Effect of Intellectual Capital of the Company with Market Value of Financial Performance as an Intervening Variable

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Abstract: In general, a company’s success is determined by the use of physical capital efficiently. However, in the new economic era, intellectual capital is the basis for the success of a company so as to enhance the company’s market value. This study aimed to examine the effect of intellectual capital on the market value of companies with the financial performance of the company as an intervening variable. The population in this study is a company listed on the Indonesia Stock Exchange (BEI) in the period 2010-2014. Samples of this study were selected using judgment sampling method and obtained 199 companies that met the study criteria. Data were analyzed using Partial Least Square (PLS). The results showed that (1) intellectual capital significant negative effect on the market value of the company. (2) Intellectual capital significant positive effect on financial performance. (3) the financial performance of companies successfully mediate in part the influence of intellectual capital on the market value of the company.

Keywords: Intellectual capital, Market Value, and Financial Performance.

1. Introduction

In this era of globalization there has been a paradigm shift rapidly in the underlying business practices. During this time the company's success is generally determined by the use of physical capital efficiently. However, in the new economic era, intellectual capital is the basis for the success of a company so as to enhance the company’s market value. Guthrie et al. (2004) found the company in a new economic success is largely determined by the company's ability to manage intellectual capital, such as knowledge and assets in general are in human beings. This opinion is supported by Abidin (2000) who found the increasing value of a company due to the inclusion of the concept of intellectual capital. This is evidenced researchers, among others: Dzinkawski (2000: 32-36), which conducts research on the company Microsoft. In 1996, the market value of the company Microsoft increased 11.2 times greater than its book value, and in 2000 the market value of 13.3 times greater. Meanwhile, Sveiby (2001) conducted a study on the firm Morgan & Banks shows a comparison between the book value and market value of 1 to 14.

The difference in market value and the book value of the company show that the financial statements of companies failing to reflect a company’s actual value (Suwarjono and Kadir, 2003). Chen et al. (2005) found investor would have appreciated more of a company owning intellectual capital. Dzinkawski (2000: 32-36) and Sveiby (2001) refer to the difference between the market value and the book value that occurred is known as intangible assets or intellectual capital. This statement is reinforced by Reinhardt (2002) who recorded the statement of Longford which is one of the Microsoft staff in 1999, Reinhardt (2002) says that the growth of the assets owned by Microsoft is different from its market value, which is caused by the increase in intellectual capital, in the form of knowledge skill communication. It can be seen on a computer application products made by Microsoft, which is based on the ability of intellectual capital of its employees. This indicates that the intensity of the use of intellectual capital in the pharmaceutical industry is very high.

Enterprise awareness of the importance of intellectual capital is a way for companies to be more superior and competitive. Solikhah (2010) stated that intellectual capital assets becomes very precious and valuable in a new economic era. The advantages of the company by itself would increase the market value of the company. Nonetheless, precise measurements on intellectual capital are being sought and developed (Chen et al., 2005). Singh and Zahn (2007) found that traditional accounting mechanism can not provide information about the identification and measurement of intellectual capital adequately to new economic enterprise. Petty and Guthrie (2000), argues that this traditional approach does not allow the execution of identification of intangibles new ones, such as the competence of staff, relationships with
Intellectual capital has proven to be one of the company's resources to improve financial performance and sustainable resources for the creation of kesejahteraan. Ulum (2007); Carey (2012); and Yunita (2012) also proves that intellectual capital positive effect on the company's financial performance. This indicates that the intellectual capital is able to drive the company's performance because the competitive advantage created by the company's intellectual capital is able to adapt to changes in the business environment so that the company's financial performance can be maintained. The market value of companies affected by several factors one of which is the company's financial performance. Good financial performance will be responded positively by investors that have an impact on the market value of the company. The market value of the company can be seen from the market price of its shares.

