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Intellectual Capital Disclosure in Determining the Economic Value Added Spread of Service Companies in Indonesia

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Abstract. *This study aims to observe the of intellectual capital disclosure on ECONOMIC VALUE ADDED (EVA) Spread. The study is conducted at a service industry sector, listed on the Indonesia Stock Exchange in the 7 years observation period, 2010 to 2016. This study examines 427 firm years from 61 companies. Human Capital Disclosure (HCD), Relational Capital Disclosure (RCD) and Structural Capital Disclosure (SCD) are used to measure intellectual capital disclosure as the independent variables. Another independent variable is Return on Assets (ROA), return on equity (ROE) and Operating Cash Flow Ratio (OCF-R) which are used to measure profitability. EVA spread is the dependent variable. There are two control variables used are firm size and firm age. In total there are six hypotheses to be tested in this study. Data testing is done using Gretl software. The results of this study are quite diverse. Five of the six independent variables have no significant effect on EVA Spread. On the other hand, SCD has a significant positive effect on EVA Spread*

Keywords. *Intellectual Capital Disclosure, Human Capital Disclosure, Relational Capital Disclosure, Structural Capital Disclosure, Profitability, EVA Spread.*

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INTRODUCTION

The concept of intellectual capital disclosure become very important because the management are recognize and realize the link between intellectual capital and the structure and performance of an organization. The management reflect the impact of intellectual capital to individual firms in order to enhance their competitive advantage (Mangena *et al.*, 2010). However, according to the previous research, intellectual capital is considered as a major contributor in the process of creating firm value, the costs occurred by the process are involved with the intangible assets which either directly expensed in the financial statement or treat as amortization, and therefore are not adequately reflected in the financial statements (Wee & Chua, 2016). The International Federation of Accountants (IFAC) defined the intellectual capital as a synonym of intellectual property. Intellectual property, which can be used as capital. The IFAC also estimates that the current firm value is greater than its intellectual capital, no longer its fixed assets. Thus, intellectual capital falls into the category of assets in capital (Gutierrez *et al.*, 2016).

The intellectual capital disclosure are divided into three main parts, there are human capital disclosure, relational capital disclosure and structural capital disclosure. Based on the previous study, there are shifting in the parts of the components of intellectual capital disclosure, from human capital shift to relational capital disclosure. To realize the importance of intangioble assets, it can be done through intellectual capital disclosure that provides a clear and big picture of the company includes

any appreciation towards any parties that involved in the process compared to the more traditional measurement of firm value which only focus on tangible assets (Slack & Matthias, 2016).

The intellectual capital disclosure also has several benefit for those company who adopt the intellectual capital disclosure on their annual report. The benefit received are having lower cost by increasing its level of intellectual capital disclosure However the costs of intellectual capital disclosure might not be as beneficial as the benefit that will be gained (Boujelbene & Affes, 2013).

The second variable that have impact on the economic value added spread on this research is relating to the firm profitability. The frim profitability are having correlation through economic value added spread through some of the indicator such as return on asset and return and equity and operating cash flow ratios which have implication towards many financial aspect (Bidaki & Hejazi, 2014; Ferreira *et al*., 2012).

The changing of mindset which have impact towards the company's competitive advantage will have impact on many areas, either on the company's value or on the company's financial profitability. One of the area that have impact on is the spread of economic value added of the company. Economic value added is one of the measurement that can help investors with their decision making (Salehi *et al*., 2014). Economic value added are better measurement compare to tangible assets because tangible assets can be easily imitated or purchased the market, thus, they cannot treat as a good strategic to maintain assets or to value it firm value, moreover it cannot create any competitive advantage for the firm. The intellectual capital disclosure help the economic value added (EVA). While the economic value added is the value created in excess of the required return of the firm and can be used for evaluating the performance of firms and developing incentive schemes (Kamasak, 2017).

In accordance with international accounting standard no 38 relating to intangible assets which is defined as a non-monetary, immaterial, identifiable assets, who's featuring is discriminated by the cited norm, in such a way that implies the need of running into initial acquisition or internally generated costs (IFRS®, 2017). The intellectual capital measurement is important, thus can be seen from two aspects, the first is between the organization which have objectives of having better allocation of resources in order to reach efficiency and to minimize the cost. Second, within the organization which have objectives to make the existing and potential investment information to forecast future growth as well as long-term planning are accessible. On the other hand, the economic value added is the financial performance measurement that can capture the true profit for a company (Juliya, 2015). Like in this information era, EVA (economic value added) has significant role. The EVA itself is giving the importance on how much economic value is added for the shareholders by the management for which they have been entrusted with. By using EVA the adjustments to accounting data are more economically viable.

