Do Intellectual Capital and Corporate Governance have Value Relevance to the Market Performance? Evidence from Indonesia

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ABSTRACT

We examine whether intellectual capital and corporate governance have value relevance to market performance. Intellectual capital is measured by VAIC™ (Pulic, 1998). We use annual report data from companies listed on the Indonesia Stock Exchange (IDX) and Corporate Governance Perception Index (CGPI) data from the Indonesian Institute for Corporate Governance (IICG) in the period of 2015–2019. Preliminary findings suggest that intellectual capital does not have value relevance to market performance, but corporate governance does have value relevance to market performance. This paper contributes to stakeholders in making economic decisions.

Keywords: corporate governance; intellectual capital; market performance


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INTRODUCTION

Creating value has been a major goal for companies over the past decade (Haksever et al., 2004; Bowman & Toms, 2010). Various studies have stated that it is important to create company value not only for the owners (shareholders), but also for all parties who have interests in the company (stakeholders). The emerge of consensus related to stakeholder view as stated by Meek and Gray (1998); Riahi-Belkaoui (2003), Bowman and Toms (2010), namely accounting profit is only a measure of return for shareholders and value added is a more accurate measurement created by stakeholders and distributed to other stakeholders. Accounting profit is an escalation of welfare created from the productive use of company resources before these resources are allocated among shareholders, bondholders-workers and government. To evaluate the performance achieved, stakeholder view uses added value as measurement of the welfare obtained.

The resource-based view (RBV) has a perspective that some resources controlled by a company are the main causes of competitiveness and performance of the company. These resources include both tangible and intangible assets which have been internalized by company and used effectively and efficiently to implement competitive and profitable strategies (Hitt et al., 2001). A company has necessary resources to conduct its operations, which are also important to create competitive advantage and strong financial performance. Some resources in the form of tangible assets, such as property, plant, equipment, and physical technology are common assets and can be obtained or sold in the open market. Meanwhile, strategic resources which are generally intangible assets, valuable, unique and difficult to duplicate or replace will provide a competitive advantage for the company (Riahi-Belkaoui, 2003). This competitive advantage in its turn will provide a positive return. The fundamental characteristics of intangible assets as strategic assets are scarce, not duplicable, irreplaceable, and unobservable. Especially the application of this criterion leads to intellectual capital (IC) (Riahi-Belkaoui, 2003; Bharathi Kamath, 2008).

The value of the company is not only assessed from the physical aspect but there are other factors in the form of non-physical aspects (intangibles) that has influence. Companies must have a competitive advantage through increasing intellectual capital which is well explored as a potential to support competitiveness in global market. Companies with good intellectual capital have ability to create innovations and the ability to compete in business world, so that they can generate economic benefits in the future.

An event related to intellectual capital began to develop since the appearance of PSAK No. 19 on intangible assets. According to PSAK No. 19 revised 2009, it was stated that intangible assets were non-monetary assets which could be identified but did not have a physical form and owned to fulfill the need to deliver goods or services or to be rented out to other parties (Indonesian Accounting Association, 2009). Intellectual capital is known as an intangible asset that is also most popular defined as valuable knowledge to a company. Therefore, intellectual capital is more important than capital to determine competitive advantage (Sawarjuwono & Kadir, 2003).

Research on the topic of intellectual capital (IC) and company’s marketing performance has been developed for decades (Riahi-Belkaoui, 2003; Bharathi Kamath, 2008; Pulic, 2000) and it has been widely used. The majority of these studies focus on IC as personal knowledge and organizational knowledge that together contribute to a sustainable competitive advantage. IC functions as all employee capabilities create additional value or everything that can be used by companies to increase competitive advantage (knowledge, information, intellectual property rights, experience).

