ANALYSIS OF THE INFLUENCE INTELLECTUAL CAPITAL ON COMPANY FINANCIAL PERFORMANCE THROUGH GREEN INNOVATION COMPANY STUDY LQ-45

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Abstract
Intellectual capital and green innovation are an important issue in the current era of technology and globalization. Companies are required to implement environmentally friendly technology in both business processes and marketed products. The company's business strategy to improve company performance through intellectual capital (resources-based view) and green Innovation must be implemented to achieve company sustainability. Data was collected from 45 companies registered as LQ-45 which are listed on the Indonesia Stock Exchange while participating in the public information disclosure program regarding environmental compliance (PROPER) during 2021-2022 based on the structural method equations modeling (SEM). The study results that intellectual capital has a positive and significant effect on the company's financial performance. intellectual capital has a negative and significant effect on green innovation. Meanwhile green innovation has a positive and significant effect on financial performance. Intellectual capital has a positive and significant effect on financial performance through green innovation. Value of intellectual capital influence on financial performance is directly greater than mediated by green innovation. These findings can help stakeholders (financial institutions, government, and society) and shareholders to map a green innovation position company commitment and to encourage implementation in an integrated with intellectuals' capital (resources-based view) to increase company profits.
Keywords*: Intellectual Capital, Financial Performance, Green Innovation*
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1. Introduction

The current rapid global economy is giving rise to business competition own advantages; thus, companies compete provide a product with its own advantages. Company on Basically it was founded to create added value, especially in generating profits. Company executives are required to learn how to manage the company's internal resources effectively to maximize the company's financial and strategic goals. Intellectual capital has become the best-known factor in the performance of an organization's tangible assets (Sadalia et al., 2018). Nevado-Pena et al (2015) emphasized that Intellectual Capital has replaced financial resources and structural organizations. Companies that organize through effective position placement and intellectual management with good capital, you will be able to be successful in your business (Lasisi et al., 2023). Companies that apply economic principles are generally not only oriented towards achieving maximum profits but try to increase the value of the company and the prosperity of its owners. Apart from aiming to be profit-oriented, companies are also required to have a commitment to maintaining the business area environment. Thus the company has a strategic plan in order to achieve what has been determined, with reference to the share price. The higher the share price, the higher the company value (Horne et al, 2014).

In the Republic of Indonesia Government Regulation Number 42 of 2012, it is stated that a company's obligation in running its business is to have sustainability in its business sector by maximizing existing resources through PROPER, namely the Public Information Openness Program regarding Environmental Compliance. PROPER is one of the government policies to improve environmental management performance. The government expects the business world to follow the laws and regulations that have been established. Therefore, PROPER can represent company transparency in managing the Indonesian environment. The PROPER assessment consists of two categories, namely

compliance assessment and assessment criteria beyond those required by regulations. Companies are evaluated in terms of their compliance with environmental management regulations. Through superior environmental awareness programs, companies can improve their reputation, image and credibility and have a positive impact, enabling them to win awards and increase share prices for stakeholders (Gürlek & Tuna, 2018). A company's ability to make large donations to society and the environment as part of its corporate social responsibility program will improve the company's image and benefit consumers (Mazodier et al., 2020).

The Indonesian government encourages companies to carry out effective company management by paying attention to methods, production processes, production, business management, waste management with the aim of realizing a green industry. This is stated in Law Number 3 of 2014 and Regulation of the Minister of Industry Number 51 of 2015. The company's strategy in realizing a green industry can be done in two ways. First, develop existing industries towards green industries of existing industries). Second, building new industries by applying the principles of green industry (creation of new green industries). The strategy in realizing this green industry cannot be separated from the role of intellectual's capital (IC) of the company where competent IC is expected to be able to achieve the company's strategic goals and create company sustainability.

The PROPER program in 2022 will experience an increase of 23 percent, from 2,593 companies in 2021 to 3,200 companies in 2022, consisting of 1,180 Agroindustry, 1,356 Manufacturing Services Infrastructure, and 664 Oil and Gas Energy Mining. In 2022, 51 companies received a gold rating, 170 companies received a green rating, 2,031 companies received a blue rating, 887 companies received a red rating, two companies received a Black rating, 59 companies were subject to law enforcement or did not operate/suspended. Intellectual effective capital is an indicator of a company's success in managing business in determining pro-environmental policies to answer national and global challenges.

Based on phenomena related to the role of intellectual's capital and its relationship with green innovation and company value, researchers are interested in analyzing intellectual influence capital on company value and the green influence innovation. Researchers conducted research on companies that fall into the LQ-45 category in 2021 and 2022 and carried out PROPER. In measuring intellectual efficiency capital using the VAIC method which consists of human capital efficiency (HCE), social capital efficiency (SCE), capital employed efficiency (CEE). Green innovation is measured using PROPER parameters. Meanwhile, the company's financial performance is measured through return on assets (ROA).

