information on intangible assets in order to reduce agency costs.

2.1.5.3 Ownership Concentration

Raffournier (1995) in Widowati (2009) suggest that the agency plays an important role in the policy of disclosure made by the company, because the annual report can be used to reduce monitoring costs. The separation between ownership and control causes agency cost of the conflict of interests between managers and stockholders. Singhvi and Desai (1971) in Widowati (2009)

supports the evidence that there is positive among the large number of ownership on the level of disclosure.

2.1.5.4 EBITDA Margin

According to Gerpott et al (2008), higher EBITDA margins are indicative of higher levels of operational efficiency. Intangible assets such as highly skilled employees or sophisticated organizational processes contribute to achieving a high level of efficiency.

2.1.5.5 Legal System of Home Country

According to Radebaugh and Gray (1997), corporate accounting and information disclosure practices are influenced by a variety of economic, social, and political factors. The environmental influences are include the nature of legal system, and the nature of accounting regulation.

Regional cultural differences can shape intangible asset disclosure, at least for specific intangible asset categories. For instance, a less (more) individualistic cultural heritage might encourage more extensive human capital reporting. Similarly, disclosure patterns may be affected by a country's accounting culture, which, in turn, either stems from a common or code law context (Gerpott et al., 2008).

The legal system is also important in determining the extent to which company law governs the regulation of accounting. In countries with a tradition of codified Roman law (or civil codes), accounting regulation tend to be detailed and comprehensive (Radebaugh and Gray, 1997).

2.1.5.6 Secrecy Accounting Value

Hofstede (1980) in Radebaugh and Gray (1997) grouping countries into culture areas, on the basis of their scores on the Hofstede's four value dimensions, using cluster analysis and taking into account geographical and historical factors. Four value dimensions initially identified by Hofstede are individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, and masculinity versus femininity. Table 2.1 shows the countries within each of the identified culture areas and any identifiable subgroups of countries within each group.

Gray (1988) theorised connections between Hofstede's (1980) cultural values and accounting values. Gray (1988) developed a model to explain the association between Hofstede's cultural dimensions and accounting sub-cultural values, and developed hypotheses on their association. Gray's model made a notable contribution to explain the impact of Hofstede's cultural values on the measurement and disclosure dimensions of accounting systems in different countries (Mir et al., 2009). Gray's (1997) accounting values included professionalism versus statutory control, uniformity versus flexibility, conservatism versus optimism, and secrecy versus transparency. This study highlights the last accounting value by Gray (1997), which is secrecy versus transparency. Based on Mir et al. (2009), intangible asset information disclosure in annual report may depend upon the level of secrecy in a culture.

According to Gray's (1997) accounting values, "secrecy versus transparency" refers to a preference for confidentiality and the restriction of

disclosing information about a company only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

Table 2.1
Culture Areas

<u>More-developed Latin</u>	<u>Less-developed Latin</u>	<u>More-developed Asian</u>
Belgium	Columbia	Japan
France	Ecuador	
Argentina	Mexico	
Brazil	Venezuela	
Spain	Costa Rica	
Italy	Chile	
	Guatemala	
<u>Less-developed Asian</u>	Panama	<u>African</u>
Indonesia	Peru	East Africa
Pakistan	Portugal	West Africa
Thailand	Salvador	
Taiwan	Uruguay	
India		
Malaysia	<u>Near Eastern</u>	<u>Asian-colonial</u>
Philippines	Arab countries	Hong Kong
	Greece	Singapore
	Iran	
	Turkey	
	Yugoslavia	
<u>Germanic</u>	<u>Anglo</u>	<u>Nordic</u>
Austria	Australia	Denmark
Israel	Canada	Finland
Germany	Ireland	Netherland
Switzerland	New Zealand	Norway
	United Kingdom	Sweden
	United States	
	South Africa	

Source : G. Hofstede, *Culture Consequences* (Beverly Hills : Sage, 1980), p.336
in Radebaugh and Gray (1997)

2.2 Prior Research

Research on voluntary disclosure of intangible asset has flourished recently. One of them is Kang (2006)'s research on top 200 emerging market companies which was obtained from *Business Week*, 14th July 2003 issue. Kang (2006)'s research objective is to examine factors associated with the voluntary disclosure practice on those companies. The result is the extent of IA disclosure is associated with leverage, adoption of IFRS/US GAAP, industry type, price-to-book ratio, and country-specific factors such as economic policy and legal system. On the other hand, firm size and ownership concentration are not found to be significant.