Mainstream research examined the effect of IC on financial performance (Lazzarotti et al., 2011). It shows that there are many other potential roles of IC on financial performance that can be considered. The appearance of new economy that is caused by information and knowledge, intangible assets whose characteristics are very knowledge based and relevant to resource based theory, becomes an important
element in creating added value. IC which is a strategic intangible asset with effective and efficient use will be able to improve company performance (Goh, 2005; Carmeli & Tishler, 2004; Striukova et al., 2008). Thus, corporate governance is seen as one of the components that can support how IC has an impact on company's marketing performance. The interests of stakeholders will be more accommodated by the existence of corporate governance in the company (Shahzad et al., 2016). Therefore, this research also considers the corporate governance mechanism as one of the components which mediates the role of IC on company’s marketing performance.

This study aims to analyze the effect of intellectual capital and corporate governance on the performance of company and analyze indirect effects of intellectual capital on company performance through corporate governance.

Stewardship Theory

Stewardship theory is a theory stated by Donaldson and Davis (1991) which asserts that management is not motivated for individual interests but for organizational interests. The purpose of all activities done in the organization is for the success and satisfaction of the organization. Organizational success is the maximum satisfaction or pleasure of principal group and management. Maximum satisfaction or pleasure can maximize individual's interests in the organizational group. The value of company can increase the economic value of the company in the future through intellectual capital which can be managed properly by management, where one of the goals of manager is to maximize the value of company (Nuraina, 2012). Managers who are motivated to maximize company value will make efforts to increase it, one of which is through intellectual capital in the organization or entity to achieve company goals. By harnessing technology, strategic planning, profitability, innovation, and improved productivity, intellectual capital serves as a powerful tool to counter uncertainty that poses a threat to a company’s continuity. This comprehensive approach does not only minimize risks but also enhances the overall value of the organization. Furthermore, implementing various improvements within the company leads to a sense of fulfillment among both management and stakeholders, as it signifies the successful achievement of organizational goals and objectives.

Resources Based Theory

Resources Based theory is a theory put forward by Penrose (1959) which is related to how companies can manage their resources so that they can be superior to other companies and beneficial for the sustainable performance of company. A company with superior resources from within the company itself will be superior compared to those that have resources from the outside. Constant good performance of a company can be maintained if the company has unique and well-managed resources (Widyaningdyah & Aryani, 2013). To be able to make intellectual capital to become one of the added values in their company, management must be able to manage the intellectual resources they own so that the resources can be used as one of the advantages of the company compared to other companies. The advantages created within the company can make a company have a competitive advantage that can increase the interest of investors to invest in that company. Several investors investing in companies can increase stock prices and it is an indication that market gives good value to the companies.

Agency Theory

The agency relationship is a contract between principal and agent which is developed by Jensen and Meckling (1976), and Fama and Jensen (1983). Agency theory tries to answer agency problems that occur between parties who work together to achieve goals with different divisions of labor. Agency theory discusses the existence of an agency relationship, where a certain party (principal) delegates to another party (agent), to carry out the activities of a company. The principal wants the agent to act based
on his interests, but because the agent and principal have different preferences, these different preferences have the potential to cause a conflict between the agent and the principal which is called agency conflict.

Agency conflict between the principal of company and the agent occurs when there is an information gap between those two parties. Principals usually concentrate more on diversifying their portfolios and making operational decisions delegated to agents, so the agent is the party who has more information about the condition of the company than the principal. The existence of this information gap encourages agents to take moral hazard actions, where agents neglect their duties and take company management policies to maximize their personal interests. In addition, the information gap also causes adverse selection problem, namely the problem of uncertainty whether the information presented by the agent, which are used for taking principal decision is the information that reflects the actual performance of the agent.

**Intellectual Capital**

Intellectual capital is appropriate capital in all knowledge-based organizations. Intellectual capital is the interaction of human capital, customer capital and structural capital (Sudibya & Restuti, 2014). Company resources are not merely in the form of tangible assets, there are intangible assets which are rare, endless, priceless and cannot be replaced (Lestari, 2017).

Value Add Intellectual Coefficiency (VAICTM) model is a model used to provide information of value creation efficiency of tangible and intangible assets in a company developed by Pulic (1998). The calculation of Value Add (VA) is started by measuring the difference between the output and the input. The output (OUT) is the total sales or income covering all sales activities of products or services. Input (IN) is all expenses spent to obtain income. In this model, employee expenses are not included in the IN because of the active role of employees in the process of creating value and intellectual abilities (which are represented by labor expenses) are not counted as costs.