From the previous study, the researcher found out that intellectual capital disclosure has significant impact towards economic value added in manufacture industry. Based on the research on manufacturing industry, human capital disclosure have strong relationship with the economic value added and for structural capital shows that it has less significant towards the EVA which means only the research and development that help the company to increase the economic value added of the company and for the relational capital disclosure shows strong relationship towards the EVA mans that the relation between the company towards the customer and the other party are important and have significant impact towards the economic value added of the company (Mojtahedi & Ashrafipour, 2013).

LITERATURE REVIEW

Economic Value Added Spread

Economic value added (EVA) is a performance measurement that can be used to assess the performance of the management of the company. The motivation of the management to improve their economic value added are first to take part in the operation parts where the returns on particular section or parts exceed the cost of capital. Second, increase the operating performance of particular sections, thus the management can increase the net operating profit after tax (NOPAT) without increasing the finance cost. Third, the company can increase its debt to equity ratio and thus reduce the weighted average cost of capital. By looking of the motivation above economic value added is a useful tool for assessing the performance of the management of the company and they should motivate them to maximize shareholders wealth (Ryan, 2018). The economic value added can be calculated through:

$$\text{EVA} = \text{NOPAT} - \text{Invested capital} \times \text{WACC} \quad (1)$$

Net operating profit after tax (NOPAT) is a profit figure that shows profit before taking out the interest expense. The interest expense is including in the finance cost that is deducted from NOPAT when calculating EVA. There are two method to adjust the interest are either start with operating profit then deduct with the adjusted tax charged. Since taking the cost of interest out of the income statement, it is also necessary to remove the tax benefit to count the tax charge. To calculate that multiply the interest by the tax rate and add this to the tax charge or another method is to start with profit after tax and add back with the cost of interest, then the interest charge is multiplied by (1-rate of corporate tax). (Gupta & Sikarwar, 2016)

$$\text{NOPAT} = \text{Income from operation} \times (1 - \text{tax rate}) \quad (2)$$

Invested capital is the total amount of the company's liabilities exclude the current liabilities, such as trade payable, and any other short term payable (Ryan, 2018). To calculate invested capital can be formulate through equation below.

$$\text{Invested capital} = \text{Total asset} - \text{Current liabilities} \quad (3)$$

To help the investor to look more detail relating to the return of the invested capital, the investor might have look by doing analysis of return on invested capital (ROIC). ROIC is define as a profitability ratio that have purpose to measure the percentage return that investors in a company are earning from their invested capital (Ryan, 2018). The ratio is relating to how efficient is the company using the investor's fund to generate the income.

$$\text{ROIC} = \frac{Net\ Income - Dividends}{Total\ Capital\ Invested} \quad (4)$$

Weighted average cost of capital are define as the rate which the free cash flows must be discounted to obtain the same result as in the valuation using equity cash flows discounted at the required return to equity (Mitra, 2011). The WACC is neither a cost nor a required return. It is a weighted average of a cost and required return. The terms of WACC as cost of capital might have mislead because it is not a cost.

$$r_{wacc} = \frac{E_m.r_e + D_{mv}.(1-T).r_d}{E_{mv} + D_{mv}} \quad (5)$$

r_{wacc}= weighted average cost of capital
E_{mv}= market mauve of equity
D_{mv}= market value of debt
r_e= cost of equity capital
r_d= cost of debt capital
T= tax rate

The WACC approach incorporates all financing considerations in a single discount rate and simplifies decision making. In the formula, the market value of the equity and debt are used instead of using their book value. The market

value of the company's equity can be obtaining from share price quotes. The market value of debt capital can be calculated by considering cash flow accruing to debtors and the market interest rate (Mitra, 2011).

Intellectual Capital Disclosure

A lot of definition comes up when the issue of intellectual capital are raise, one of them are stated that intellectual capital is the group of knowledge of assets which are attributed to an organization and most significantly giving contribution to an improvement in relating to competitive position of this organization by adding value to defined key stakeholders (Marr *et al*., 2014). Another perspective coming from CIMA, it stated that intellectual property can be defined as intangible assets, such as patents, trademarks, and copyrights that can be included in traditional financial statements (Starovic & Marr, 2001).

