Intellectual Capital Measurement and Disclosure in Indonesia: a literature review

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Abstract

Recent global development in the economy has led many worldwide stakeholders to put more concern on intellectual capital as an intangible asset. Prior research had proved intellectual capital as a pivotal factor in improving company's performance. In accordance with intellectual capital measurement, Pulics' model in 2004, known as VAIC^{tm} had been considered as the best practice in measuring the performance of intellectual potential. However, there has no agreement been made to justify the VAIC^{tm} model as the best practice in measuring intellectual capital. Furthermore, in accordance with Indonesia's accounting regulation, intellectual capital disclosures are considered as voluntary. There is no specific regulation to determine intellectual capital disclosures as mandatory in the financial report. As results, many companies are not disclosing their intellectual capital elements on their financial report. This issue had made a financial report to become less informative, as the value stated does not represent the actual condition. In contrary, the investors are looking forward to actual disclosure of the financial report to make an effective economic decision. Consequently, this paper aims to elaborate the measurement and disclosure method of intellectual capital potential in Indonesia.

Keywords: Intellectual Capital, VAIC^{tm}, Disclosure, Indonesia

1. Introduction

Intellectual Capital attractiveness as an intangible asset, which has the same priority as tangible assets, has attracted stakeholder's attention. Firstly, there has been growing consideration where Intellectual Capital in the form of knowledge, staff competency, good organizational structure, adequate internal control and high-tech savvy are more valuable in comparison to physical assets such as land, vehicles, buildings and other types of tangible assets. Consecutively, many business entities have started to develop their focus on employees training program, instead of doing business expansion activities such as buying lands or building new factories. Secondly, many investors have putted intellectual capital disclosures to be taken into consideration in the application of investment decision making. Therefore, many listed business entities have started to disclose their Intellectual Capital resources and their efforts on improving Intellectual Capital. Thirdly, in recent global development, Intellectual Capital has become valuable assets. Therefore, it has become a challenge for professional accountant to identify, measure and disclose Intellectual Capital in financial report (Widarjo, 2011). To conclude, it is highly recommended for listed business entities to disclose their Intellectual Capital resources in their annual financial report to support investors in forming their investment decision making.

2. Grounded Theories

Resource-based Theory (RBT)

Resource-based Theory is the advancement of Ricardo's Economic Rent theory and structure-performance-conduct Porter (Barney and Clark 2007). The theory evolved from a strategic question regarding of why a company can surpass other company and having a sustainable superior performance? Companies who are able to build and manage their own resources tend to keep its competitiveness in the future, in contrast to companies who bought their resources from external parties. A collection of unique resources that a company has, can bring sustainable superior performance.

Unique resources in Resource-based Theory is a valuable resource that met the elements of rare, inimitable and non-substitutable. Valuable means can be used for company activities. Rare means belong to certain company only. Inimitable means the resource is well protected from forged indication done by the competitors. Non-substitutable means the resource is only possessed by certain companies only and irreplaceable by other product (Barney, et al. 2001). This kind of resource can bring competitive advantages to the company.

The Resource-based Theory is rapidly improved, in particular the consistency in the imposition of empirical studies over various realm of science. The initial realm of science which developed the Resource-based Theory was strategic management (Spanos and lioukas 2001, Schroeder et al. 2002, Ray, et al. 2004).

Wernerfelt (1984) states that under the perspectives of Resource-based Theory, a company will supreme over business competition and having better financial performance by taking possession, control and use of significant strategic assets, in terms of tangible and intangible assets. Belkaoui (2003) states that a potential strategy to improve the performance of the company is by combining tangible and intangible assets. Resource-based Theory is developing mindset in strategic management theory and business competitive advantage, in particular the company's believing in to achieve excellence needs a superior resource (Solikhah, dkk, 2010). To conclude, under Resource-Based Theory approach, a resource owned by the company will predispose the performance and eventually added the value of the company.