Modified-Value Added Intellectual Coefficiency (M-VAIC) model is a measurement of intellectual capital based on VAICTM as a model proposed by Pulic (1998) which is begun by calculating the Value Add. The difference between the M-VAIC method and VAICTM method lies on the addition of a new Relation Capital Efficiency (RCE) component that is obtained from the amount of costs for marketing. Based on research conducted by Ulum et al., (2014) about measuring Intellectual Capital in the banking industry with the implementation of the M-VAIC method shows that the M-VAIC method can be used to measure intellectual capital in all industrial sectors, not only in the banking sector.

**Marketing Performance Measurement**

The value or performance of a company is an important factor for investors in making investments because it is related to how the company is valued in the market. The increase of company's marketing performance can attract investors to invest. The maximalization of company value can fulfil shareholders' prosperity (Kherismawati et al., 2016). To measure firm value, one of the methods which can be used is Tobin's Q. The Tobin's Q ratio was developed by Professor James Tobin (1967). This ratio shows the return value of the amount invested based on current financial market estimation.

**The Influence of Intellectual Capital on Company's Marketing Performance**

Intellectual capital is a capital owned by knowledge-based companies. Intellectual capital is an interaction created from human capital, organizational capital, and customer capital. Intellectual capital that has been managed properly will produce economic benefits which are useful for the company's survival in the future. Investors will invest in companies that have economic benefits in the future. Studies conducted by Berzkalne and Zelgalve (2014) and Chizari et al., (2016) have confirmed that
intellectual capital with the VAICTM method influences the firm value. In addition, a research by Hariyati, Subroto, Wahyudi, and Riyanto (2017) with M-VAIC method in measuring intellectual capital confirmed that there is a significant effect of intellectual company on company's marketing performance. Based on the explanation above, a hypothesis that can be formulated is as follows:
H1: Intellectual capital has value relevance to the market performance

The Influence of Corporate Governance on Company's Marketing Performance

Research examining the relationship between corporate governance and company’s marketing performance still shows various results. This is due to differences in proxies of corporate governance used. Corporate governance is a series of mechanisms that can protect minority parties (outside investors/minority shareholders) from the expropriation of managers and insiders with an emphasis on legal mechanisms (Shleifer & Vishny, 1997). The legal approach of corporate governance means that the key mechanism of corporate governance is the protection of external investors, both shareholders and creditors through the legal system, which can be interpreted by law and its implementation.

Research by Razali and Arshad (2014), proved that the corporate governance structure can reduce fraud in financial reporting, showing that corporate governance is an important element in improving the quality of financial reports. Armstrong, Balakrishnan, and Cohen (2012) and Anderson, Mansi, and Reeb (2004) proved that the structure of corporate governance improves the quality of financial statement information. The hypothesis that explain the result is formulated as follows:
H2: Corporate Governance has value relevance to the market performance

The Influence of IC on Company's Marketing Performance through Corporate Governance

Lev (2000) stated that intangible capital is defined as a collection of claims for future profits that have no financial or physical manifestation. Braune, Sahut, and Teulon, (2020) classify IC into three categories, namely human capital, organizational (structural) capital, and relational capital. Based on the OECD definition, corporate governance is a management and control system that is implemented in a company. This system has characteristics that explain the relationship between the board of directors of a company and stakeholders. The general standard of implementing corporate governance is to maximize the value of company or in other words fulfill the interests of shareholders and managers at the lowest cost. IC which is a strategic intangible asset with effective and efficient use will be able to improve company performance (Goh, 2005; Carmeli & Tishler, 2004; Striukova et al., 2008). Related to this, corporate governance is seen as one of the components that can support how IC has an impact on the performance of a company. Stakeholders’ interests will be more accommodated by the existence of corporate governance in the company (Shahzad & Sharfman, 2016). Therefore, this research also considers the corporate governance mechanism as one of the elements that mediates the role of IC on the performance of company. The hypothesis is formulated as follows:
H3: Intellectual Capital has an indirect value relevance to the marketing performance through Corporate Governance