Oliveira et al. (2006)'s research on 56 listed companies at 31 December 2003 on the Portuguese Stock Exchange found that the voluntary reporting of intangibles is influenced significantly by size, ownership concentration, type of auditor, industry and listing status.

Widowati (2009) replicated Oliveira et al. (2006)'s research on 43 listed companies at 31 December 2005, 2006 and 2007 on Indonesia Stock Exchange. Widowati (2009) found that firm size and industry type influence intangible asset reporting practices. In Contrast with Oliveira et al. (2006), ownership concentration, leverage, profitability, and auditor type did not influence intangible asset reporting.

Gerpott et al. (2008) in the other hand, conducted research on single industry to detect industry-specific patterns of intangible asset disclosure in an

international sample of 29 telecommunications network operators (TNOs) at June 2003. Gerpott et al. (2008) found that intangible asset disclosures were often limited to small pieces of qualitative information. Intangible asset disclosure varies significantly by the home region of the TNO, with European TNOs displaying higher quality levels than their American counterparts, and intangible asset disclosure measures were not significantly related to TNOs' financial performance criteria. Summary of prior research is shown in table 2.2.

There are several differences of the current study between prior research. First, beside including firm specific characteristic, the study explore firm financial performance and country difference using Gray (1988)'s theory as independent variable. Second, the study focuses on single industry cross country in South-East Asia and Australia coverage. Commonly, research on international disclosure of intangible asset or intellectual capital mostly conducted in Europe, or in single country cross industry. However, countries in South-East Asia region based on World Bank data is include in emerging countries, thus the study explores intangible asset disclosure in emerging countries, comparing with Australia on the other hand. The difference, at last, are proxies to measure independent variable, sample size and more up to date time period. Therefore, these study is expected to complement the prior research result.

2.3 Hypothesis Development

Based on problem statement, the hypotheses in this study are explained below.

2.3.1 Firm Size

Based on agency theory, larger firm size is more likely to have greater agency problem than smaller firm size. To reduce those agency problem, manager as agent discloses more information to shareholders as principal. According to Widowati (2009), Agency costs increase when external capital increased which is likely to be higher in larger companies, thus agency theory can explain the positive relationship between firm size and level of disclosure

Prior work that detected significantly positive relations between firm size and intangible asset disclosure are Gerpott et al (2008) in Europe region, and Widowati (2009) in Indonesia, with the exception of Kang (2006) who observed insignificant associations.

Based on agency theory above, the hypothesis developed to examine association between firm size and intangible asset disclosure is following:

H1 : There is a positive association between firm size and intangible asset voluntary disclosure index.

2.3.2 Leverage

According to Agency Theory, a corporation with high leverage has an incentive to disclose more information. Since creditors can price protect themselves via restrictive debt covenants, managers have incentives to increase disclosures to reduce agency costs (Kang, 2006).

Signalling theory suggests that a firm with a relatively low leverage has incentive to send signals to the market about its financial structure – implying higher voluntary disclosures (Oliveira et al, 2006).

The empirical evidence of the effect of leverage on intangible asset disclosure is mixed. Gerpott et al (2008) find a significantly positive relationship, in the other hand Kang (2006) find a significantly negative relationship, and Widowati (2009) find no such significant association.

- Based on the rationale that a higher leverage and a resulting higher financial risk lead to increased monitoring interests of the capital market in a corporation, it can be expected that highly leveraged companies are motivated to disclose more intangible asset information as one means to reduce their cost of capital (Gerpott et al., 2008). The following hypothesis is thus developed:

H2 : There is a positive association between leverage and intangible asset voluntary disclosure index.

2.3.3 Ownership Concentration

Agency theory suggests that where there is a separation of ownership and control of a firm, the potential for agency costs arises due to conflicts of interest between the two contracting parties. Subsequently, the potential for conflicts between principal and agent is greater for companies whose share ownership is widely-held than in more closely-held companies (Fama and Jensen, 1983 in Kang (2006).