Stakeholder Theory

Stakeholders theory states that every stakeholder have the rights to acquire information regarding company's activities that may affect them. Stakeholders theory is emphasizing the accountability of the company is way superior compare to financial performance or simple economy (Deegan, 2004). Stakeholders theory prioritizes the stakeholders as they are powerful. The stakeholders have become the main reasoning of companies on disclosing/not disclosing an information in financial report (Ulum, dkk, 2008). In particular, the stakeholders have the authority to influence the management in the utilization of the whole resources owned by the company. Value added creation can only be achieved through good governance and the utilization of resources, so the improvement of financial performance and the value of the company is attainable, as it the purpose of stakeholders to intervene the management.

Legitimacy Theory

In accordance to legitimacy theory, organization will continuously find ways to maintain its existence within the limits and norms that apply within societies. Organization tries to ensure their activities will be accepted by external parties (Deegan, 2004). This theory relies on the statement that there is a social contract applies between organization and environment where the business is running. Social contract is a way to describe societies expectation on how an organization should perform their business. This social expectation is unstable, as it keep changing through time. Therefore, this issue expects organization to be more responsive on environment, where they perform the business (Deegan, 2004).

Signaling Theory

Signaling theory indicates that organization will tries to signal in forms of positives information to the potential investors through financial report disclosures (Miller dan Whiting, 2005). Leland dan Pyle (1997) states that signal is an action belongs to previous owner in communicating the information they have to investors. Previous owner has the motivation to reveal private information voluntarily, as they are expecting the information can be considered as a positive signal regarding the organization performance and able to mitigate asymmetry information.

Many researchers discuss on how to measure Intellectual Capital, instead of how the Intellectual Capital is made. In addition, publication in relation to Intellectual capital is rarely found. However, some companies in Scandinavia such as Skandia AFS, Dow Chemicals in United States, Coca Cola and IBM, starts to build a distinct reporting in comparison to traditional reporting which focusing on financial (Sawarjuwono dan Kadir, 2003)

Widarjo (2011) research on Intellectual Capital upon companies who perform Initial Public Offering at Indonesia's stock exchange, known as Bursa Efek Indonesia. The finding reveals that during the initial offering, there were asymmetrical information between the previous owner of the company and the investors, as the previous owner possess a better private information about the company prospect, in contrast to the investors who are about to invest their capital to the company (Hartono, 2006 dalam Widarjo, 2011). To mitigate the asymmetrical information, the previous owner are supposed to communicate the signal regarding the quality of the company offered to the investors. By performing signal analysis send by the previous owner, then investors are supposed to find out the company's future prospectus (Widarjo, 2011).

Moreover, Widarjo (2011) findings indicates that the signal delivered by the company through Intellectual Capital disclosures may reduce asymmetrical information. The more items included in the Intellectual Capital disclosures of company's prospectus, the easier for the investors to discover the company's prospectus and entire performance. Consecutively, investors will have higher appraisal upon the company who disclose their Intellectual Capital resource.

Investors believes that only reputable companies only will dispose to expand Intellectual Capital disclosures. Signaling theory states that only a high-quality company will give adequate signal to the market, so the market is able to differentiate the companies. It is essential to make the signal effective and well received by the investors. The signal should be inimitable by other company (Hartono, 2005 dalam Widarjo, 2011).

According to Widarjo (2011) findings, Intellectual Capital disclosures had positive contribution upon the value of the company after initial public offering. The higher Intellectual Capital disclosures will improve the value of the company. The expansion of Intellectual Capital disclosures will reduce the asymmetrical information between the previous owner of the company and the investors, so it will assist investors in valuing the share price of the company and able to analyze the company effectively, regarding the future prospectus. This finding has implication to policy makers to perform review and evaluation regarding standard regulation on Intellectual Capital disclosures in company's financial report. Current standard is only regulating Intellectual Capital disclosures as a voluntary. The new standard is supposed to put

Intellectual Capital disclosures as a mandatory and supporting the company's financial report. By doing so, the practice of Intellectual Capital disclosures is more comprehensive and well structured. Furthermore, investors will be easier to perform analysis regarding performance and prospectus of the company, so they can make an effective decision making.