RESEARCH METHOD

Some data used in this study are secondary data in the form of these following data, namely: Financial Report Data from manufacturing companies listed on the Indonesia Stock Exchange for the period of 2015-2019, Corporate Governance Perception Index (CGPI) data from The Indonesian Institute for Corporate Governance (IICG), and purposive sampling method was used as data collection method in this research. It was used to take the research samples. The research sample criteria are as follows: All companies are listed on the Indonesia Stock Exchange (IDX), the financial data and other
data needed in the operationalization of research variables are available, and complete data for the period of 2015-2019 are present.

Manufacturing companies are chosen as the focus of this research because they often rely heavily on intellectual capital, which includes technological know-how, research and development capabilities, and brand value. Moreover, manufacturing companies typically have significant tangible and intangible assets, making it relevant to examine the value relevance of intellectual capital in this sector. The selected timeframe of 2015-2019 allows for a comprehensive analysis of the relationship between intellectual capital, corporate governance, and market performance over a specific period. By studying this period, the research can capture the influence of various economic, social, and regulatory factors that might have affected the selected manufacturing companies during those years.

RESULTS AND DISCUSSION

Table 1. Results of the H1 and H2 tests

Hypothesis testing was done using panel data with STATA15. Testing the influence of intellectual capital and CG on marketing performance was carried out using the best model based on the Chow Test, Lagrange Multiplier (LM), and Hausman. The test results show that random effect model is used as suitable test. Multicollinearity is detected by using the VIF value of each variable with a VIF value of is less than 10. Variables which show multicollinearity problems can be solved by doing data centering. Variables that still had indications of multicollinearity after data centering were decided to continue to be included in the model because theoretically these variables influence the dependent variable and the estimation results were still used for hypothesis testing. The results of the H1 and H2 tests are presented in Table 1.

Intellectual Capital has Value Relevance to the Market Performance (H1)

The results of data calculations for H1 which test Intellectual capital on marketing performance show the coefficient value of -0.0050792 and the prob value. t-stat of 0.274 (significance value at = 0.5).
Prob significance value of t-stat of intellectual capital was above 0.5, so that it can be concluded that intellectual capital has no value relevance to the marketing performance, meaning that hypothesis 1 (H1) was rejected.

This is consistent with a previous research done by Lestari (2017) which stated that intellectual capital has no effect on marketing performance. However, this result is not in accordance with the research conducted by Berzkalne & Zelgalve (2014) and Chizari et al., (2016) which explained that intellectual capital by applying AICTM method has an effect on firm value. Research by Hariyati et al. (2017) applying -VAIC to measure intellectual capital show that there is a significant effect on marketing performance. This study does not prove the influence of intellectual capital on marketing performance. This indicates that the existence of intellectual capital is not able to create firm value yet. The increase of marketing performance is higher because of the ability of the company to generate profits through company's production. In addition, these results also show the lack of ability of company to manage funds to create good routine structures and processes, such as the operational system of company, organizational culture, procedures, database, management philosophy and all forms of structural capital owned by the company in supporting the efforts of its employees.

The results of this study are also confirmed by the condition of Bank Mandiri company which has a VAIC ratio of 219.43 but is followed by a low market performance of 0.00167.

These results indicate that investors do not properly appreciate the efforts of company in fulfilling the company's routine processes and structures which support the efforts of employees and company operations to generate added value. It shows the lack of ability of company to manage funds to create good routine structures and processes, such as the operational system of company, organizational culture, procedures, database, management philosophy and all forms of structural capital that the company have in supporting the efforts of its employees.

**Corporate Governance has Value Relevance to the Market Performance (H2)**

The results of data calculation for H2 examining corporate governance on marketing performance showed the coefficient value of -9.304704 and the value of prob. t-stat was 0.070 (significance value at = 0.5). The significance value of prob. t-stat of corporate governance was below 0.5, so that it can be concluded that corporate governance has value relevance of marketing performance, it means that hypothesis 2 (H2) was accepted.