In the same way, stakeholder theory supports the notion that low concentration of ownership indicates the existence of a more diverse group of stakeholders of the company, and subsequently, the company has more incentives to disclose information to respond to different perspectives of different stakeholders (Cormier et al, 2005 in Kang, 2006).

Singhvi and Desai (1971) in Widowati (2009) suggests a reason why the distribution of ownership had significant impact on the quality of disclosure in annual reports. First, firms with large number of shareholders is likely to be public concern, as to pressure from stockholders and analysts, then the disclosures be done better. Second, firms with a large number of shareholders may reveal greater information to minimize the tremendous pressure by regulatory agencies. Third, to meet the demand marketabilitas in securities of companies, the company with a large number of shareholders is likely to disclose more information. Last, with the increasing number of shareholders, managers are increasingly aware companies to disclose more information as a form of social responsibility.

Prior work that detected significantly positive relations between firm size and intangible asset disclosure is Oliveira et al (2006). In other hand, Kang (2006) and Widowati (2009) find it not significant.

The following hypothesis is thus developed:

H3 : There is a negative association between ownership concentration and intangible asset voluntary disclosure index.

2.3.4 EBITDA Margin

Agency theory posits that disclosure works as a mechanism to control a manager's performance, that managers are stimulated to disclose information voluntarily to maintain their positions and compensation arrangements. Consistent with signalling theory, highly profitable companies are expected to be more likely to disclose good news to avoid undervaluation of their shares (Oliveira et al, 2006).

However, Gerpott et al (2008) and Widowati (2009) detected insignificant association between EBITDA margin and profitability and intangible asset disclosure.

Higher EBITDA margins are indicative of higher levels of operational efficiency. Intangible assets such as highly skilled employees or sophisticated organizational processes contribute to achieving a high level of efficiency (Gerpott et al, 2008). These companies would want to inform their stakeholders of such potential by voluntarily disclosing intangible asset information in their annual reports. The following hypothesis is following:

H4: There is a positive association between EBITDA margin and intangible asset voluntary disclosure index

2.3.5 Legal System of Home Country

It has been argued that generally, common law countries have a greater dispersion of corporate ownership and they also offer better legal protection and therefore have lower risks associated with legal systems. There is, however, an

opposing view – companies originating from those countries with higher degree of risks may try to negate the perceived problems by engaging in voluntary disclosure practices (Kang, 2006).

Common law countries can be characterized by an accounting culture emphasizing public disclosure to compensate for missing close ties. In contrast, in countries with code law systems the accounting culture might favor a close adherence to a set of accounting standards implying a low intangible asset disclosure, since intangible reporting is still not subjected to accounting standards in most cases (Gerpott et al, 2008).

Prior works result, Jaggie and Low (2000) indicate that firms from common law countries are associated with higher financial disclosures compared to firms from code law countries. In contrast, Gerpott et al (2008) found that firm from code law based countries disclosed more intangible asset than firm originating from common law based countries.

Subsequently, for the purpose of the current study, it is hypothesised that:

H5 : There is a association between legal system of home country and intangible asset voluntary disclosure index.

2.3.6 Secrecy Accounting Value

Secrecy related to the disclosure dimensions (Radebaugh and Gray, 1997). Perera (1989) in Mir et al (2009) argue that the degree of secrecy preferred in an accounting sub-culture would influence the extent of the information disclosed in accounting reports.