The studies above indicated that intellectual capital can affect the market value of companies indirectly through improved financial performance of companies that we examine the effect of intellectual capital to the market value of the company's financial performance as an intervening variable in companies in the Indonesia Stock Exchange. This study developed a research conducted by Chen et al. (2005) with some modifications. The difference this study with research Chen et al. (2005) is penelitiaan using a sample of public companies in the Indonesia Stock Exchange with the observation period between 2010-2014. This study indicators add a Price Earning Ratio (PER) on an endogenous variable market value of the company because this ratio illustrates how investors judge the stock price to annual earning per share.

Based on the above phenomenon, the problems raised in this research is encapsulated in several research questions that will try to answer as the purpose of the study, as follows: (1) Is a positive effect on intellectual capital tehadap company's market value ?; (2) Is the intellectual capital positively affects the company’s financial performance ?; and (3) Is the intellectual capital indirect effect on the market value of the company through financial performance ?;

2. Literature Review and Hypotheses Development

In order to face an increasingly competitive business competition, does not cause businesses nevertheless continue its efforts even more motivated to make innovations for the company so that business continuity can be guaranteed and has the advantage kompetitif so that the financial performance will increase and impact on increasing

customers, system administration, database, and system decision support (decision support system) which is a booster of the value of the company based knowledge. This will have an impact on the growing asymmetry of information between companies and users of financial statements which creates inefficiencies in the allocation of resources in the capital market (Li et al., 2008).

In relation to increasing the company's market value. The views are resource-based theory, Intellectual capital is an economic resource when can be described, and evaluated the effect is influenced and which plays an important role in the success of the growth and sustainability of the company, as well as financial capital and physical capital (Asni, 2007). Based on stakeholder theory, corporate management is expected to perform activities that are expected by the stakeholders and report such activities to them (Purnomosidhi, 2006). These activities carried out by managing all resources owned by the company. If all the resources (tangible and intangible) is managed and utilized properly, will create added value for the company. Investors will give more appreciation to companies that are able to create sustainable value added (Solikhah, 2010). In the era of knowledge economy, the evaluation of the company's market value is not limited to elements of fixed assets, but should also consider factors other than the financial statements of companies, one of which is intellectual capital is an important driver in the creation of value for the company. Intellectual capital is a strategic asset for the company to create added value for the company.

Research on the effect of intellectual capital to the company's market value has been proved empirically by several researchers both in Indonesia and abroad are found among them Chen et al. (2005); Solikhah (2010); Amalia (2012); Pramelasari (2010); and Yunita (2012), Chen et al. (2005); Amalia (2012); Yunita (2012) found that the positive effect of intellectual capital on the market value of the company. However, research conducted Solikhah (2010) and Pramelasari (2010) found different results. Solikhah (2010); and Pramelasari (2010) found that intellectual capital has no effect on the market value of the company. Some of the above study found contradictory results. This is a research gap that is interesting to study further. According to Govindarajan (1986), inconsistencies can result solved either by using a contingency approach. This approach is done by inserting other variables between intellectual capital and the market value of the company. Researchers speculate that the results of the inconsistency caused by the presence of other variables that mediate the relationship between two variables, namely financial performance.
the company's market value. Companies must be supported by stakeholder group in achieving its objectives (Freeman and Reed, 1983). According to stakeholder theory states that the company is not enough to just be responsible to the shareholders, but also must maintain relationships with stakeholders to achieve the goal (Donaldson and Preston, 1995). Companies have the primary goal is to maximize shareholder kesejahterahaan which can be measured from the value added is distributed. Value added is the increase in welfare arising from the utilization of company resources. To increase value creation for the company, is through increased competitive keungulan obtained by implementing strategies that exploit internal keungulan company, responding to the opportunity of the surrounding environment, and neutralizing external threats (Barney, 1991).