Williams (2001) states that voluntary disclosures regarding Intellectual Capital may led investors and other stakeholders to better measure the future ability of the company and reducing their risks perception. The company discloses Intellectual Capital in their financial report to meet the investor needs regarding information and improving the value of the company (Miller dan Whiting, 2005). Positive signal of the organization is expected to receive positive feedback from the market, as it will produce competitive advantage and increasing the value of the company.

In accordance to (Sugiri dan Sumiyana, 2005), Balance Sheet is incomplete in measuring human resource assets. Human resources is not included in the balance sheet as the future service cannot be measured in monetary form, although human resource has already met the definition of an assets (Sugiri dan Sumiyana, 2005). Human resource is referring to Intellectual Capital and categorized as an intangible asset.

The majority of mandatory disclosure is required by accounting profession, regarding physical capital. The recognition of Intellectual Capital as pivotal factors to the company, has made mandatory disclosures in relation to physical capital to become irrelevance for users. This issue raises information gaps in relation to investment decision making. Therefore, standard setter needs to compile guidelines for Intellectual Capital disclosures, to protect users' interest (Suhardjanto dan Wardhani, 2010).

Suhardjanto dan Wardhani (2010) research proves that the level of Intellectual Capital disclosures in Indonesia is still low (in average, 34,5 out of 25 items of Intellectual Capital). It is resulting from company's low awareness upon the significance of Intellectual Capital in creating and maintaining competitive advantage and shareholders value.

3. Measurement of Intellectual Capital

Following Yusuf, et al. (2013), our independent variables are Value Added Intellectual Coefficient (VAICTM) of Pulic (2004) and its components as the proxies of IC.

The following are the formula to measure VAIC™:

- Output (OUT) –Total sales and other revenues
- Input (IN) – Expenses (excluding employee expenses)
- Value Added (VA) – Difference between Output and Input

$$\boxed{VA = OUT - IN}$$

- Human Capital (HC) – Employee Expenses
- Capital Employed (CE) – Available fund (equity, retained earnings)
- Structural Capital (SC) – VA - HC
- Value Added Capital Employed (VACA) – Ratio between VA and CE that represents the contribution of each CE to the organization's value added.

$$\boxed{VACA = VA / CE}$$

- Value Added Human Capital (VAHU) – Ratio between VA and HC that represents the contribution of each Rupiah invested in HC to the organization's value added:

$$\boxed{VAHU = VA / HC}$$

- Structural Capital Value Added (STVA) – Ratio between SC and VA. This ratio measures the amount of SC needed to generate one rupiah of VA and indicates the ability of SC in value creation:

$$\boxed{STVA = SC / VA}$$

- Value Added Intellectual Coefficient (VAIC™) – indicates the intellectual capability of an organization. VAIC™ can also be considered as BPI (Business Performance Indicator).

$$\boxed{VAIC^{\text{TM}} = VACA + VAHU + STVA}$$

HC are employee-related expenses (salaries, employee training and development, and professional fee). HCE is a human capital efficiency coefficient. SC stands for structural capital. SCE is structural capital efficiency coefficient. ICE is intellectual capital efficiency coefficient. CE is the book value of net assets. CEE is capital employed efficiency coefficient, and VAIC is value added intellectual coefficient.

According to Bontis et al (2000), researchers in general identify 3 main characteristics of intellectual capital. There are Human Capital (HC), Structural Capital (SC) and Customer Capital (CC). Firstly, HC is an individual knowledge stock of an organization, represented by the employees. HC is a combination of genetic inheritance, education, experience and attitude of existence and business. Secondly, SC comprises of the entire non-human storehouses of knowledge within organization. Including database, organizational charts, process manuals, strategies, routines and other aspects that contributes in enhancing the value of the company from its material value. Thirdly, CC is an inherent knowledge in marketing channels and customer relationship, where the company elaborates the process through the course of business (Bontis et al., 2000). According to Pulic (2001), intellectual capital is regard as employees, organization and its ability to create value-added. In general, intellectual capital consisting of 3 main aspects, as follows.