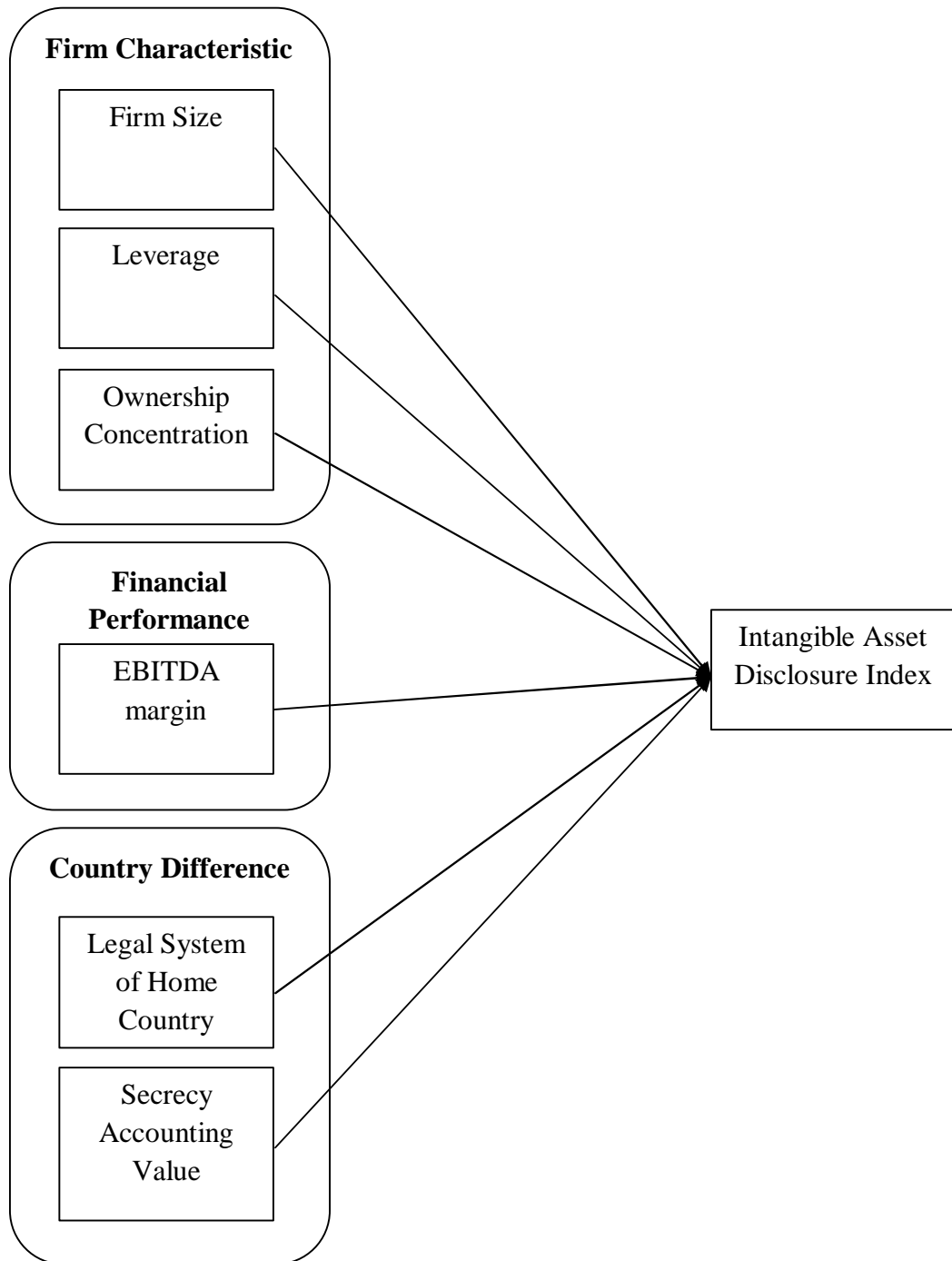
Intangible asset disclosure is expected to be lower in companies annual report when its country include in culture areas which have high secrecy based on Gray's (1998) theory. Subsequently, for the purpose of the current study, it is hypothesised that:

H6 : Companies in secrecy accounting value countries will disclose less information about its intangible asset than other countries.

2.4 Conceptual Framework

Based on the development of the hypothesis above, the conceptual framework of this study is illustrated in Figure 2.1. Figure 2.1 presents the disclosure of intangible assets as measured by the index is treated as the dependent variable, the variable of interest researchers. While the independent variables are divided into three group. First independent variables related to firm characteristic. Second, independent variable related to firm financial performance, and last, independent variables related to country difference.

Figure 2.1
Factors Influencing Intangible Asset Disclosure



CHAPTER III

RESEARCH METHOD

This research method explain the research design, population and research sample, research variables and operational definitions, data collection procedures, and data analysis method.