If the company have failed to measure its value, it will cause any damage consequences that might happened at all levels. For a particular firm that do not have understanding relating how value is measured might led to inefficient resources allocation, which means the company has loss the opportunity to assessing its value of future business opportunity. The miss allocation might happen at all level of the company which means it can lead the company to inefficiency at all level. The level of the inefficiency will be depends on the level of the misallocation of the resources (Starovic & Marr, 2001).

Measuring the intellectual capital is very important which the company might know what it owns but cannot measure the intellectual capital properly. Intellectual capital can be both the end of result of a knowledge transformation process or it might be become the knowledge that transformed into intellectual capital. For the intellectual capital can be classified into three categories, human capital, relational capital and structural capital (Bismuth & Kirkpatrick, 2006).

Human capital will rise if the company is able to use the knowledge that is owned by its employees. Some of the indicator that help to measure the human capital disclosure index are level of education, training programs, competence, experience, and etc. (Bowyer, 2017). Another sources came up with different perspective, it is stated that the knowledge, skills, competencies and other attributes are includes in individuals or groups of individuals acquired during their life and use it to produce goods, services or idea within the industry (Bismuth & Kirkpatrick, 2006). The essence of education that human capital have has increase the value and effectiveness of human capital, is spending money now but the expected benefit will flow in the future (Beattie, 2010). The most important thing for current conditions are education because it contributes to the technological progress, factors productivity growth, increasing value of the human capital and overall economic growth. The new knowledge has to be adapted to the needs of the company in an innovative and creative way (Kucharcikova, 2011).

The increasing of the human capital doesn't mean that human capital disclosure is also increasing, because while the human capital is increasing but the company do not disclose the intangible assets. So not all of the company disclose their intellectual capital since it is not mandatory yet (Slack & Matthias, 2016). When the performance of the company is increasing, then the intangible value of their human resources are also increasing which means it will create higher economic value added (Masri *et al*., 2018).

HYPOTHESES DEVELOPMENT

Hence the hypotheses for the relationship between human capital disclosure and EVA Spread are postulated below:

H_1: HCD has positive impact towards EVA Spread

Relational capital is a sub category of intellectual capital which focus on valuing the intangible assets in the relation to an organization which has business partners and

other external parties that give contribution to fulfil the company's needs, and it is also includes several aspects such as corporate reputation and potential customers (Andriessen, 2004). Relational capital represents the capability of a company to interact with the external parties and with all stakeholders (Smith & Beattie, 2012). Relational capital is the value created by people in the business relationship and it is become very important aspect in a business relationship (Martini *et al*., 2016). To form a relational capital in business relationship it needs good qualities of credibility, integrity, and authenticity in order to enhance the stakeholder's trust and the investing relational capital development will improve the business relations in the perspective of its value (Martini *et al*., 2016).

Structural capital is more constant compare to the human capital because human capital is having tendency to change (Talaromi & Nezhad, 2013). However, the structural capital efficiency is showing insignificancy in the case of relationship between intellectual capital and the company's value. However each of the industry might have different result, the previous study was took the Baltic listed company which represent different industry (Salehi *et al*., 2014). Hence the hypotheses for the relationship between relational capital disclosure and EVA Spread are postulated below:

H_2: RCD has positive impact towards EVA Spread

Structural capital is a crucial element of intangible capital. It can be both an asset and a liability, it all depends on how the stakeholders see the value of the structural capital (Gogan *et al*., 2015). Structural capital is a supportive infrastructure that enables the rest of an organization to have function in a repeatable and scalable way. It is installed within the organization and remains within it even when the operator leaves the company, in other word structural capital are talk more about system that developed by the company (Kateb, 2012). Structural capital includes data, data processing, systems, design and knowledge. Most structural capital is improving with the reuse system. The intangible capital measurement can help the company to ensure to have the right structural capital in order to achieve the company's goal. Another perspective to define structural capital. Based on the previous research it is stated that the structural capital is the structure that supports the human capital and include in the organizational processes, procedures, technologies, information resources and intellectual property rights to support its operations (Malhotra, 2003). The structural capital is a supportive infrastructure to support human capital and is a combination of knowledge and intangible assets that derived from the processes within the organization in order to realize company's efficiency, procedural of innovativeness and access to information for assessing and applied the knowledge (Edvinsson & Malone, 2001).