2. LITERATURE REVIEW

2.1 Intellectual Capital

Intellectual capital (IC) or intellectual capital is the transformation of knowledge into value (Edvinsson, 1997). In 1969, Kenneth Galbraith, an American scholar, innovated the IC concept for the first time. Afterwards, the efficacy of IC was extended to the Skandia model by Leif Edvinson in 1997. In this model, IC consists of four key elements: Customer capital, innovation capital, human capital, and process capital. Some experts identify IC into various segments. (Pedro et al., 2018) wrote a review paper on 777 leading research articles and found that IC consists of 25 main dimensions. Of this number, 81.3 percent of research mentioned human resources, 75.2 percent used structural capital, 57.7 percent used relational capital, and 12.7 percent used working capital respectively. Therefore, it can be concluded that IC includes four main components: Structural, Human, Relational and Labor Capital. (Ulum et al., 2014) also used these four elements to measure IC efficiency by extending Pulic's original VAIC model. Resource-based explains that organizational achievements depend on the proper utilization of all resources (intangible and tangible).

Human resources capital (HC) are the knowledge, talents, skills, competencies, and other intangible attributes of the workforce that can create value for the organization. According to HC theory, companies can derive value from employees' skills, experience, and knowledge (Becker, 1993). With this statement, (Kannan & Aulbur, 2004) state that the value of an organization's human resources is measured by how much it invests in the education, skills, and potential for future advancement of

its employees. According to Luthy (1998), HC refers to an organization's ability to solve business challenges through the integrated efforts of its employees. Moreover, it is the sum total of a person's knowledge, skills, and abilities (Martínez, 2006). Individuals who have all their knowledge assets are referred to as human capital.

Structural capital (SC) includes both intangible and tangible components. What remains of a business after all its human resources have gone home is called SC (Edvinsson & Sullivan, 1996). Corporate information technology, customer databases, commercial and industrial practices, and strategic plans are examples of intangible aspects. In terms of business acumen, structural capital is about a company's structure and information systems (Nazari & Herremans, 2007). (Manzaneque et al., 2017) emphasized that SC includes all internal processes for disseminating, communicating, and managing scientific and technical knowledge. Soewarno and Tjahjadi (2020) stated that SC consists of company databases, strategies, organizational procedures and other activities that have higher value than just real activities.

Relational capital (RC) is the current and potential future value of an organization's relationships with customers and others outside the business (Engstrom et al , 2003). It consists of the total value of a business' relationships with suppliers, customers, industry groups, and markets. Customer capital (CC) also includes things such as understanding and trust, as well as loyalty and the strength of customer relationships (Kannan and Aulbur , 2004). RC is what a company knows about people outside it, for example customers (Soewarno and Tjahjadi, 2020). Based on Lee's statement (2010), RC is the total of all assets that a company uses to organize and manage its relationships with the outside world.

The relationship and impact of VAIC on ROA and ROE is shown to be positive by research (Kasoga, 2020; (Xu & Wang, 2018); (Nadeem, 2017) ; (Haris et al., 2019); (Haque & Weqar, 2022). The results found a negative influence on ROA were found by (Shahwan & Fathalla, 2020) in Egypt from 81 non-financial companies during 2014-2018. Further studies by Ozkan et al (2017) revealed an insignificant effect on ROA and ROE. From this literature, we assume that a higher VAIC value has a positive effect on company performance. Intellectual Capital is recognized as an important element for the creation of value in an organization (Stuart & Brandenburger, 1996). Knowledge base resources are a key indicator for any organization. Business growth depends on the competence of its human resources and structural capital. IC is now known as a more sophisticated tool for measuring the profitability of a company besides traditional financial ratios. There are rapid changes in the business environment and traditional financial measures for calculating performance are considered incomplete (Gan & Saleh, 2008).

2.2 Green Innovation

Green innovation or environmentally friendly innovation refers to reducing the risk of environmental exploitation and the negative impact it has on resources, including energy (Basana et al., 2022, Lisha et al., 2023). Environmentally friendly innovations carried out by companies can produce goods and provide services that should have a small or minimal environmental impact (Wong et al, 2012, Ali et al., 2022). Environmentally friendly innovation with new technology and collaboration in saving energy, avoiding pollution, recycling waste, making environmentally friendly products, and managing the environment around the company are examples of green innovation (Tang et al, 2017). In addition, implementing environmentally friendly innovations in business increases competition (Jiwa et al., 2020). In addition to increasing environmental efficiency, it also involves reducing chemical waste disposal costs, helping companies comply with government regulations, and generating positive reactions from stakeholders to increase consumer and achieve superior product quality (Chiou et al, 2011). Environmental innovation is a reasonable basis for companies to implement environmentally friendly innovations to address rapid climate change as a corporate environmental responsibility (Sáez-Martínez et al., 2016).

Eco-innovation aims to improve the company's environmental and economic performance by implementing eco-efficiency (Leitão et al., 2019); Sáez-Martínez et al, 2016). The supporting element in green innovation shows the company's support by paying attention to social expectations and pressure from stakeholders who are willing to take responsibility but has a significant impact on social

expectations as awareness in taking opportunities to utilize environmental sustainability (Lee et al., 2018).

2.3 Company Financial Performance

According to Mulyadi (2007) financial performance is the periodic determination of the operational effectiveness of an organization and its employees based on predetermined targets, standards and criteria. Meanwhile, according to the Indonesian Accounting Institute (IAI), financial performance is a company's ability to manage and control its resources. Company performance can be measured using financial ratios (Prasinta, 2012). Investors make capital investments, one of which is looking at the profitability ratio (Prasinta, 2012, Irawati et al., 2019). The profitability ratio used in this research is Return on Assets (ROA) because it can provide an overview of the level of return that investors can obtain on their investment (Prasinta, 2012).