3.1 Research Design

Population in this study are telecommunication companies in South East Asia and Australia. According to world bank data, countries in South East Asia are emerging countries. Consequently, this study also explore intangible asset disclosure practices in emerging countries, furthermore this study will compare intangible asset practices in South East Asia with Australia. This focus on one single industry follows the prior work (Gerpott et al, 2008) that identified the need for industry-focused study on the level of intangible asset disclosure. Specifically, there is evidence to suggest that the competitive prospect of firms operating on *telecommunication services markets* are strongly affected by intangible asset (Gerpott et al, 2008).

Sampling in this study take purposive sampling method, which is a type of random sample selection of information obtained by using certain considerations.

Requirement that used in this study is telecommunication companies which share Annual Report consistently via website in 2007 – 2009, whereas Annual Report publish globally through the internet. Annual reports are

downloaded from website due to not all population companies are listed on stock exchange.

Data used in this study is Annual Report. The study used Annual Reports because they represent the concerns and interests of corporations in a comprehensive and compact manner. Further, they are regularly produced and offer an opportunity for a comparative analysis of management attitudes and policies across reporting periods (Abeysekera and Guthrie, 2005).

3.2 Research Variables and Operational Definition

3.2.1 Dependent Variable

Based on Widowati (2009), The dependent variable in this study is voluntary disclosure index of intangible assets, which consist of 32 items. These measurements using a scoring index. Scoring index range is 0-2, score 1 if the item is reported in the qualitative form, score 2 for the items reported in quantitative form, while 0 if not reported. Giving a higher score on the form of quantitative disclosure because the form of quantitative disclosures have number for each type of disclosure. This categories use categories that have been established by Oliveira et al. (2006). The highest value if the companies disclose all categories of intangible asset at 64.

Assessment of the dependent variable in this study uses an index that is formulated as follows:

$$\text{Intangible Asset Disclosure Index (IADI)} = \frac{\sum s_{ij}}{m} \quad (3.1)$$

d_i : intangible asset voluntary disclosure. Where $d_i = 1$ for disclosure in qualitative form, $d_i = 2$ if disclose in quantitative form, and $d_i = 0$ if not disclosing.

m : maximum value of the items disclosed (64)

3.2.2 Independent Variables

The independent variables of this research are Firm size, Leverage, Ownership concentration, EBITDA margin, Legal system of home country, and Secrecy accounting value.

3.2.2.1 Firm Size

Firm size is the most commonly examined organizational correlate of corporate intangible disclosure (Gerpott et al., 2008). Several studies using firm size as an independent variable because the size of the company revealed that the larger the company, the greater the firms will make a voluntary disclosure (Oliveira *et al.*, 2006) in Widowati (2009).

There are alternative proxies to measure firm size. These include total assets (Bozzolan et al., 2003; Oliviera et al., 2006), sales (Bozzolan et al., 2003), turnover (Gerpott et al., 2008), market capitalization (Widowati, 2009), and number of employees (Gerpott et al., 2008).

The present study measured size by telecommunication companies natural log total revenue (Ln Total Revenue). Ln use in this measurement to avoid large value differences with the value of other independent variables. All currencies of company sample were converted to US Dollar using the exchange rate at the

balance sheet date. Information about the exchange rate was downloaded from world bank data website.

3.2.2.2 Leverage

Firm leverage shows firm ability to cover its current liabilities (Oliveira *et al.*, 2006). Leverage in this study is measured as debt to equity ratio. Total debt or total liabilities, and total equity are taken from balance sheet of sample companies in years 2007, 2008, 2009. Leverage is measured as follows :

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Equity}} \quad (3.2)$$

3.2.2.3 Ownership concentration

Ownership is the number of shares of companies that spread and owned by several shareholders (Oliveira *et al.*, 2006). Kang (2006) said that data for ownership concentration was not easy to find. The best information available regarding ownership concentration was the shareholding percentage of each company by the top shareholder. Subsequently, ownership concentration was defined as the percentage of ordinary shares held by others than the top shareholder, and it was calculated from the available information on top shareholdings.

In this study, ownership is measured by ownership percentage of shares owned by 3 highest shareholders (Oliveira *et al.*, 2006). Data of ownership concentration could be seen in annual report in years 2007, 2008, and 2009 under 'Shareholders Information' part.