It found that the most of the intellectual capital are significant towards the company's value. From the empirical study also shows that the intellectual capital disclosure are a helpful tool as an analysis for investor before they bought any of the shares in other word the disclosure of the intellectual capital are very helpful for the investor to build trust among the company. The issue relating to the relational capital is relating to the value creation, as expressed in a well-known brand and accessibility to foreign investments (Shakina & Barajas, 2013). From the empirical study also shows that the investors are gaining more trust to the well-known company, because not only the information are publicly available but many research had analyzed and those information are publicly available (Berzkalne & Zelgalve, 2014). In the long-term it might enhance the competitive efficiency and minimize the organizational costs (Datta & De, 2017). Hence the hypotheses for the relationship between structural capital disclosure and EVA Spread are postulated below:

H_3: SCD has positive impact towards EVA Spread

Firm Profitability

Firm profitability is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates after it pays all of the expenses directly related to the generation of the revenue. (Grimsley, 2018). Some of them are prefer to use return on assets (ROA) and return on equity (ROE) as a parameter. However, the fund that coming into the operational activities like debt are not generate income. This simply cash transaction between the business and the lender to generating cash to support the operational activities (Hofstrand, 2009).

ROA or return on assets is a profitability measurement indicator of a business in relation to its total assets. This ratio shows how well the company generating a profit from its total assets. The higher the result shows the more productive and efficient management in utilising the available economic resources (Warrad, 2015). The ROA formula can be useful in comparing a company's performance between periods or benchmark it with the other company with similar size and industry. The nature of business will affect the ROA result therefore different industry and sector will have different result as well (Gallo, 2016). However the measure management performance based on ROA can be misleading and biased. It could encourage management to achieve higher ROA as a target by minimising necessary investment on new asset because it will lower the ROA.

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \quad (6)$$

Based on the previous study that observe in the manufacturing industry the impact of return on assets variable has showed a partially positive influence significantly to economic value added. The larger the ROA, the higher the profit generated by the company and will be increase which greater than the economic value added. This means in the manufacturing company that listed in IDX has been effective in using its assets to generate operating profit as well as to create economic value for the company (Alsoboa, 2017). Hence the hypotheses for the relationship ROA and EVA Spread are postulated below:

H_4: ROA has positive impact towards EVA Spread

Return on Equity (ROE) is a measurement of a company's annual return divided by the value of its total shareholder's equity (Gallo, 2016). Alternatively, ROE can also be derived by dividing the company's dividend growth rate by its earnings retention rate (Kamasak, 2017). ROE is a profitability ratio from investor's point of view not based on company's point of view, which means this ratio calculates how much money is used to generate profit or to use in operating activities (Berzkalne & Zelgalve, 2014). Since every industry has different levels of investors and income, ROE can't be used to compare companies outside of their industries very effectively. Many of the investors choose to calculate the return on equity at the beginning of a period and the end of the period to see the change or the difference in its return (Kabajeh *et al.*, 2012). Many of the investors choose to calculate the return on equity at the beginning of a period and the end of the period to see the change or the difference in its return (Kabajeh *et al.*, 2012). This ratio reflects that how much the firms has generated in terms of funds invested by the shareholders (Ichsani & Suhardi, 2015).

$$\text{ROE} = \frac{Net\ Income}{Shareholder's\ Equity} \quad (7)$$

Based on the previous study the return on equity shows a positive correlation towards the economic value added. It is stated that maximize ROE can be alternative to maximize EVA in the strategic corporate objective. It is also stated that the corporate behavior is completely different

depending on the company's strategic financial objective. While the relationship between EVA and ROE is found out when the company tries to maximize its output, price, input and labor. When the ROE is maximizing the company might produce less at a high price with fewer input and less labor and it might led to maximize the EVA since ROE and EVA are interrelated. By maximizing two of strategic method, the company might run more effectively and it might reach it optimum production (Mesnard, 2017). Hence the hypotheses for the relationship ROE and EVA Spread are postulated below:

H_5: ROE has positive impact towards EVA Spread

Operating cash flow is a measurement of the amount cash generated by a company's business operation (Hughes *et al.,* 2010). The objective of operating cash flow is to indicate whether the company have sufficient amount of fund to maintain its operation and the growth of the operations. (Holt, 2010). Statement of cash flow can be used in conjunction with the rest of the financial statements to obtain better understanding of the company's condition in term of any changes of assets and financial related (Hales & Orpurt, 2013). The company are much more dependent on third party such as bank. In the context of having difficulties in getting fund from the bank, the company might have to find new investor that will give cash injection to support the operating activities of the company (Kelly, 2009; Fawzi *et al.,* 2015).

$$Operating\ Cash\ Flow\ Ratio = \frac{Operating\ Cash\ Flow}{Current\ Liabilities} \quad (8)$$