Corporate governance is a series of mechanisms that can protect minority parties (outside investors/minority shareholders) from expropriation done by managers and insiders with an emphasis on legal mechanisms (Shleifer & Vishny, 1997). The legal approach of corporate governance means that the main mechanism of corporate governance is the protection of external investors (outside investors), both shareholders and creditors, through the legal system, which can be interpreted by law and its implementation.

This is consistent with research by Razali and Arshad (2014), which proved that the structure of corporate governance can reduce fraud in financial reporting, which shows that corporate governance is an important element in improving the quality of financial reports. Armstrong et al. (2012) and Andersonet et al. (2004), proved that the structure of corporate governance improves the quality of financial statement information.

**IC has an Indirect Value Relevance to the Market Performance through Corporate Governance**

The test results for H3 examining indirect value relevance of intellectual capital on marketing performance through corporate governance showed the coefficient value -0.0009805 and the prob value. t-stat was 0.507 (significance value at = 0.5). The Prob significance value of t-stat was above 0.5,
so that it can be concluded that intellectual capital does not have value relevance to marketing performance through corporate governance, which means that hypothesis 3 (H3) was rejected.

Table 2. Results of the Chow Test, LM and Husman Test

| Indirect effects | OIM Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] |
|-----------------|----------|-----------|--|-------|---------------------|
| Structural | | | | | |
| cgedit | 0 (no path) | | | | |
| vaic | 0 (no path) | | | | |
| ln_asset | 0 (no path) | | | | |
| lev_n | 0 (no path) | | | | |
| growth | 0 (no path) | | | | |
| market_trf | cgedit | 0 (no path) | | | |
| vaic | -0.0179444 | 0.013367 | -1.36 | 0.17 | -0.041041 to 0.0042752 |
| ln_asset | 0.0015162 | 0.0018545 | 0.82 | 0.41 | -0.0003507 to 0.0033631 |
| lev_n | 1.44 | 0.150 | 9.54 | 0.00 | 1.14 to 1.74 |
| growth | -0.2192574 | 0.7540371 | -0.29 | 0.77 | -1.697143 to 1.258628 |

It shows that governance or corporate governance is not the right component which can mediate the role of intellectual capital on the marketing performance.

CONCLUSION

The purpose of this study is to analyze the effect of intellectual capital and corporate governance on the performance of company and analyze indirect effects of intellectual capital on company performance through corporate governance.

This research was conducted in the context of companies listed in the Corporate Governance Perception Index (CGPI) of The Indonesian Institute for Corporate Governance (IICG).

This research cannot prove that intellectual capital have value relevance to marketing performance. It indicates that the existence of intellectual is not able to create firm value. The increase of marketing performance is higher because of the ability of company itself to generate through company’s production. In addition, the results also show the lack of ability of company in managing funds to create good routine structures and processes, such as the operational system of company, organizational culture, procedures, databases, management philosophy and all forms of structural capital owned by company in supporting the efforts of its employees.

The testing of the indirect value relevance of intellectual capital on marketing performance through corporate governance in this study is also not proven yet. It shows that governance or corporate governance is not the right component which can mediate the role of intellectual capital on marketing performance.

Corporate governance is proven to have value relevance of marketing performance. Corporate governance has a major contribution in increasing company value and marketing performance. This study has several limitations as follows: First, the number of companies which already have a Corporate Governance Perception Index (CGPI) from The Indonesian Institute for Corporate Governance (IICG) is relatively limited and it consists of companies from various types of industries. Future research can consider the use of corporate governance mechanism measurements by using elements, such as the
composition of the board of commissioners, the composition of the board of directors, the audit committee, and the structure of ownership. Second, intellectual capital measured by VAIC does not fully measure the role of intellectual capital on marketing performance. Future research may consider different VAIC measurement, such as M-VAIC. Third, this study does not consider the effect of interaction of intellectual capital and corporate governance on marketing performance.

REFERENCES