3.2.2.4 EBITDA Margin

EBITDA margin is computed by dividing a firm's earnings before interest, taxes, depreciation, and amortization (EBITDA) by total revenue. The variable expresses the degree to which the revenue net of operating expenses covers the cost of assets and the financial claims of various debt and equity owners (Gerpott et al., 2008). EBITDA margin could be seen on annual report under 'financial highlight' provided by management of companies, or compute ratio earning before interest, taxes, depreciation and amortization to total revenue. Those data could be seen on income statement sample companies in years ended 2007, 2008 and 2009.

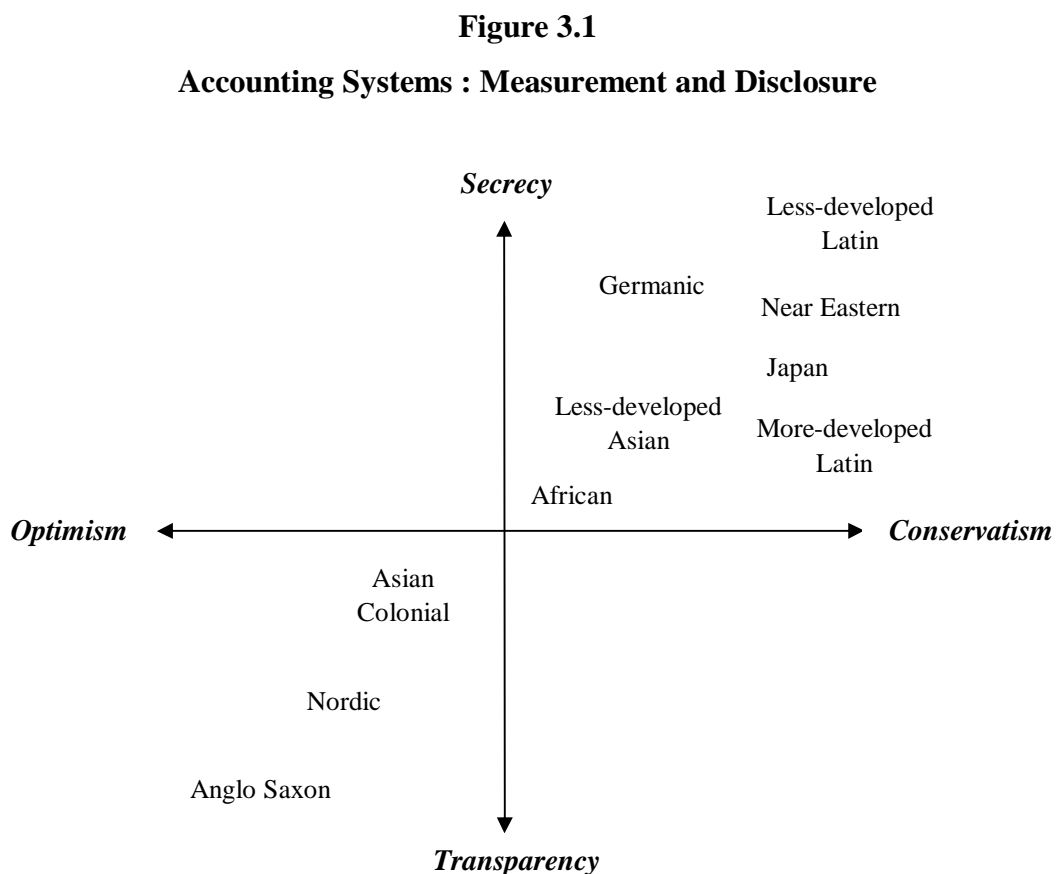
3.2.2.5 Legal System of Home Country

According to Gerpott et al (2008), in common law systems accounting rules have been developed largely in the private sector. They are based on the assumption that corporate stakeholders interact with a firm mainly through arm's-length market transactions without corporate value insights stemming from close ties. Therefore, common law countries can be characterized by an accounting culture emphasizing public disclosure to compensate for missing close ties. In contrast, in countries with code law systems the accounting culture might favor a close adherence to a set of accounting standards implying a low IDQ, since intangible reporting is still not subjected to accounting standards in most cases. It is said by Hope (2003) in Gerpott et al (2008) that "it is not obvious whether legal systems dominate national culture or whether they are complements".