Creation of value in order to obtain kesejahterahan stakeholders are closely related with the company's competitive advantage in utilizing the maximum resources owned by either tangible or intangible. Based on the viewpoint of resource-based theory, the basic principles of this perspective is the "competitive advantage" lies in how to use or empowering a set of resources and capabilities are unique or difficult to imitate a company's (Hunt, 1997). Chan et al. (2005), argues intellectual capital is a unique resource that belongs to the company so that not all companies can imitate it. This is what makes intellectual capital as a key resource for companies to create added value for the company and will be achieved competitive advantages. Companies that have a competitive advantage will certainly be able to compete and survive in a business environment. Intellectual capital consists of three components, namely human capital, structural capital and relational (customer) capital (Bontis et al. 2000).

Hypotheses

H1: Intellectual capital positively affects the market value of the company
H3: Intellectual Capital indirect effect on the market value of the company through financial performance.

3. Research Methodology

Research approach

This study is the explanation (explanatory research). This study aims to examine the effect of intellectual capital variables on the market value of companies with financial performance as an intervening variable.

Population and Sample Research

The population in this study are all companies that go public in Indonesia Stock Exchange. The number of companies registered the Indonesia Stock Exchange between 2010-2014 was 510 companies. In this study the sampling method using sampling nonprobabilitas (nonrandom selection) by purposive sampling. The criteria used by certain considerations (judgment sampling). The criteria for the determination of the samples in this study were (1) The Company listing on the Indonesia Stock Exchange and publish the audited financial statements for 5 consecutive years, ie during the period 2010-2014 in a row; (2) The company must undergo an operating profit and profit after tax was positive during the period 2010-2014; (3) The Company did not experience minus equity during 2010-2014. Based on the above criteria, obtained by 199 companies as samples with 995 observations (5 years).

Definition and Measurement of Variables

The variables in this study consisted of variable intellectual capital that serves as an exogenous variable, the variable value of the company's market functioning endogenous variables, and the company's financial performance variables serves as an intervening variable. Valiabel in this study is the latent variables (constructs). Below is a description of the study variables to be tested:

1) Exogenous Variables

In this study exogenous variables, namely intellectual capital. Intellectual capital is defined as the knowledge of individual workers and organizations that contribute to a sustainable competitive advantage (Bontis et al., 2000). Intellectual capital is formed formative. Intellectual capital in question in this research is the performance of intellectual capital is measured based on the value added created by the customer capital (VACA), human capital (VAHU), and Structural capital (STVA). The combination of these three value added symbolized by the name VAICTM developed Pulic. VAICTM an analytical procedure that is designed for management, shareholders and relevant stakeholders in order to carry out effective monitoring and evaluation of the added value of the resource company kesuluruhan owned enterprise (Firrer and Williams, 2003).

Stages and formulations calculation of Value Added Intellectual Coefficient (VAICTM) draws on research by Chen et al. (2005), as follows:

1. Counting Value Added (VA)

\[ VA = Output (OUT) - Input (IN) \]

2. Output(OUT) = Total sales and other revenue

3. Input(IN) = Costs and expenses (other than personnel expenses)
2. Counting Value Added Capital Employed (VACA)
   \[ \text{VACA} = \frac{\text{VA}}{\text{CE}} \]
   Capital Employed (CE) = Available funds (Equity)
   Value Added Capital Employed (VACA) = Ratio of VA to CE

3. Counting Value Added Human Capital (VAHU)
   \[ \text{VAHU} = \frac{\text{VA}}{\text{HC}} \]
   Human Capital (HC) = Expenses Employee
   Value Added Human Capital (VAHU) = Ratio of VA terhadap HC

   \[ \text{STVA} = \frac{\text{SC}}{\text{VA}} \]
   Structural Capital (SC) = Value Added (VA) - Human Capital (HC)
   Structural Capital Value Added (STVA) = The ratio of the SC against VA