Based on the previous study it is stated that operating cash flow (OCF) are have no relationship towards economic value added on the pharmaceutical company in which means that operating cash flow of the company are not influential towards the company's potential investment. The operating cash flow are not a measurement that attractive for the potential investor so that the operating cash flow are not showing any significant relationship towards economic value added. In the pharmaceutical company the investor are more attracted to return on assets and return on investment (Parast *et al.,* 2013). Hence the hypotheses for the relationship OCF Ratio and EVA Spread are postulated below:

H_6: OCF Ratio has positive impact towards EVA Spread

RESEARCH METHODOLOGY

From the descriptions above, this paper attempts to see the correlation between intellectual capital disclosure, firm profitability and EVA. In this research, multiple regression is used to find the empirical findings of the relationship between intellectual capital disclosures with economic value added spread. There are 4 regression formulas for this research as follow.

$$EVAS_{ft} = \beta_0 + \beta_1 HCD_{ft} + \beta_2 RCD_{ft} + \beta_3 SCD_{ft} + \beta_4 SIZE_{ft} + \beta_5 AGE_{ft} + \beta_6 ROA_{ft} + \beta_7 ROE_{ft} + \beta_8 OCF_{ft} + \varepsilon_{ft} \quad (9)$$

Explanation:

$EVAS_{ft}$ = Economic value added spread of *f* firm and *t* period
HCD_{ft} = Human capital disclosure index
RCD_{ft} = Relational capital disclosure index
SCD_{ft} = Structural capital disclosure index
$SIZE_{ft}$ = Firm's size
AGE_{ft} = Firm's age
ROA_{ft} = Return on Asset
ROE_{ft} = Return on Equity
OCF_{ft} = Operating cash flow
β_0 = Constant of the regression
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$, = Unstandardized coefficients of each variable
ε_{ft} = error

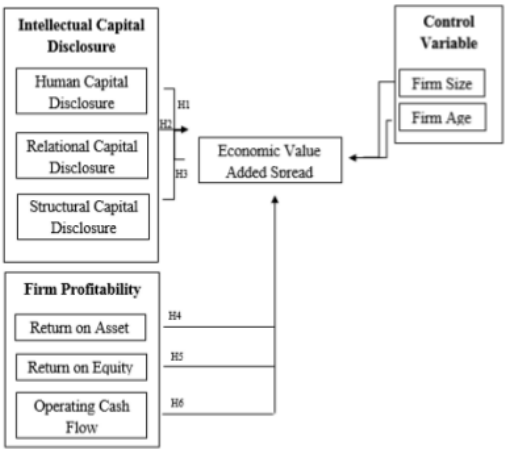

Figure 1 Theoretical Model

This research uses quantitative data, sourcing from mainly Bloomberg Terminal and company's annual reports. Population includes 61 service listed companies between 2010 and 2016. Several pre-determined criteria are used to choose the sample:

Table 1. Observation Detail

Sampling Criteria	Number of Observation
Total Indonesian Stock Exchange service listed companies from 2010 to 2016	81
Companies failed to meet criteria	(20)
Total companies included as sample	61
Total period of observation (in years)	7
Total sample of observation (in reports)	427

Source: Indonesia Stock Exchange

The service industry is chosen as the population in this study since this sector has been growing since 2010 until 2017, in average of 7.1%. In addition, the role of service sector become larger in a developing country like Indonesia which is implementing the fourth industrial revolution (Aisyah, 2019).

RESEARCH RESULT AND ANALYSIS

Descriptive Statistics

Following are the result of the descriptive statistics that summarize all sample data's average, standard deviation, maximum, and minimum.

Table 2. Descriptive Statistics

Variables	Mean	S.D	Min	Max
HCD	0.44	0.21	0.06	0.94
RCD	0.47	0.24	0.10	1.00
SCD	0.64	0.23	0.10	1.00
ROA	0.11	0.77	-1.78	11.47
ROE	0.06	0.35	-6.12	0.94
OCF-R	2.71	11.58	-14.99	117.41
F-SIZE	10.98	1.57	5.89	13.68
F-AGE	15.12	6.70	1.00	32.00
EVA-S	-0.04	0.32	-5.46	1.40

Source: Authors' Compilation

Panel Data Model Estimation Method

In assessing panel data, the first thing to do is to determine the estimation model in order to choose the best one. Using the Gretl software, after plotting with OLS method, the best panel data model could be estimated using three tests; F Test, Breusch-Pagan Test, and Hausman Test. As there are two regressions, the tests will be run twice. Below are the detailed results for each test:

