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Descriptive and correlation in intellectual capital variable: Case study from Indonesia

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Abstract:

This study was conducted to investigate the four variables of intellectual capital such as variable value added capital, value added human capital, Value Added Intellectual Coefficient, and structural capital. This study is conducted on companies listed on the IDX, which consists of 21 companies that have registered their financial statements on the BEI during the period 2011-2017 This study uses descriptive statistical test and correlation test to see the relationship between the variable intellectual capital. From the study conducted can be concluded that there is a strong correlation, moderate and weak among the variables intellectual capital in doing research, thus this research can add evidence empirically about studies related to intellectual capital in Indonesia.

Key words: intellectual capital, descriptive statistic, correlation.

PRELIMINARY

This paper discusses and reviews the theme of Intellectual Capital. Intellectual Capital one of the assets contained in the company's financial statements, where the asset has no form and categorized in the form of human resources as information and everything related to the knowledge that is owned by the company, whose function is to increase competitiveness and can

improve the performance of the company can then be categorized as Intellectual Capital see Bontis, N., et, all, (2000), Firer, S. and M Williams (2003).

According to the International Federation of Accountants quoted by the author on Intellectual Capital, Intellectual Capital is a term that is almost similar to what is called intellectual capital, such as intellectual property, intellectual assets, knowledge assets that all have the intention as sahat or modal which base on existing knowledge of the company. Intellectual capital is generally identified as the difference between the market value of the firm and the book value of the firm's assets. According to the results of an observational study, Intellectual Capital has existed since the early 70s. Intellectual Capital can be interpreted also as the market value of larger companies in the value reported in the financial statements based on calculations performed by the accountant.

LITERATURE REVIEW

Intellectual Capital Components

Pulic, A. (2004) classifies the intellectual capital in the value added obtained from the firm's revenue difference with all costs. In particular, intellectual capital is divided into capital employed (VACA), human capital (VAHU), and structural capital (STVA)

Human Capital (VAHU)

Is a combination of knowledge, skills, innovativeness, and individuals skill in a company. Pulic, A. (2004) and Baroroh, N. (2013) high human capital will be able to encourage the combination of one's knowledge, skills, innovation and ability to carry out its tasks to create value.

Structural Capital (STVA)

According to Pulic, A. (2004) and Baroroh, N. (2013) states that structural capital is the ability of the organization to include infrastructure, information systems, routines, procedures and organizational culture that support employees' efforts to produce optimal intellectuals. Structural capital as a company infrastructure that helps increase employee productivity. The million are databases, organizational, charts, process manuals, strategies routines, and all the things that make the company's value bigger than the material.

Capital Employeed

Is a harmonious relationship / association network that exist in the company with its partners, both from reliable and qualified suppliers, come from loyal customers and feel satisfied with the service of the company concerned, originally from the company's relationship with the government or with the surrounding community . The VAIC (Value Added Intellectual Coefficient) method is designed to provide information on the value creation efficiency of tangible assets and intangible assets in the company.

VAIC is an instrument to measure the performance of intellectual capital of the company. This method is to measure how and how the efficiency of intellectual capital and capital employeed in creating value according to the relationship of three main components namely Human Capital, Capital Employeed, and Structural Capital.

This capital starts from the company's ability to create valua added (VA). Value added is the most objective indicator in the assessment of business success and describes the company's ability to create value (value creation). Value added is calculated as the difference between output and input in Pulic, A. (2004) and Belkaoui, R. A. (2003). Output (OUT) shows revenue and covers all products and services sold in the market, while input (IN) includes all the expenses used in obtaining

revenue. The important thing in this model is that the expense of employees is not included in IN. Because of its active role in the value creation process, the intellectual potential described by the labor expense is not calculated as cost (cos) and not the IN component. Therefore, the key aspect in the Pulic model A. (2004) is to treat labor as a value creating entity in Tan, P.H, et, all, (2007).

RESEARCH METHODOLOGY

This research was conducted in March 2018 at companies listed on the BEI during the period 2011-2017. This research uses 4 variable of intellectual capital such as variable of value added capital, value added human capital, Value Added Intellectual Coefficient, and structural capital. This study uses descriptive statistical test and correlation test to see the relationship among the variable intellectual capital. This study was conducted on 21 companies that have registered their financial statements on BEI during the period of 2011-2017.

RESEARCH RESULTS AND DISCUSSION

In this study the authors used descriptive statistical test and correlation test. The descriptive statistics test only describes the characteristics of the data both interval, ratio, nominal and ordinal data. Descriptive statistics should always precede analytical statistics in order to know the important things of a bunch of data. such as mean (mean), standard deviation, median and so forth. While the Correlation test for the sample is denoted by r where as for the population is notated ρ (read rho). The correlation test aims to examine the relationship between two variables that do not show functional relation (related not mean caused) Nugroho (2005: 35). Correlation test does not distinguish the type of variable whether the dependent

variable or independent. Both of these tests are presented in tables 1 and 2 below:

Table 1 : Result for statistic descriptive

	STVA	VACA	VAHU	VAIC
Mean	0.541781	0.335276	2.752656	3.629755
Median	0.571500	0.316000	2.335000	3.258125
Maximum	0.875000	0.811000	7.972000	8.989000
Minimum	-2.053000	0.056000	0.328000	-1.631000
Std. Dev.	0.294449	0.145248	1.368990	1.658846
Skewness	-5.104167	1.265855	1.647881	1.084506
Kurtosis	42.01331	5.177969	6.128816	5.662334
Jarque-Bera	10435.09	71.56573	132.5140	75.66942
Probability	0.000000	0.000000	0.000000	0.000000
Sum	83.43425	51.63250	423.9090	558.9822
Sum Sq. Dev.	13.26509	3.227854	286.7423	421.0209
Observations	154	154	154	154

Source : Proceed by author

Table 2 : Result for correlation analisys

	STVA	VACA	VAHU	VAIC
STVA	1			
VACA	0.4395078360366533	1		
VAHU	0.6362463758854046	0.551874296625829	1	
VAIC	0.7410544049516184	0.6210266837138478	0.9864867007734859	1

Source : Proceed by author

Based on the results of table 1 and table 2 presented above, the authors can conclude that the descriptive statistical test is the activity of collecting, grouping, processing, analyzing and presenting research data in one group of research sample which includes standard deviation test, variance, data range, , the highest value, the amount of data and the average of research data.

While for the correlation test results stated in% closeness relationship between variables called the correlation coefficient, which shows degree of closeness relationship between two variables and the direction of the relationship (+ or -).

CONCLUSION

In this study we can draw the conclusion that the test of descriptive statistics and correlation test must first meet a series of assumptions. Correlation test assumptions are: Normality. That is, the distribution of variables to be correlated should be normally distributed. Linearity. This means the relationship between two variables must be linear. For example shown through straight-line. Ordinal. That is, variables should be measured with a minimum of Ordinal scale. Homoscedasticity. That is, variability score in variable Y must remain constant in all values of variable X. But the authors take the data that will be proposed for the test of descriptive statistics and correlation test has met these requirements, so that the study did conclude that the correlation between the variables in the per some have strong percentages, moderate and weak percentages.

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