2) Endogenous Variables
   In this study the endogenous variables, i.e. the market value of the company. The market value is the price that goes from the bid process the stock market (Christiawan and Tarin, 2007). The market value of the company formed reflective. Below is a description of the indicators of research that will be tested:
   a. Price Earning Ratio (PER)
   \[ \text{PER} = \frac{\text{Market Value Per Share}}{\text{Earning Per Share}} \]
   b. Market to Book Value (MtBV)
   \[ \text{MtBV} = \frac{\text{Market Value}}{\text{Book Value}} \]

3) Intervening Variables
   Intervening variable in this research is financial performance. The financial performance is a result of the condition keuangan companies in the use of capital owned by effectively and efficiently. The market value of the company formed reflective. Below is a description of the indicators of research that will be tested:
   a. Return On Asset (ROA)
   \[ \text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \]
   b. Return On Equity (ROE)
   \[ \text{ROE} = \frac{\text{Net Income}}{\text{Shareholder's Equity}} \]

Data Analysis Methods
   Methods of data analysis in this study using Equation Modeling Structural equation modeling (SEM) based components or variant (variance) and Partial Least Square (PLS). In this study, the construct formed using the formative and reflective indicators. Researchers chose to analyze using PLS because it has advantages over AMOS, OLS and lisrel is not fundamentally on various assumptions, can be used to construct a formative and reflective and have the ability to analyze the path (Hartono and Abdillah, 2014: 15). Evaluation Model PLS is done by assessing the models outer and inner models. Outer models are used to assess the validity and reliability of the model. Inner models to use to predict the relationship between latent variables (Hartono and Abdillah, 2014: 77)

4. Results and Discussion
   The models in this study consisted of three constructs, namely intellectual capital, financial performance, and the market value of the company. Intellectual capital is treated as an exogenous construct with formative indicators, namely physical capital, human capital and structural capital. Constructs endogenous, the market value of the indicator reflective difreleksikan company that is market to book value and price earning ratio. Intervening variables, the financial performance is reflected from the reflective indicators, namely return on assets, return on equity and employee productivity. Evaluation model in this research is conducted through the outer and inner models models. Outer models is a stage of measurement to evaluate the validity and reliability.

Evaluation Model
   This study uses the construct formative and reflective so that the measured parameter when performing a test construct validity in contrast to construct reflective

Evaluation Outer Model Reflective Constructs
Convergent Validity
   Based on the test results in Table 1 we can see that the construct financial performance and market value have factor loading values greater than 0.6. So variable financial performance and market value passed the test of convergent validity.

<table>
<thead>
<tr>
<th>Table 1. Result Factor Loading</th>
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<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>MTBV &lt; Market Value</td>
</tr>
<tr>
<td>PER &lt; Market Value</td>
</tr>
<tr>
<td>ROA &lt; Financial Performance</td>
</tr>
<tr>
<td>ROE &lt; Financial Performance</td>
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Evaluation Discriminant Validity
   Based on the measurement results Table 2 it can be seen that all the roots AVE value is greater than the AVEnya and test results from cross loading in Table 3 it can be seen that the overall indicators of the construct of the market value, and financial performance generates cross loading greater than 0.7. Thus, the construct indicators of financial performance, the market value has met the criteria in the test discriminant validity.
Effect of intellectual capital on financial performance.

From the analysis results obtained value of t-statistics 1.9725 and 0.0770 for the negative path coefficient value of t-statistic greater than t-table value of 1.65 (one-tailed) concluded that the importance of the first hypothesis is rejected. With negative path coefficient value, intellectual capital to the market value. These results are significantly increasing intellectual capital then the market value will decrease.

2. Effect of intellectual capital to financial performance.

From the analysis results obtained value of t-statistics and path positive coefficient 13.1573 0.4606 as the value of t-statistic greater than t-table value of 1.65 (one-tailed), can dikesimpulkan that the second hypothesis is accepted. With the positive path coefficient value, which means the positive influence of intellectual capital to financial performance. These results are significantly increasing the intellectual capital's financial performance will also increase.