ROA analysis in financial analysis has a very important meaning because it is a comprehensive technique. ROA analysis is an analysis technique that is commonly used to measure the level of effectiveness of a company's overall operations.

Kasmir (2012) Return on Assets (ROA) is a ratio that shows the return on the number of assets used in the company. Apart from that, ROA provides a measure of management's effectiveness in managing its investments. And Hery (2016) Return on Assets (ROA) is a ratio that shows how much assets contribute to creating net profit. In other words, this ratio is used to measure how much net profit will be generated from each rupiah of funds embedded in total assets. The greater the ROA, the greater the level of profit achieved by the company and the better the company's position in terms of asset use. According to Munawir (2007), Return on assets is a company's financial ratio that is related to profitability, measuring the company's ability to generate profits or returns at certain levels of income, assets and share capital. Abdullah (2005) states that return on assets is a ratio that measures a company's effectiveness in generating profits by utilizing the assets owned by the company.

This profitability ratio is used to analyze and to find out information on the health of a company. Munawir (2007) has the advantage of ROA ratio analysis, namely that it is comprehensive, can be used to measure the efficiency of actions carried out by divisions/sections, can also be used to measure the profitability of each product produced by the company and is useful for control purposes, is also useful for planning. Apart from that, with ROA, investors can see how the company optimizes the use of its assets to maximize profits, which is also the goal of GCG to use assets efficiently and optimally (OECD, 2004).

Based on the opinion above, it can be concluded that return on assets (ROA) is a ratio used by companies to measure the company's ability to obtain net profits from managing the assets it owns. The higher this ratio, the better the productivity of assets in obtaining net profits. By knowing ROA, we can assess whether the company is efficient in using its assets in operating activities to generate profits. Net profit (net income) is the main measure of a company's overall success. ROA can help companies that have implemented good accounting practices to measure the overall efficiency of capital use for everything that affects the company's financial condition so that the company's position in the industry can be known.

2.4 Relationship between Intellectual Capital and Company Financial Performance

Employees who are competent and highly committed to the company can show the company's productivity and profitability. Competence and commitment need to be supported by company facilities. The company's financial funds/physical assets are needed in order to have good employees and supporting facilities. This combination suggests that companies need to demonstrate intellectual capital.

Good productivity and profitability mean good financial performance and attracts investors to invest in the company. Increasing intellectual capital as an opportunity to increase company value is carried out through profit creation, positioning strategy, innovation, consumer loyalty, cost reduction and increased productivity (Ulum et al, 2008).

Intellectual capital is an intangible asset owned by a company and is believed to be able to provide added value to the company in creating innovative products and services that are sold to customers.

This innovation will create a competitive advantage which is believed to be able to make the company dominate the market share.

The superiority of intellectual capital in creating competitive advantage and added value is considered capable of contributing to increasing company value. Ownership and use of intellectual resources allows investors to reward companies that can create added value in a sustainable manner (Oktari et al, 2016). Signal theory provides the view that companies will voluntarily disclose more information than they should to provide a positive signal, so that companies tend to increase the information provided to stakeholders by disclosing in annual reports. The influence of intellectual capital disclosure and company value is explained in research conducted by Jihene and Paturel (2013). Information regarding intellectual capital disclosed in the annual report contributes to the creation of company value. Intellectual capital information is considered an important piece of information in making decisions regarding company financial performance, investment and funding. Companies will report intellectual capital to provide signals and attract potential investors to invest. The capital market accepts intellectual capital as an opportunity for companies to grow in the long term, and as a strategic indicator or measure of the company's future value and condition. These results are also supported by research conducted by (Berzkalne & Zelgalve, 2014)which states that intellectual capital has a positive and significant effect on company financial performance. Investments in intellectual capital enable companies to innovate and signal to the market about growth opportunities, which in turn drives improvements in corporate financial performance. Based on the research results, the research hypothesis is:

Hypothesis 1: Intellectual capital has a significant positive effect on the company's financial performance.

2.5 Relationship between Intellectual Capital and Green Innovation

Intellectual capital (IC) refers to the total stock of intangible assets, information, collective knowledge, experience, relationships, learning and sustainability-oriented competencies that create environmental pro-value for the company (Chen 2008). Intellectual Environmentally friendly oriented capital is a comprehensive concept and consists of three aspects: environmentally friendly human capital, environmentally friendly structural capital, and environmentally friendly relational capital. Environmentally friendly human capital includes accumulated knowledge, wisdom, skills, safety, and environmental protection (Chen 2008).

Because performance outcomes at the corporate level depend on the actions and achievements of individual employees, a highly motivated workforce is likely to use its own wisdom, abilities, and knowledge to innovate processes that ensure pollution control, save energy, and protect ecosystems (Yusliza et al, 2020). Environmentally friendly structural capital is embedded in the company and includes several patents, intellectual rights, databases, organizational climate and culture to achieve sustainability goals. It is also a sign of the company's commitment, knowledge management system and managerial philosophy regarding environmental protection. The third form of green IC is green relational capital, which refers to a company's 'accumulative interactive relationships with customers, suppliers, and partners regarding the company's environmental management and green innovation. Based on the findings and arguments of previous researchers, this research proposes the second hypothesis as follows:

Hypothesis 2: Intellectual capital has a significant positive effect on Green Innovation

2.6 Relationship between Green Innovation and Company Financial Performance

(Yang et al., 2019) proposed that when constrained by the inherent concept of environmental governance, green innovation in companies has a significant negative impact on company value. However, (Agustia et al., 2019) used data from registered companies in Indonesia to conduct a study and reported that environmentally friendly innovations carried out by companies can significantly increase the company's competitive advantage and have a positive impact on the company's financial performance.