Table 3. Estimation Panel Tests Result

P-Value of Panel Test	Result
Fixed effect test (p-value 9.01646e-008)	Fixed effect
Breusch-Pagan test (p-value 9.58786e-009)	Random effect
Hausman test (p-value 0.254976	Random effect

Source: Authors' Compilation

Feasibility Test

Table 4 depicts the result of feasibility tests for both regressions. The regression model, with EVA Spread as the dependent variable, has p-value of the F test of 00076348. The figures are lower than 10%, therefore it could be concluded that all the independent variables have significant influence on the dependent variables, and the regression model is valid for hypothesis testing.

Table 4. Feasibility Tests

Test	Asymptotic test statistic	Determinant Coefficient (R^2)
HCD, RCD, SCD, ROA, ROE, OCF towards EVA Spread	Chi-square (8) = 20.8223 with p-value= 0.0076348	Corr (y,yhat)^2 = 0.0603337

Source: Authors' Compilation

Also from Table 4, for the determinant coefficient test, regression with EVA as dependent variable have R^2 of 6.03%. It means EVA Spread can be explained by the independent variables as much as 6.03%, while the rest of 93.97% is explained by other factors apart from the independent and moderating variables.

Hypothesis Test

Table 5 depicts the coefficients and t-test's p-value of each variable. Firstly, the independent variable, HCD, has p-value of 0.2445 towards EVA Spread which is higher than the significance level of 10%, therefore it has insignificant relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in HCD will decrease the EVA Spread by 1.164. RCD, has p-value of 0.7737 towards EVA Spread which is higher than the significance level of 10%, therefore it has insignificant relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in RCD will decrease the EVA Spread by 3.141. SCD, has p-value of 0.0017 towards EVA Spread which is lower than the significance level of 10%, therefore it has significant relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in SCD will decrease the EVA Spread by 0.2875.

Table 5. Regression Result Summary

Variable	Coef.	Std. Error	t-ratio	p-value
Constanta	−0.089	0.061	−1.441	0.150
HCD	−0.003	0.003	−1.164	0.245
RCD	−0.001	0.004	−3.141	0.773
SCD	0.014	0.005	0.288	0.002**
ROA	−0.004	0.025	−0.181	0.856
ROE	0.006	0.015	0.038	0.970
OCF – R	−0.001	0.001	−0.812	0.417
SIZE	0.009	0.005	1.865	0.062*
AGE	−0.001	0.001	−0.519	0.604

Source: Authors' Compilation

Second is the relationship between profitability variables and dependent variables. ROA, has p value of 0.8562 towards EVA Spread which higher than the significance level of 10%, therefore it has insignificance relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in ROA will decrease the EVA Spread by 0.1812. ROE, has p-value of 0.9700 towards EVA spread which higher than the significance level of 10%, therefore it has insignificance relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in ROE will increase the EVA Spread by 0.03766. OCF Ratio, has p value of 0.4170 towards EVA Spread which higher than the significance level

of 10%, therefore it has insignificance relationship with EVA Spread. This implies that if all other variables are held constant, every 1 percent increase in OCF Ratio will decrease the EVA Spread by 0.8116.

SIZE as the control variable is found to have positive significant relationship with EVA Spread with coefficient of 0.00943198 On the contrary, AGE has insignificant impact towards EVA Spread with coefficient of −0.000589002.

Discussion and Theory Analysis

Based on the regression result, it was found that Human Capital Disclosure (HCD) which represents intellectual capital disclosure do not have significant relationship with economic value added spread (EVA S). Hence, **hypothesis 1 is rejected**. This result is consistent with Anifowose, Rashid, & Annuar (2017), Slack & Matthias (2016) where these authors also failed to find significant relationship of human capital disclosure. This implied that the disclosure of human capital does not play a significant role in enhancing company's economic value added. 54% of companies are disclose their human capital below the average percentage. This graph will reflect the insignificant of the result that cannot support the hypothesis 1. Since the intellectual capital disclosure are still voluntary in Indonesia, then the company are not yet concern on the disclosure of their intellectual capital. This can be prove by only 43.77 % of human capital that disclose by the Indonesian service listed companies