From the analysis results obtained value of t-statistics and path positive coefficient 21.4984 0.7373 as the value of the t-statistic greater than t-table, it can be concluded that the positive effect on the financial performance of the company's market.
value. With the positive path coefficient which means increasing the company's financial performance, the market will increase.

4. The indirect effect of intellectual capital on the market value of companies melalalui financial performance.

In addition, the analysis testing this path there is influence which is the sum total of the effects of direct and indirect effect shown in Table 5.9 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Effect of Direct</th>
<th>Indirect Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>-0.0770</td>
<td>0.4606x</td>
<td>0.2626</td>
</tr>
</tbody>
</table>

In table 7 on the path of intellectual capital on the market value has a direct effect of -0.0770 and indirect effects through the financial performance of 0.3396. Based on the above results it can be concluded third hypothesis is accepted that financial performance is mediating variables that play a role in helping conceptualize or describe the effect of intellectual capital which is an exogenous variable for the market value which is an endogenous variable.

Intellectual Capital Influence on Market Value Company

The study found that the negative effect on the intellectual capital of the firm's market value. The results are consistent with research conducted Solikhah (2010). This study does not support the research conducted by Chen et al. (2005), Amalia (2012), and Yunita (2012) which provides empirical evidence of the positive influence of intellectual capital to the value of the company. Directions negative influence of intellectual capital with the value of the company indicates that the company managing the intellectual capital optimally and efficiently is not appreciated more by investors in the capital market. Investors in Indonesia is still focused on short-term interests, namely by increasing the financial return. Thus, investors tend to look at his physical assets. Investors view the expenditure incurred by the company's intellectual capital (such as: cost control, utilization and development of intellectual capital) only as a burden that will affect the profits of the company. In fact, if seen the benefits of intellectual capital for the company as a source of strategic power, should be recognized as an investment as part of the assets owned by the company. For example, companies that invest in employee education and training will improve the skills and productivity higher than the less skilled. Steffy and Maurer (1988) found an increase in employee capability will feed that returns are greater than the costs incurred by the company due to employee productivity will increase after training. In the context of intellectual capital, human resources (employees) are part of a strategic asset owned companies.

In conjunction with the stakeholder theory, that all the company's activities led to the creation of value / value creation (Wicaksana, 2011). Edvinsson and Malone (1997) argues that one of the benefits of intellectual capital as a tool to determine the value of the company. In the context of intellectual capital, value creation is done by maximizing the utilization of the elements of intellectual capital. Stakeholders can appreciate companies that have superior intellectual capital of the other company because of the superior intellectual capital will help the company to meet the interests of all stakeholders. As one of the stakeholders of the company, the investors in the capital market will show appreciation for the excellence of intellectual capital of the company by investing in the company. Added the investment will have an impact on the increase in the market value of the company. However, empirical evidence from this study shows a negative influence. Thus, the results of the study do not support the theory stakeholder.

Influence of Intellectual Capital and Corporate Financial Performance

The study found that intellectual capital positively affects the performance of the company. The results are consistent with research conducted Ulum (2007), Chen et al. (2005) and Solikhah (2010). Findings from this study indicate that companies listed on the Indonesian Stock Exchange have been successfully using intangible assets, especially intellectual capital as well as in the structural capital, relational capital and human capital. Maximum use of the skills and knowledge of its employees, the information technology that supports employees and connecting companies with customers, as well as organizational climate which is conducive to innovation, problem solving, and development proves that management has successfully managing strategic resources of the company productively for the benefit shareholders.

This is consistent with the concept of Resources Based Theory (RBT). Susanto (2007) argues that in order to compete and have an edge kompotitif, organizations need two main things. First, has the resources and superior quality, be it in the form of intangible assets and tangible assets. Second, have the ability to utilize resources efficiently and effectively. Companies gain a competitive advantage and a good performance by utilizing, own and control an important strategic asset. Barney (1991) divides the strategic assets into 3 parts, namely customer capital, human capital and
structural capital. It shows that intellectual capital is a resource that is scalable to improve competitive advantages, as well as contributing added value to financial performance.