The type of legal system was measured as a binary dummy variable with common law countries coded as 1 and other as 0.

3.2.2.6 Secrecy Accounting Value

Gray (1988) in Radebaugh and Gray (1997) combined Gray's (1988) accounting values and the classification of Hofstede (1980)'s culture areas. Based on Gray's (1998) accounting value and international classification as shown in figure 3.1, the type of secrecy accounting value was measured as a binary dummy variable with secrecy culture areas coded as 1 and other as 0.



Source : S.J Gray "Toward a Theory of Cultural Influence on The Development of Accounting System Internationally" *Abacus* (March 1998).pp.13 in Radebaugh and Gray (1997).

3.3 Data Collecting Method

Data used in this study is secondary data, which is annual report of telecommunication companies in South East Asia and Australia, in years 2007 – 2009.

The information of telecommunication company spread in South East Asia and Australia was searched in stock exchange of each country (such as www.asx.co.au, www.idx.com, www.klse.com.my, www.pse.com.ph, www.sgx.com), or through the search engine (such as www.google.com), and the websites that provide information about telecommunication company and its website link in various country, such as www.ostamyy.com or www.alloexpat.com. Then, the annual report is downloaded from telecommunication company website.

3.4 Data Analysis Method

Method of data analysis in this study is descriptive statistics analysis, classical assumptions test, and multiple linear regression analysis.

3.4.1 Descriptive Statistics Analysis

Descriptive statistics analysis is conducted to determine intangible asset disclosure index, firm size, leverage, ownership concentration, EBITDA margin, legal system of home country, and secrecy accounting value of telecommunication company in South East Asia and Australia. The measurement used in this study are mean, deviation standard, min value, and max value.

3.4.2 Classical Assumption Test

According to Kiswara (2010), a multiple regression model have to meet the classic assumptions in order to become a good estimation equation models, which are (1) Normal distribution of data known through normality testing, (2) Non Multicollinearity known through Multicollinearity testing, (3) Non heteroscedasticity, and (4) Non autocorrelation.

3.4.2.1 Normality Testing

Normality testing used to test whether the data of dependent variable, independent, or both have normal distribution (Kiswara, 2010). According to Ghozali (2007), the purpose of normality testing is to test whether in the regression model, confounding variables or residual variable have normal distribution. One ways to detect whether residual have normal distribution or not is statistical test.

Simple statistical testing conduct by looking at the value of kurtosis and skewness of the residuals. The value of z statistics for skewness is calculated using the formula below:

$$z_{skewness} = \frac{\sum_{i=1}^n \frac{(e_i - \bar{e})^3}{n \cdot s^3}}{s^3} \quad (3.3)$$

While the value of z kurtosis can be calculated using the formula:

$$z_{kurtosis} = \frac{\sum_{i=1}^n \frac{(e_i - \bar{e})^4}{n \cdot s^4} - 3}{s^4} \quad (3.4)$$

Note:

N = number of samples

If the value Z count > Z table, then the distribution is not normal.

3.4.2.2 Multicollinearity Testing

The purpose of multicollinearity testing is to test whether in regression model there is a correlation between independent variable (Ghozali, 2007). According to Kiswara (2010), that correlation can be detected based on tolerance value and VIF (Variance Inflation Factor), if tolerance approach 1 value and VIF are in the surrounding, then it is non multikol.

3.4.2.3 Heteroscedasticity Testing

The purpose of the heteroscedasticity testing is to test whether there is residuals inequality in the regression model at one observation to another observation. If the residual variance from one observation to the other observation remain, it is called Homoscedasticity and if different, it is called Heteroscedasticity. Heteroscedasticity is detected by using the Park test. According to Ghozali (2007), Park argued method that variance (s^2) is a function of independent variables expressed in equation as follows:

$$s^2_i = aX_i^\beta \quad (3.5)$$

These equations are translated linear in equation logarithmic form so that it becomes:

$$\text{Ln}s^2_i = a + \beta \text{Ln}X_i + v_i \quad (3.6)$$

Because s^2_i is not known, it can be estimated by using U_i residuals as a proxy, so the equation becomes:

$$\text{Ln}U_i^2 = a + \beta \text{Ln}X_i + v_i \quad (3.7)$$

3.4.2.4 Autocorrelation Testing

The purpose of autocorrelation testing is to test whether in linear regression model there is correlation between confounding error in t period and confounding error in t-1 period (before). If there is a correlation, it is called that there is an autocorrelation problem. Autocorrelation arises due to successive observations over time related to each other. This problem arises due to the residuals (confounding errors) are not independent from one observation to another observation. It is often found in time series data due to "interference" in the same individual / group in the next period.

