

Does intellectual capital drive firm performance? Data from secondary sector companies on the Indonesia Stock Exchange

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Abstract

This research aims to determine the effects of Intellectual Capital, Leverage, and Liquidity on Firm Performance. Sample are secondary sector companies on the Indonesia Stock Exchange and used panel data regression for analysis; this research found that Intellectual Capital and Liquidity had a significant positive effect on Firm Performance, and Leverage did not have a considerable impact.

Keywords: Intellectual capital, leverage, liquidity, firm performance

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Introduction

Every company strives to achieve maximum profits with what resources are available at its disposal effectively and efficiently. Currently, companies depend on digital devices and networks for their work achievements to improve their performance qualities. Even some companies invest financial resources in considerable amounts to build highly effective organizations and increase their performance efficiency (Lee, 2016). Profits are central for companies' attempt to maintain their sustainability, grow, develop, and face competition. Various strategies have been executed, one of which is implementing management policies to manage business performance for companies to compete, design, and maintain their sustainability (Aji, Widarno, dan Astuti, 2016).

The return on asset ratio provides information regarding a company's ability to generate a net income at a certain asset level. By paying attention to this ratio, one will know the story at which return on investment in a company is sufficient to satisfy the investor. For this reason, potential investors always pay attention to this ratio before making investments in specific companies (Zuliarni, 2012). The firm performance depicts a company's financial condition, which is revealed through analyses with financial analysis instruments. In this manner, how good or bad a company's situation is and how it reflects its work achievements in a period can be identified. Therefore, resources optimization is suggested to be performed to face environmental changes (Natalia and Siswantaya, 2014).

Intellectual capital is an intangible asset in the form of information of human resources and their performance in driving the company. The comprehensive intellectual capital measurement system is divided into three categories: individual, group, and organization. In some cases, the intellectual capital system is handy through the information it provides a company with (Kianto, Ritala, Vanhala, and Hussinki, 2018). To achieve maximum company profits, decision-making is one of the essentials in a business. One of the key internal factors in decision-making is information on financial conditions and human resources. Financial condition information can be derived from various sources, including liquidity and leverage. Liquidity usually informs on the current ratio and quick ratio (Ingga, 2017). Besides, a company's prospect can be seen from its leverage by measuring fixed assets to maximize its profits and by looking into its percentages of income and sales. The impact of leverage, especially short-term leverage, on firm performance is critical. This case unveils the consequence of a preference for a leveraged form and the company's lacking conditions or diminished performance quality (Ibhagui and Oloyoko, 2018).

In the case of disproportionate short-term liabilities, liquidity can also be defined as a company's ability to pay off its debts or meet its liabilities that are payable with current assets. A company has sound liquidity if its existing assets

are more significant than its liabilities (Adrian and Boyarchenko, 2018). Research into the effects of intellectual capital, leverage, and liquidity on firm performance is relevant because the rapid development of the technology industry demands increased uses of intellectual capital. Company funding for assets or daily production activities always draws attention from various parties interested in the company's prospect. A company with efficient asset use will have increased ROA.

Marzuki (2018) finds that using intellectual capital resources correctly will improve a company's ROA. The research by Fajarini and Firmansyah (2012) used a population of LQ 45 companies in Indonesia in the period 2005–2007 investigated intellectual capital as an independent variable and firm financial performance as a dependent variable. STVA and VACA were the most significant indicators of intellectual capital, which was influential to the future financial performance of companies in Indonesia. Sirojudin and Nazaruddin (2014) examined companies in the banking, telecommunication, electronic, computer, and multimedia industries. The analysis results showed that intellectual capital and intellectual capital disclosure had significant positive effects on the firm performance index. The extent of intellectual capital a company owned turned out to impact the company's value.

A significant number of knowledge-based companies that manifest their competitive advantage in knowledge and skills indicate the strategic role of intellectual capital in the business world. The link between intellectual capital and a company's strategies is demonstrated by the company's innovations and marketing strategies, including the presentation of products in an attractive, competitive, and transaction-friendly way. The success of a strategy depends on knowledgeable and skilled human resources (human capital), the organization's internal structure (structural capital), and customer loyalty (customer capital), which are the components of intellectual capital (Marfuah and Ulfa, 2014).

Hypothesis 1: Intellectual Capital has a positive effect on firm performance

Leverage can increase the investment capacity in developing an information system to improve a company's competitiveness and advantages. The weakness lies in the loan payment in installments and interest payments, limiting human resources funding (Soewarno, 2011). Research by Ibhagui and Oloyoko (2018) showed that leverage and firm performance are interrelated. Leverage analysis has a role in improving strong performance since it helps companies funded by debts be informed about the effect of the loans they take on the firm's performance improvement (Isbanah, 2015). Isbanah (2015) studied a population of companies that reported ESOP on the Indonesia Stock Exchange from 2010–2013. The results showed that leverage hurt a firm financial performance.

Russian Sari & Aslah (2016), on the financial report data of manufacturing companies listed on the IDX between 2010 and 2013, revealed through its hypotheses testing that the variables DTA, DER, TIER, and DFL had significant effects on ROA. An increase in leverage raised the risk as debts would primarily fund the companies. In the face of non-payment risk, the companies were obliged to pay the debts and the interests, which would lower the companies' profits and even possibly take the companies to bankruptcy (Setyobudi, Amboningtyas, and Yulianeu, 2017). A low leverage ratio would reduce the risk for the companies at times of bad economic conditions, but the return would be low during better economic conditions.