1. Human Capital (HC)

   Human Capital is a lifeblood of Intellectual Capital, consisting of innovation and improvement. However, it is hardly measured (Sawarjuwono dan Kadir, 2003). Human Capital is the source of innovation and improvement, as knowledge, skills and employee's competence are included. Human capital is able to improve as long the company efficiently utilized and developed the knowledge, skills and competency of employees. Therefore, Human Capital is the key resource to develop competitive advantage of the company to survive in dynamic business environment. Having skilled employees, company can improve the performance and ensuring the sustainability of the company. By improving the company's performance is enhancing market perception.

2. Structural Capital (SC)

   Structural Capital is the ability of an organization in meeting the routines process and promotes the employee in providing maximum intellectual and business performance entirely. For instance, company's operational system, manufacturing process, organizational culture and management philosophy (Sawarjuwono dan Kadir, 2003).

3. Relational Capital (RC) atau Customer Capital (CC)

   Relational Capital (RC) is harmonious relationship among association network belongs to the company and its partners. Including suppliers, customers, government and societies. Relational Capital (RC) existence is build up through external aspects of the company and able to enhance the value of the company (Sawarjuwono dan Kadir,2003).

4. Disclosure of Intellectual Capital

Wolk, Dodd, dan Rozycki (2008) define disclosures in broader interpretation. Disclosures in relation to information included in the financial report and supplementary communications, consisting of footnotes, information regarding post event after reporting date, management analysis regarding company's future operation, financial forecasting and other types of information.

Information disclosed in the issuer financial report can be categorized as follows:

1. Mandatory disclosures
2. Voluntary disclosures

Mandatory disclosure is a delivery of information that an issuer needs to disclose, and it is arranged by the capital market regulation of a country. Every issuer or listed company is mandatory required to submit annual financial report periodically and other material information to public and government bodies (Bapepam), (Nuswandari, 2009).

Voluntary disclosures is a delivery of information and voluntary given by the company, apart from mandatory disclosures. Voluntary disclosures is an information disclosures that exceed the minimum requirement of the applicable capital market regulation. Companies have discretion to voluntary disclose in the annual report. Consecutively, it caused variety and variation of voluntary disclosures among companies (Nuswandari, 2009).

Intellectual Capital disclosures in the financial reports is an integrated, true and fair method to explain company's activity. Intellectual Capital disclosure is communicated to the internal and external stakeholders, by combining report in the form of numbers, visualization and narrative. It is intended for value-added creation. Intellectual Capital report is consisting of financial and non-financial information, such as employee's rotation, job satisfaction, in-service training, customer satisfaction and supply accuracy. These factors are essential to be possessed by the employee to knowing how to contribute in creating value-added to the company (Ulum, 2009).

Guthrie dan Petty (2000) have conducted research upon 20 listed companies in Australia and the findings have showed results as follows.

- Over 95% Intellectual Capital disclosures are presented separately, and it is not in the form of number. Due to the fact, the finding supports the argument on how difficult it is to quantifies intangible assets, in terms of Intellectual Capital.
- Business entities are likely to disclose external capital. There are no evidences found in the financial reports regarding the inclusions of the 3 elements on Intellectual Capital.
- The reporting and the disclosure of Intellectual Capital had only been applied partially.
- In general, many business entities state the importance of Intellectual Capital in facing futures global competition, however this statement is poorly supported in the disclosure of annual report.