The regression result shows that RCD has shown insignificant impact on Economic Value Added (EVA) spread as a measure of firm value, which failed to supports the second hypothesis. This is also consistent with Datta & De (2017). Who found that the relational capital disclosure is having insignificant relationship towards economic value added spread. This implied that the disclosure of relational capital does not play a significant role in enhancing company's economic value added. Hence **hypothesis 2 is rejected.** 56% of companies are disclose their relational capital below the average percentage. This graph will reflect the insignificant of the result that cannot support the hypothesis 2. Since the intellectual capital disclosure are still voluntary in Indonesia, then the company are not yet concern on the disclosure of their intellectual capital. This can be prove by only 46.7 % of relational capital that disclose by the Indonesian service listed companies

The regression result shows that SCD has shown negative significant impact on Economic Value Added (EVA) spread as a measure of firm value, which supports the third hypothesis. This is also consistent with Mojtahedi & Ashrafipour, (2013), Talaromi & Nezhad, (2013), Salehi *et al*., (2014). In the previous study it were stated that the structural capital disclosure have significant impact towards the economic value added. It means the lower of the structural capital disclosure the higher the economic value added spread. Therefore **hypothesis 3 is accepted**. According to the previous study the structural capital disclosure have a big role on the economic value added, because based on the research the structural capital are the supportive infrastructure that might enable the rest of the company to run or still have function in a repeatable and scalable way. It really helpful because structural capital is more into the system of the company which have big role on the investor decisions. Besides human capital that have important role, the structural capital are more constant compare to the human capital because human capital are having tendency to change.

The regression result shows that ROA has shown insignificant impact on Economic Value Added (EVA) spread as a measure of firm value, which failed to supports the fourth hypothesis. This is consistent with Alsoboa (2017), Mangena *et al*. (2010) and Gupta & Sikarwar (2016) which in this research the return on assets have insignificant impact towards the economic value added. The reason behind this phenomenon is because the return on assets is not a perfect measurement, however ROA shows that it is the most effective parameter.

ROA captures only fundamentals of business performance. The lack of the use of ROA is that ROA cannot capture short term strategy due to its meaning which is dealing with assets. The assets itself is dealing with the long term strategy because of its long term use. Hence **the hypothesis 4 is rejected**. While having EVA as the dependent variable is having the value of shareholders point of view which means it takes long term decisions. Because the shareholders also take an investment as a long term strategy. By then having ROA are less suitable for shareholders who treat the investment as a long term decisions or strategy. Another point of view regarding the return on assets is that the shareholders are tend to concern more in profit rather than its competitive advantages of the company.

The regression result sho[13] that ROE has shown insignificant impact on Economic Value Added (EVA) spread as a measure of firm value, which supports the fifth hypothesis. This is also consistent with in the previous study Kabajeh *et al*. (2012), Marcineková & Sujová (2015) and Marchini & D'Este (2015) stated that the return on equity have insignificant impact towards the economic value added. In the previous research also stated that the return on equity are showing insignificant towards the economic value added spread. Hence the **hypothesis 5 is rejected**. The ROE or return on equity also failed to capture the effectiveness towards firm value because of the ROE can be bias when the company buyback their own shares. When the management repurchase their own shares, this will cause reduction in the number of outstanding share in the market. Thus the ROE increase as the denominator decrease. Another weakness of return of equity ratios are the ROE are excluding the intangible assets from its shareholder's equity. Intangible assets are non-monetary assets such as intellectual capital. This can mislead the result and become difficult to do benchmarking to another company that includes the intangible assets in their report. While the EVA spread was carried out the value of the company to the shareholders as a whole. Thus EVA spread are more reliable and effective to use as a parameter for the shareholders to decision making process.

The regression result shows that [13]CF ratio has shown insignificant impact on Economic Value Added (EVA) spread as a measure of firm value, which supports the sixth hypothesis. This is also consistent with in the previous study Parast *et al*. (2013) and Shen *et al* (2015). Based on the previous study it is stated that operating cash flow (OCF) are have no relationship towards economic value added which means that operating cash flow of the company are not influential towards the company's potential investment. The operating cash flow ratio are not a measurement that attractive for the potential investor so that the operating cash flow ratio are not showing any significant relationship towards economic value added. Hence hypothesis 6 is rejected. 35% of the companies are not having good operating cash flow ratio. It was mention before that having negative or less operating cash flow ratio indicates that the company do have problems with liquidity which from the graph indicates that having less amount of operating cash flow ratio means the company are hard or even do not have sufficient cash to paid short term debt. By having problem with the liquidity area, it will decrease the shareholder's trust by giving them information that the company are not having sufficient cash from its operation to pay the short term debt. By having statutory law that regulate if the company was liquidate the first party who paid is the secured creditors, second unsecured creditors, third the shareholders. This is due to the risk of investment done by each parties. The law regulates to pay for the highest risk who is the secured creditors.