According to Gujarati (2003) in Widowati (2009) regression that affected autocorrelation problem, one of the corrective actions is using data transformation. If the d value of Durbin-Watson, the technique that can be used is Theil – Nagar technique. Here are the steps to improve the autocorrelation :

✍ Value of p (one estimation):

$$\hat{p} = \frac{N^2(1-d^2/2) + k^2}{N^2 - k^2} \quad (3.8)$$

✍ Transformation for the first data:

$$Y = Y - \hat{p} \text{Lag} Y \quad \text{and} \quad (3.9)$$

$$X = X - \hat{p} \text{Lag} X \quad (3.10)$$

✍ Transformation for the second data and the next data

$$Y = Y - (\hat{p} \text{Lag} Y) \quad \text{and} \quad (3.11)$$

$$X = X - (\hat{p} \text{Lag} X) \quad (3.12)$$

✍ If intercept element is conducted in all steps above, in fact it is an estimation of $\beta_0(1-p^{\wedge})$

3.4.3 Multiple Liner Regression Model

The purpose of multiple linier regression analysis is to explore association between several independent variables and dependent variable. The regression equation in this study is following :

$$IADI = a + \beta_1FS + \beta_2Lev + \beta_3OC + \beta_4EBITDA + \beta_5LOC + \beta_6SAV + ? \quad (3.13)$$

Note :

IADI	:	Intangible Asset Disclosure Index
FS	:	Firm Size
Lev	:	Leverage
OC	:	Ownership Concentration
EBITDA	:	EBITDA margin
LOC	:	Legal System of Home Country
SAV	:	Secrecy Accounting Value
a	:	Constanta
β	:	Regression coefficient
?	:	Error

3.4.4 Stastistical Test

This model determine the best level of accuracy in regression analysis, in this case is shown by the Adjusted R^2 . Adjusted R^2 value is used to determine the

percentage of independent variables influence to the dependent variable. It will be known how much the dependent variable will be able to be explained by the independent variable, while the rest is explained by the other reasons outside the model.

a) Simultaneous Significance Testing (F Statistical Test)

To determine whether the independent variables collectively have the same effect on the dependent variable, therefore simultaneous test by using the F test should be done, with the following procedures:

$H_0 : b_1 = b_2 = 0$, meaning, collectively, there is influence between the independent variable on the dependent variable.

$H_0 : b_1 \neq b_2 \neq 0$, meaning, collectively, there is no influence of independent variables on the dependent variable.

With a 5% significance level and $df = nk$, F_{table} values obtained. Then F_{table} value compared with the F_{count} value that obtained. By comparing these two values, its effect will be able to determine, which is able to determine acceptance or rejection of the hypothesis, with the following criteria:

? When the $F_{count} > F_{table}$; H_a is received

? When the $F_{count} < F_{table}$; H_a is rejected

b) Individual Parameter Significance Tests (t Statistic Test)

The purpose of t Statistical Test is to see how far the influence of explanatory variables (independent) individually explain the variation of

dependent variable. The desired Null hypothesis (H_0) is whether a parameter (β_i) is equal to zero, or :

$H_0: \beta_i = 0$, meaning no effect between the independent variable on the dependent variable.

$H_0: \beta_i \neq 0$, meaning that there is effect between the independent variable on the dependent variable.

With a 5% significance level and $df = nk$, t_{table} values obtained. Then t_{table} value compared with the t_{count} value that obtained. By comparing these two values, its effect will be able to determine, which is able to determine acceptance or rejection of the hypothesis, with the following criteria:

? When the $t_{count} > t_{table}$; H_a is received

? When the $t_{count} < F_{table}$; H_a is rejected