Intellectual Capital is a new phenomenon, in terms of supporting documents of annual report or even as a management concept. However, there are many companies use Intellectual Capital as a supporting document of annual report (Sawarjuwono dan Kadir, 2003).
Intellectual Capital as an intangible asset is not part of the element of balance sheet in the annual report, it is because the element of Intellectual Capital itself is difficult to be quantified. For that reason, Intellectual Capital is alternatively disclosed in the form of supporting document of annual report in separate. Referring to research project of Intellectual Capital reporting done by Denmark government, the findings showed there were no specific model of Intellectual Reporting. This reporting model is situationally made by the business entities as an effort of strategy implementation, instead of portraying the historical relation. The processing and measurement method are the inseparable factors in Intellectual Capital statement, as it will form language and practice in Intellectual Capital. Intellectual Capital statement is not actually disclosed the value of resources that a company has, but it is disclosing the activities aspects of company's knowledge management and the measurement factors belong to integral part of Intellectual Capital Statement (Sawarjuwono dan Kadir, 2003).
Investors will be interested on relative future return compare to the future risk of the company and the profit margin will be used to compensate additional risks that may exist in the future (Nur, 2008).
In gaining more value added as a strength, a company needs to improve their internal condition. Many factors can contribute to build up the company's profile in market perspectives, apart from tangible assets. An intangible asset such as a positive stockholder's equity, strength on financial performance, intellectual capacity in reducing costs and increasing the performance of the company to compete in the market, innovation continuous improvement, in terms of Intellectual Capital that can boost company's financial performance and competitiveness (Nur, 2008).

5. Measurement and Disclosure in Indonesia

Indonesia's accounting standard, known as PSAK, number 19 states that an intangible asset is an identifiable non-monetary asset without physical substance. The identifiable criterion is met when the intangible asset is separable (that is, when it can be sold, transferred or licensed) or where it arises from contractual or other legal rights (Ikatan Akuntan Indonesia, 2009). Furthermore, in accordance to IAS 38, intangible assets require an entity to recognize an intangible asset, whether purchased or self-created (at cost) if, and only if:

a. it is probable that the future economic benefits that are attributable to the asset will flow to the entity; and
b. the cost of the asset can be measured reliably.

Hence, if intangible assets acquire in business combination, according to IFRS 3 Business Combinations, such business combinations are accounted for using the 'acquisition method', which generally requires assets acquired and liabilities assumed to be measured at their fair values at the acquisition date.

According to Erdianthy dan Djakman (2014), the high compulsion of Intellectual Capital disclosures is caused from local regulation, in particular Indonesia's regulation known as BAPEPAM, number: Kep-38/PM/1996, on 17 January 1996, regarding the format and contents of annual report. As result, the disclosures tend to be mandatory. Furthermore, Healy et al (1999) states that high compulsion of information disclosures will led investors to revise their judgement over company's share price and increase the share's liquidity. It will also create institutional value added and increase analysis interest over securities. To summarize, the findings indicates the higher of capital disclosures will produce accountable information and mitigates investors fault on evaluating company's share price. It will also increase market capitalization.

6. Conslusion and Suggestion

Various studies in Indonesia proves Intellectual Factors have influenced financial performance and the market. Therefore, the significance factors of Intellectual Capital need to get greater attention of the stakeholders, particularly in the economy sectors. Intellectual Capital measurement was developed by Pulic (2004). Meanwhile, there have no certain rules applied in Indonesia, in regard to justify the company's obligation to compile Intellectual Capital disclosures as mandatory. Currently, it is still voluntary.

Writers suggest Intellectual Capital measurement to apply another model aside from Pulic (2004)., for instance, in-dept interview approach. However, a guidance needs to be made for a standardize in-dept interview. Furthermore, the policy makers need to require companies, particularly listed company, to disclose Intellectual Capital. The Intellectual Capital is believed to have significance influence to improve financial and market performance in Indonesia. Consequently, Intellectual Capital will be able to boost Indonesian economy and ready to deal with industrial revolution 4.0.

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CERTIFICATE

This is to certify that

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