Research (Xie et al., 2019) found that environmentally friendly innovation in companies can significantly improve the company's environmental performance and financial performance. Environmentally friendly innovation is an important driving factor to realize a "harmonious symbiosis"

between companies and the environment. Enterprise value is the discounted value of the company's future cash flows. Therefore, company value will be influenced by the company's future profitability and sustainable development capabilities. Improving company performance and sustainable development capabilities will help increase company value. Third, green innovation helps enterprises improve their business image, coordinate the relationship between enterprises and various stakeholders, and create good external conditions for the improvement of enterprise organization (Zhu et al, 2005) found that green innovation can help drive corporate environmental improvements and can better coordinate relationships with customers and suppliers. Therefore, this research proposes the third hypothesis that environmentally friendly innovation can improve company financial performance as follows:

Hypothesis 3: Green Innovation has a significant positive effect on company financial performance.

Intellectual Capital Variables on Company Financial Performance Mediated by Green Innovation

The commitment that companies engage in environmental and eco-friendly actions for financial gain, researchers assess companies' desire to be perceived as legitimate by external stakeholders, which also motivates them to offer environmentally friendly products and adopt environmentally friendly processes. Companies reduce costs, save energy and protect the environment in search of easy-to-achieve financial benefits through environmentally friendly innovations (Borsatto and Bazani 2021). However, if a company's motivation is to achieve legitimacy, this requires long-term commitment and redefining business processes or even entire business models in response to environmental risks. For example, compliance with ISO 9000 improves quality and, at the same time, signals to external stakeholders about the company's compliance with some standards. Likewise, compliance with international and domestic environmental regulations will enhance a company's reputation in terms of environmental legitimacy (Tsinopoulos et al., 2017).

Companies want a strong commitment in carrying out production and operational processes towards environmentally friendly innovation. More specifically, a company's high motivation to achieve legitimacy will likely optimize the use of existing resources and capabilities to embed environmentally friendly processes and offer environmentally friendly products (Qiu et al., 2019). Therefore, companies are expected to use their environmentally friendly ICs optimally to develop environmentally friendly DCs. Likewise, the company's desire to appear legitimate appears to motivate management to increase green innovation by utilizing green DC. Therefore, we argue that firms' motivation to achieve legitimacy mediaates the relationship between green IC, green DC, and green innovation.

Hypothesis 4 : Intellectual capital has a significant positive effect on the company's financial performance, through green innovation .

3. RESEARCH METHODS

3.1 Method

The method used by researchers in analyzing the data in this research is descriptive statistical analysis. According to (Sugiyono, 2010) descriptive analysis is: "Statistics are used to analyze data by describing or illustrating the data that has been collected as it is without the intention of making general conclusions or generalizations." This research uses data analysis methods using software WarpPLS 8 which runs on computer media. PLS (partial least square) is a variance-based structural equation analysis (SEM) that can simultaneously test measurement models as well as test structural models.

3.2 Population and Sample

This research aims to analyze the influence of intellectual capital and green innovation on the financial performance of companies listed on the LQ 45 group of stock exchanges in Indonesia and companies that participate in PROPER. This study uses data from all companies that are in the LQ45 group in 2021 and 2022 as well as companies that take part in PROPER in 2021 and 2022. This research uses data from 45 companies in the LQ 45 group in 2021 and in 2022 only 36 companies are in the LQ 45 group. for 2 years. Then, of the 36 companies that entered the LQ 45 group for 2 years, only 18 companies participated in PROPER. All financial sector companies do not follow PROPER. So this

research covers 18 non-financial companies from 5 sectors, 2 pharmaceutical and chemical sectors, 2 oil and gas sectors, 6 industrial company sectors, 2 cement sectors and 6 food and beverage sectors. The variables measured in this research include intellectual variables capital (IC), green innovation (GI) and company performance (PF). This research variable is explained as follows:

Indicator	Formula	Latent Variables	Information
VACA	$\frac{VA}{VC}$	I.C	VA = OUT-IN; OUT : Total income; In: business expenses except employee expenses VC: available funds (total equity)
VAHU	$\frac{VA}{HC}$	I.C	HC: employee burden
SCVA	$\frac{SC}{VA}$	I.C	SC : VA-HC
VAIC	VACA+VAHU+SCVA	I.C	Value added intellectual coefficient
PROPER	$\frac{Proper\ Value}{Total\ Value}$	G.I	https://proper.menlhk.go.id/
ROA	$\frac{Nett\ Profit}{Total\ Assets}$	P.F	Return on assets

Source by : Author

4. Results and Discussion

Tests carried out in research using WarpPLS 8 include measurement model evaluation, structural model evaluation and model suitability and quality evaluation with the following results:

Evaluation of Measurement Models

The results of the evaluation of the measurement model show that this research model contains an intellectual variable capital measured reflectively. Therefore, evaluate the measurement model (reflective) on the intellectual variable capital is as follows:

1. The results of factor loading on the variables studied are the intellectual variable capital , there is one exogenous variable which is below ≤ 0.50 (recommendation LF ≥ 0.50). With intellectual results capital (VACA 0.488; VAHU 0.899; STVA 0.635; VAIC 0.985 with P values all <0.001). Even if the VACA is ≥ 0.50, the AVE needs to be reviewed .
2. Then proceed with the composite evaluation reliability (CR) and average variance extracted (AVE), with a CR value for intellectual capital (0.851), green innovation (1,000), company financial performance (1,000) all ≥ 0.70 (reliable). Meanwhile, the AVE intellectual value capital (0.605), green innovation (1,000), company financial performance (1,000) all ≥ 0.50 (convergent validity achieved). Researchers still include the VACA value as one of the exogenous variables of intellectual capital considering that AVE is achieved.
3. Discriminant evaluation validity which can be seen by looking at Fornell and Lacker criterion with the root results of AVE all being greater than the correlation (intellectual capital 0.778; green innovation 1,000 and company financial performance 1,000) so that the measurement model is met and convergent validity and discriminant validity .

Structural Model Evaluation

1. collinearity evaluation results with variance values inflated factor , namely intellectual capital (1,025) on the company's financial performance and green innovation (1.025) on the financial performance of all VIFs is less than 5, this shows that multicollinearity between variables is low/negligible.
2. collinearity evaluation results (Full Collins . VIF) namely intellectual capital (1,464), company financial performance (1,479) and green innovation (1.125) all VIFs are less than 5 so it is concluded that multicollinearity is low.
3. Path results The coefficient and p- value are obtained as follows:

	Intellectual Capital		Green Innovation		Financial performance	
	Path Coefficients	P values	Path Coefficients	P values	Path Coefficients	P values
Intellectual Capital						
Green Innovation	-0.337	0.012				
Financial performance	0.505	<0.001	0.387	0.004		

Source by : data analysis, 2023

The influence of intellectual capital on company financial performance has a path coefficient of 0.505 and p<0.001. Because p <0.01, it is said to be very significant, so the hypothesis is accepted. The path coefficient has a positive sign, meaning that the better the intellectual capital, the company's financial performance will increase. The results of this study support the first hypothesis (H1) which is consistent with previous research,(Rana & Hossain, 2023) (Kasoga, 2020) (Xu & Wang, 2018)(Harris et al., 2019) (Ousama & Fatima, 2015).

Intellectual capital is an intangible asset that is important in efforts to create sustainable company goals in the current era of technology and information. Goods-based companies (consumer goods) and natural resources make various breakthroughs to create competitive business strategies through owned assets (resourced based view). Significant and positive intellectual influence capital on financial performance reveals that PROPER LQ45 companies have employees who are competent and committed to the company's productivity and profitability. The research results also revealed that the company gained intellectual superiority capital in creating competitive advantage and added value and is considered capable of contributing to improving financial performance. The company uses intellectual assets well capital to create positioning strategies, consumer loyalty and cost reduction. It can be said that the companies studied have infrastructure assets including company culture, process management, information systems, operational network systems and good financial systems.

Intellectual influence capital against green innovation has a path coefficient of -0.337 and p<0.012. Because p<0.01 is said to be very significant, so the hypothesis is accepted. The negative sign of the path coefficient means that the better the green innovation, the lower the intellectual capital. The results of this research have a significant influence on intellectual capital against green company innovation in accordance with research (Abrudan et al., 2022). Negative relationship between intellectual capital against green innovation from PROPER-LQ45 companies can be analyzed that companies in Indonesia are to implement green Innovation requires very large investments. It is understandable that the company still invests a certain amount of its funds to enforce statutory regulations. Strict procedures and bureaucratic system problems are thought to be one of the causes of the large investment made by companies apart from implementing new environmentally friendly technology. Law Number 32 of 2009 concerning Environmental Protection and Management then there is Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management. Furthermore, there is a ministerial regulation where each ministry can issue environmental regulations for companies with the same commodity. On the other hand, of course the application of environmentally friendly technology also requires large investments in its implementation. Environmentally friendly technology aims to produce products and services for the benefit of humans by utilizing natural resources that can be renewed and do not produce waste that is harmful to the environment.

Green influence innovation on company financial performance has a path coefficient of 0.387 and p<0.004. Because p <0.01, it is said to be very significant, so the hypothesis is accepted. The path coefficient has a positive sign, meaning the green is better company innovation, the company’s financial performance will increase.