Hypothesis 2: Leverage harms firm performance

Liquidity indicates that a company can meet its short-term financial liabilities with the current funds available. However, liquidity that is too big would reflect that the company cannot manage its existing assets maximally, causing the financial performance to be less optimal and allowing the possibility of profit manipulation to tailor the information of the profits (Astika and Dira, 2014). For a company to remain liquid, the current funds available must be greater than the current liabilities. A non-liquid company is an unhealthy company. The liquidity ratio measures a company's ability to meet its short-term liabilities (Parwati and Sudiarta, 2016). Liquidity is calculated by comparing short-term (current) liabilities against short-term resources. Short-term liabilities include business debts, short-term notes receivable, debts due less than one year, and other expenses, while short-term resources include cash, securities, business receivable, and inventories (Wibowo and Wartini, 2012).

Hypothesis 3: Liquidity has a positive effect on firm performance

This study contributes to expanding the literature on the importance of intellectual capital, leverage, and liquidity on firm performance. This study also answers the lack of literature that samples secondary sector companies listed on the Indonesia Stock Exchange. Furthermore, the rest of this paper will describe the method, empirical results, and conclusions.

Method

The data are collected from 2013–2018 annual reports of the secondary sector companies listed on the Indonesia Stock Exchange, the sampling process based on the criteria as seen in Table 1, and the research model follows the equation (1) which adopted from Zuhroh, et al. (2021); where Y is firm performance (ROA); α is Constant; β is coefficient of regression; X1 is intellectual Capital (VAICTM); X2 is leverage; X3 is Liquidity; μ is the effect of other variables or residuals (error term).

$$ROA = \alpha + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \mu \quad (1)$$

Table 1. Sample criteria

Criteria	Number of Companies
Secondary sector companies listed on the IDX in 2019	141
Secondary sector companies listed after 2013	(25)
Companies publishing financial statements in foreign currency (USD)	(28)
Companies with negative net incomes over the research period	(38)
Companies not publishing annual reports completely over the research period	(23)
Number of companies used as sample	27
Number of years	6
Total number of sample data	162

Empirical Result

From the panel data regression with the random-effects model, the following regression equation was obtained relatively higher R-squared, 0.761. The data analysis also shows that the Prob(F-statistic) value was 0.000000 (< 0.05). It could be concluded that the three independent variables, intellectual capital, leverage, and liquidity, simultaneously influenced the dependent variable firm performance.

Based on Table 2, the significance (Prob.) level of the variable intellectual capital was 0.0112. It could be concluded that the independent variable intellectual capital influenced ROA. Therefore, the hypothesis saying that intellectual capital affects firm performance was accepted. Companies with increased intellectual capital will also experience an increase in net income, which will, in turn, return or improve their assets. Employee performance is measured according to the standard operating procedure of the company. If the employee performance quality is good, the company will gain profits and maintain the company's existence. Intellectual capital significantly affects the dependent variable firm performance in secondary sector companies listed on the Indonesia Stock Exchange from 2013–2018. In this research, intellectual capital had a significant positive effect, meaning that when intellectual capital had an increase of 1%, the firm performance (return on asset) would increase by 2.573887%. Intellectual capital influenced firm performance at present and in the future (Natalia and Siswantaya, 2014).

Meanwhile, the variable leverage had a significance (Prob.) level of 0.5635 (> 0.05). It could be concluded that the leverage did not influence ROA. Companies with high levels of debt use would face difficulties maintaining their sustainabilities and running their operations, leading to a risk of loss. In

other words, negative net income would be produced, or no asset increase would take place. If the debt used by the companies is small in amount, the risk of loss faced in generating profits would be small too. Besides, the interest burden borne by the companies would not become too large since the companies did not have too considerable a debt. The variable leverage did not partially affect the return on assets, presumably because the company management had yet to manage the company debts efficiently and effectively (Rusdiana Sari and Aslah, 2016).

Table 2. Research results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Intellectual Capital	0.159587	0.062002	2.573887	0.0112
leverage	0.007096	0.012254	0.579074	0.5635
Liquidity	0.417208	0.173454	2.405292	0.0175
C	8.779940	1.098350	7.993757	0.0000
<i>R-squared</i>	0.761			

Table 2 also shows that the variable liquidity had a significance (Prob) level of 0.0175. It could be concluded that ROA was influenced by liquidity. Thus, the hypothesis saying that liquidity affects firm performance could be received. It could be interpreted that liquidity significantly influenced the dependent variable firm performance in secondary sector companies listed on the Indonesia Stock Exchange in 2013–2018. In this research, the variable liquidity had a significant positive effect, meaning that when liquidity increased by 1%, firm performance (return on asset) would also increase by 2.405292%. The liquidity ratio indicates a company’s ability to meet its short-term financial liabilities promptly. A company’s liquidity is shown by the size of current assets or assets, which can easily be converted into cash, including cash, securities, receivables, and inventories (Utami and Pardanawati, 2016).

Conclusions

Based on the hypotheses testing results, the following conclusions were drawn. Intellectual Capital and Liquidity had positive effects on Firm Performance in secondary sector companies. Meanwhile, Leverage did not affect Firm Performance in secondary sector companies listed on the Indonesia Stock Exchange in 2013–2018. Future researchers are recommended to make an extension in research object determination. For example, they may use companies in other sectors, different research periods, or other variables.

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