MANAGERIAL IMPLICATION

There are six hypotheses within this research and only one out six were accepted after data panel regression process. The other five hypotheses were rejected due to its insignificant relationship among variables. There are no significant correlation between

human and relational capital with economic value added spread; as well as return on assets, return on equity and operating cash flow ratio. Since intellectual capital disclosures still in voluntary basis, all the stakeholders are encouraged to provide more information about their intellectual capital because the competitive advantage is now shifting into intangible assets, most likely intellectual capital. By disclosing intellectual capital information, it will reduce the bias information or information asymmetry caused by any earning management done by the firm since the company is more transparent and reliable that will attract investors. From practical point of view, by doing the disclosure of the intellectual capital will entrust the investor to invest in the company or in the other hand the company will have a clear picture of how the company have doing relating its operation and as a whole. Relating to the economic value added (EVA), if the company wants to increase its economic value added, there are two major ways to increase the EVA, either to increase its revenues or decrease its capital costs. For increasing its revenues the company might raising its price or selling additional goods, however those strategies might have deficiencies regarding the supply and demand, when the company increase its price, it's sales quantity will drop, it will goes along with the selling the additional goods, it means that the company needs a new strategy to boost the sales such as marketing strategy, promotion and other strategy which is costly. Another way is to decrease its cost of capital. To decrease it, the company another way is either to increase its economic of scale or reducing operating expenses and increasing marginal productivity. To relate the economic value added and the intellectual capital disclosure can be referred to its original meaning of economic value added, which some research referred to shareholder's value added. EVA can be used by the investor to see how well a company can generate sufficient cash flow, by disclosing its intellectual capital, the investor are more entrust to the company since the company are more transparent.

CONCLUSION

The objective of this research is to analyze the relationship of intellectual capital disclosure toward economic value added spread. Intellectual capital disclosure will be measured using human capital disclosure (HCD), relational capital disclosure (RCD) and structural capital disclosure (SCD) while the profitability variable represent by return on assets (ROA), return on equity (ROE) and operating cash flow ratio (OCF-R). The economic value added spread (EVA-S) is chosen to represent its firm value. The research subjects used in this research are derived from Indonesian service listed companies, in the period between 2010 and 2016. After applying several criteria to the population, the sample includes 61 service companies, totaling to 427 firm-year companies. The data are taken mainly from Bloomberg Terminal and company's annual reports.

In this research is use multiple regression model developed for this research; The EVA regression is modelled using random effect model. Based on the result of the research, it can be concluded that: HCD is insignificant towards EVA Spread. RCD is insignificant towards EVA Spread. SCD is negatively significant towards EVA Spread. ROA is insignificant towards EVA Spread. ROE is insignificant towards EVA Spread. OCF Ratio is insignificant towards EVA Spread. Based on the interaction variables result, only structural capital disclosure has significant impact toward EVA Spread.

LIMITATION AND SUGGESTION FOR FUTURE RESEARCH

Due to the limitations occurred in this research that is explained below, future researches may be suggested to take into account for the extension of this research as follows. This research failed to identify the correlation between intellectual capital disclosure components and economic value added spread. By looking at its determinant coefficient or R-square which is only 6.03% of independent

variables can explained the dependent variable, and the rest 93.97% is other factors other this research scope. Also, this research is within a specified industry, which are service sector companies listed in Indonesia Stock Exchange. Future research may extend this study by observing the variations across different industries and other indicators which influence the economic value added spread. The independent variables of specified intellectual capital disclosures components are not commonly used to investigate the economic value added spread research as its dependent variable so that it was difficult to find the supporting previous journal to accept or disapprove the result. Therefore, future study may want to extend this topic by finding more evidence. This study is contained bias since the company's age size are vary. This might have different treatment for those who have smaller or bigger size of company. Even though the result of this research can be also used as Indonesian service industry representative condition, but the result may not be accurate as each of company's size has different environment and strategy. Therefore future research can focus on particular size of company and detect the trend in each one. This study is contained of two sub category of service industry which are trade, service and investment sector, property and real estate and building construction sector. The two of them might have different environment and strategy including their disclosure and their valuation. Even though the result in this research can be also taken from representative of Indonesian service industry, however different environment and strategic are tend to have different trend which can mislead the result. Therefore in the future research can focus on particular sub industry in order to minimize the bias and error.

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