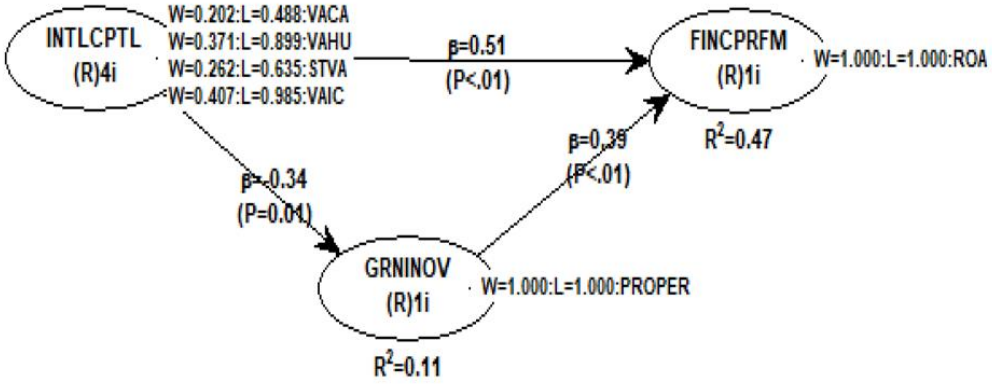
Green innovation in this research is the company's performance in environmental management (PROPER) which is in accordance with Ministerial Regulation Number 3 of 2014. So, the company's performance in environmental management has a significant influence on the Company's Financial Performance.

This research reveals that the PROPER-LQ45 company can align the company's financial performance with the implementation of environmental management. The company is considered successful in encouraging green innovation to increase its positive reputation, image and credibility as reflected in the Company's Financial Performance. A positive reputation in environmental management will win awards and increase share prices for stakeholders. The existence of a positive and significant relationship between green innovation and company financial performance is also encouraged because green innovation is used as an indicator, including:

1. The PROPER (Green Innovation) assessment results are used by Bank Indonesia to analyze loan risks to companies.
2. In the ILO (International Labor Organization) buyer forum, PROPER is recommended to be used as an indicator of environmental management performance for buyers.
3. Green innovation as the basis for national and international environmental certification

Green Innovation helps companies face the challenges of a competitive business environment. Green innovation can create effective business survival and sustainability strategies and build relevance among stakeholders (Novitasari and Agustia, 2021; (Tang et al., 2018).

Based on the evaluation of the measurement model and evaluation of the structural model, the structural model (path coefficient and significance testing) of this research is described as follows:



Source by data analysis, 2023

Evaluate model fit and quality

Next, an evaluation of model fit and quality is carried out quality indices) with the following results :

Indicator Type	Value Results	Explanation	Conclusion
Average path coefficient (APC)	0.410	p = 0.001, (p<0.5)	Fulfill f its model requirements
Average R-squared (ARS)	0.290	p = 0.014, (p<0.5)	Fulfill f its model requirements
Average adjusted R-squared (AARS)	0.261	p = 0.022 , (p<0.5)	Fulfill f its model requirements
Average blocks (VIF)	1,025	Accepted if ≤ 5, ideal ≤ 3.3	ideal
Average full collinearity VIF	1,356	Accepted if ≤ 5, ideal ≤ 3.3	ideal

Indicator Type	Value Results	Explanation	Conclusion
Tenenhaus GoF	0.502	small ≥ 0.1 ; currently ≥ 0.25 ; large ≥ 0.36	big
Simpson's paradox ratio (SPR)	1,000	accepted ≥ 0.7 ; ideal = 1	ideal
R-squared contribution ratio (RSCR)	1,000	accepted if ≥ 0.9 ; ideal = 1	ideal
Statistical suppression ratio (SSR)	1,000	accepted if ≥ 0.7	accepted
Nonlinear bivariate causality direction ratio (NLBCDR)	0.833	accepted if ≥ 0.7	accepted

Source by : Author

All measures of model fit were acceptable including APC, ARS, significant AARS, no multicollinearity, Tenenhaus measure GoF (0.502) includes a large interpretation (≥ 0.36) which shows that the variance of measurement and structural models can simultaneously be translated at a high/large level by empirical data.

Based on other model suitability measures, namely SRMR and SMAR with the following results:

Standardized root mean squared residual (SRMR)=0.138, acceptable if <= 0.1

Standardized mean absolute residual (SMAR)=0.094, acceptable if <= 0.1

Standardized chi-squared with 14 degrees of freedom (SChS)=1.207, P<0.001

Standardized threshold difference count ratio (STDCR)=0.933, acceptable if >= 0.7, ideally = 1

Standardized threshold difference sum ratio (STDSR)=0.692, acceptable if >= 0.7, ideally = 1

As a result, the size of this research model is that SRMR (0.138) is less fit while SMAR (0.098) is <0.1 model fit.

the R-square was measured with the results of intellectual influence capital against green innovation of 11.4%, intellectual influence capital to the company's financial performance of 46.6%. Meanwhile, the Q- squared results obtained are Q-squared for green innovation (0.131) and financial performance (0.477). Both Q values are squared above zero indicates the model is predictive relevance. Any changes to intellectual capital can predict green innovation and financial performance. Every green change innovation can predict variance changes in a company's financial performance.

Output results standards error and effect value size ,effect size , describes the influence of variables at the structural level, which according to Cohen and Cohen (1988) is (0.02 = small, 0.15 = medium, and 0.35 = large) as follows:

	Intellectual Capital		Green Innovation		Financial performance	
	Stdr. error	effect sizes	St Dr. error	effect sizes	Stdr . error	effect sizes
Intellectual Capital						
Green Innovation	0.143	0.114				
Financial performance	0.133	0.286	0.140	0.180		

Source by : author, 2023

Based on the calculation results above, the effect is obtained size of intellectual influence capital against green innovation is (0.114) (tends to be small) while the company's financial performance is (0.286) (tends to be big). Effect size of green influence innovation on financial performance is (0.180) (tends to be big).