These empirical results are also in accordance with the concept of stakeholder theory. Stakeholder theory explains that the company is not enough to just be responsible to stakeholders but also must maintain relationships with stakeholders to achieve the goal (Donalson and Preston, 1995). Here stakeholder has a role in controlling the use and management of company resources including intellectual capital. Intellectual proper management will provide benefits in the financial side of the company. This advantage also indirectly benefit to its stakeholders.

**Intellectual Capital indirect effect on the Market Value of the Company through Financial Performance.**

Our research found that financial performance is mediated in part the effect of intellectual capital on the market value of the company, however dianuakn mediation model that researchers rejected for not complying with the model of existing research results, where N is expected mediating effect is negative it is positive. The market value is derived from the market perception of stakeholders (investors or creditors) against the company's financial condition and usually reflected in the market value of shares of the company (Khotari and Zimmerman, 1995). The market price of the stock price as a consequence of bargaining between sellers and buyers of shares so that the market value shows the fluctuations of the stock price. Rise and fall of the company's market value is influenced by the company's book value, the rate of profit, the economic picture, as well as speculation and confidence in the company's ability to create value. Pulic (2000) argues that the intellectual capital company's ability to create value will greatly affect its market value. Financial performance is one of the factors that affect the market value of the company. Empirical evidence Agustina (2008), Fiantoro (2010) and Sorganingsih (2010) has shown that a good financial performance would enhance the company's stock price. Investors will give a positive response to the company with good financial performance. Good financial performance will be responded by the market thereby increasing the company's market value.

5. **Conclusion**

This study aims to examine the indirect effect of intellectual capital on the market value of companies with financial performance as an intervening variable. Based on the results of research and discussion conducted in the previous chapter, it can be concluded that the market value of individual companies listed on the Indonesia Stock Exchange was influenced negatively by intellectual capital. Increasingly declining market value of the company, intellectual capital would tend to rise. Meaning that the company's market value declined as investors assume that the costs incurred by the company's intellectual capital such as expenses relating to the control, utilization, and development of human capital, structural capital, and customer capital will reduce corporate profits.

The results showed that the market value is not affected by the intellectual capital but through the company's financial performance. The market value of the company will rise if investors responded positively to the improved financial performance of companies. Financial performance can be increased with an exploration, mengtenisifkan and utilize the components of intellectual capital efficiently and effectively. The findings prove that intellectual capital is the intangible resources of the company are heterogeneous, so the performance of the company with other companies are not the same.

The results also show the company's financial performance is affected by intellectual capital. Intellectual capital is a strategic resource of a firms in creating sustainable competitive advantages. Companies in the Indonesia Stock Exchange has been able to manage intellectual efficiently and optimally so as to create added value for the company that will result in improved financial performance. The results of this study support the resource-based theory, companies are faced with the interests of choosing, owning, and managing strategic resources in running the company to provide prosperity like stakeholders. It also fits with stakeholders thory.

6. **LIMITATIONS OF RESEARCH and ADVICE**

This research is of course not in spite of the limitations, the study does not memisahkan industry based High Intellectual Capital intensive industries and Low Intellectual Capital intensive industries so it can not determine whether the intellectual capital also contributed to the market value of the company which Low Intellectual Capital intensive industries , Examples of High Intellectual Capital intensive industries consist of agriculture, mining, consumer goods industry sector, transport sector and infrastructure, and trade, services and investment. Low Intellectual capital intensive industries consist of basic industry and chemical sector, the various sectors of industry, property and real estate sector, trasporasi and infrastructure sectors and the financial sector. Suggestions for further research by separating or
classifying industries based Intellectual Capital intensive industries High and Low Intellectual Capital intensive industries in order to know the difference.

7. References


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