Mediation Test

Output of Indirect Influence, Mediation of 2 segments

No	Exogenous Variables	Variable Mediation	Endogenous Variables	Indirect Influence Path Coefficient	P Value	Information
1	Intellectual Capital	Green Innovation	Company Financial Performance	-0.131	0.124	Not significant mediate

Sources by: author, 2023

Intellectual influence capital on the company's financial performance through green innovation is (-0.131) and is not significant with p = 0.124. meaning any change in intellectual capital will reduce financial performance by 0.131 if it goes green innovation . This is different from research (Borsatto & Bazani , 2021).

Outputs Total Influence

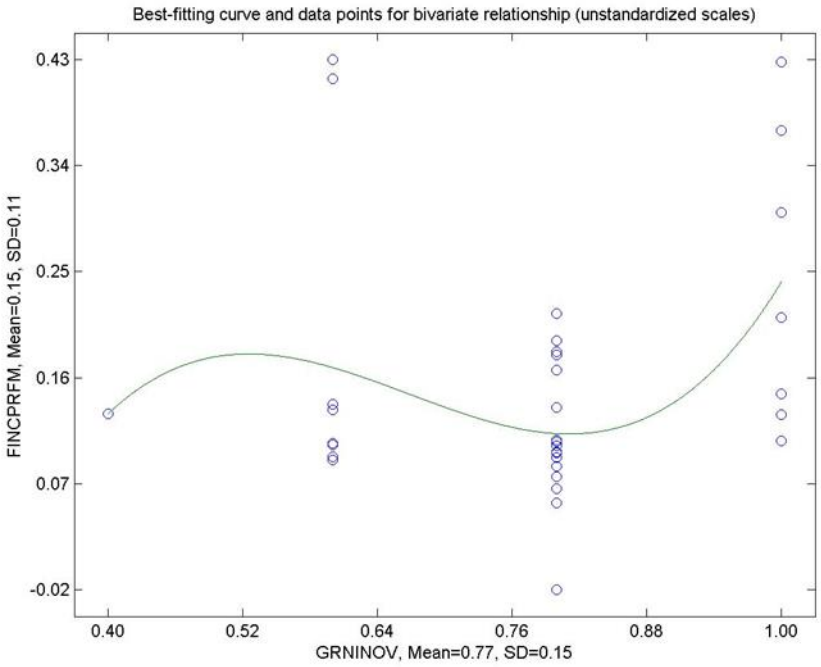
	Green Innovation		Financial performance		Intellectual Capital	
	Total effects	p- value	Total effects	p-value	Total effects	p- value
Green Innovation					-0.337	0.012
Financial performance	0.387	0.004			0.375	0.006
Intellectual Capital						

Source by : author, 2023

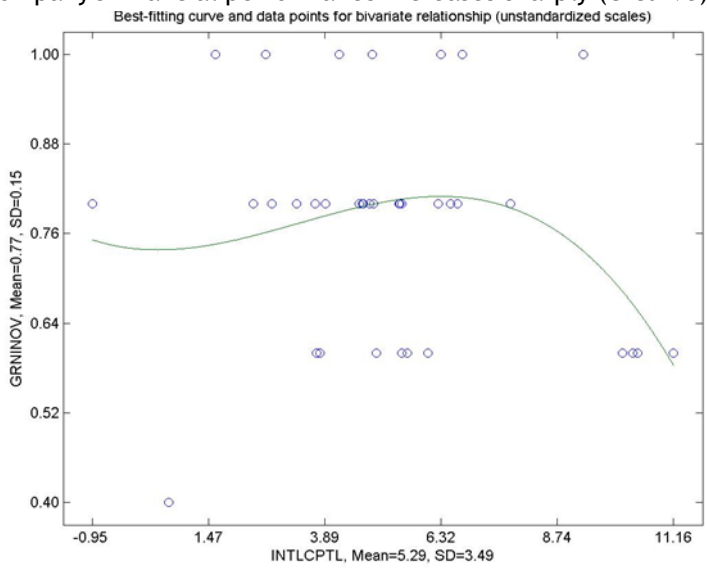
The total effect is calculated from the sum of the direct and indirect effects. Total effect intellectual capital on financial performance is (0.375) and is significant p<0.05. Intellectual influence capital on the company's financial performance has a coefficient value of 0.375 with p value of 0.006. So the total influence is calculated as follows = $(0.375)^2$ x 100% = 14.1% Thus the intellectual contribution capital to the company's financial performance both directly and indirectly has a contribution of 14.1%.

The results of this research state that intellectual capital has a significant and positive effect on the company's financial performance through mediation green innovation was 0.375 (p<0.01) smaller than the direct influence of intellectual capital on financial performance 0.505 (p<0.01). This indicates that the PROPER-LQ 45 Company still considers the company's intangible assets (intellectual). capital) is still burdened by the implementation of green innovation, while green Innovation has not been able to make a direct contribution in the form of increasing company performance or company profits. On the other hand, researchers suspect that PROPER-LQ 45 companies still need quite a lot of innovation in implementing environmentally friendly technology with human capital who can understand and implement environmentally friendly technology in companies. The PROPER-LQ 45 company is considered not to have maximized value added with capital green- oriented employees' innovation. VACA companies are still encouraged to improve financial performance through conventional operational activities to increase company profits.

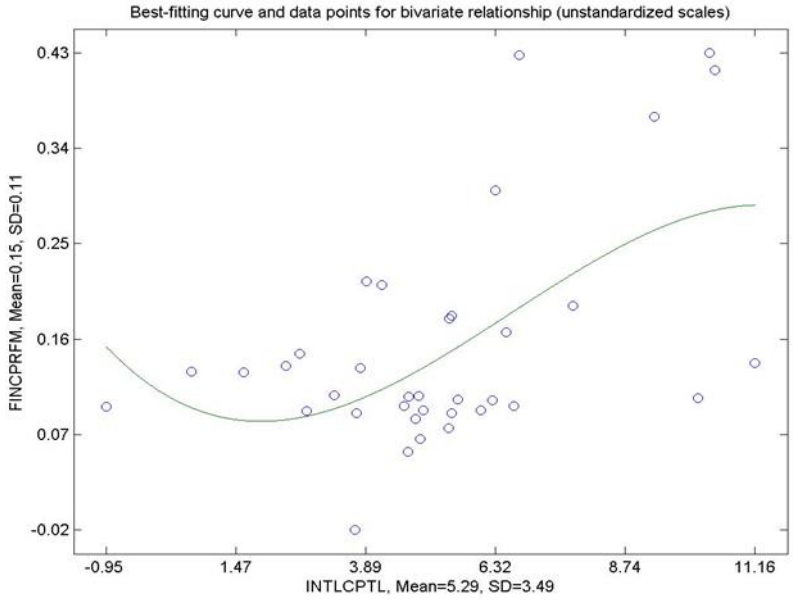
View linear or nonlinear plots



Plot between greens innovation with the company's financial performance in the form of an S curve with an increasing trend, namely an inverted U curve and a U curve. When the point is 0.40 standard deviation to close to the mean (mean = 0.77) there is a trend towards green innovation increases, there is a tendency for financial performance to increase then it approaches the average, there is a tendency for green to decrease innovation then reduces the company's financial performance (inverted U curve) but when the points are more than the average (mean >0.7) then the green effect innovation on the company's financial performance increases sharply (U curve).



The plot between intellectual capital with green innovation takes the form of an S curve with a downward trend, namely a U curve and an inverted U curve. When the point is -0.95 standard deviation to close to the mean (mean = 5.29) there is a trend towards increasing intellectual level capital has a green tendency innovation also increases (U curve), but when the points are more than the average (mean > 5.29) then the influence of intellectual capital against green innovation decreased quite sharply (inverted U curve).



The plot between intellectual capital with financial performance in the form of an S curve with an increasing trend, namely the U curve and the inverted U curve. When the point -0.95 standard deviation approaches the mean (mean = 5.29) there is a tendency for intellectual development to increase capital there is a tendency for financial performance to also increase (U curve), but when the points are more than the average (mean > 5.29) then the influence of intellectual capital on the company's financial performance increased quite sharply.

5. CONCLUSION

Intellectual Capital is an important resource that improves company performance to achieve a sustainable and environmentally friendly business strategy. Company commitment and government regulations regarding the importance of environmental management in business processes and environmentally friendly products is an absolute must. This research wants to know the extent to which the company's business strategy uses intellectual capital in demands for environmentally friendly and sustainable innovation so that it can improve company performance.

PROPER LQ-45 companies use intellectual capital well in improving company performance. The research results reveal capital effective employment, supported by relational capital such as (brands, customers , customers loyalty , distributions channel , company good names) can improve company performance. The company manages human capital through education, job qualifications, openness to innovation and job-related competencies to create an environmentally friendly company. Intellectual capital also has a significant effect on financial performance through mediation green innovation. The results of this research reveal efforts to improve environmentally friendly environmental management by companies using large sources of funds or investment to implement green the innovation.

Intellectual capital is also able to significantly increase green corporate innovation. However, the effect is negative. It can be concluded that companies need to increase their integration of technology implementation efforts comprehensively and not partially so that they can increase company profits. This really requires government support, namely tax incentives for companies that implement green innovation, interest incentives in banking financing and the application of sustainable and environmentally friendly principles that are easy to implement and have an impact on the company's business processes through participation intellectual company capital.

Green innovation has a significant effect on company financial performance. It is considered that the PROPER-LQ 45 company is aware that it is green Innovation is a necessity because stakeholders including financial institutions, international institutions, government and society also ensure the implementation of green innovation and making assessment of environmentally friendly technology an obligation. Customers and shareholders are considered very good at choosing environmentally

friendly company products and business processes. However, green innovation has not been able to become a mediating variable for intellectual capital on the company's financial performance. It can be concluded that companies are still unable to implement environmentally friendly technology to increase profits. The company still considers it green innovation is an investment cost and even an expenditure cost including increase capital employed, relational capital and human capital but have not yet received optimal reciprocity. The government is expected to be able to capture the potential for revision of Law Number 32 of 2009 to accommodate the ease of implementation of environmentally friendly technology through tax incentives, ease of licensing processes, interest incentives and ease of financing.

The study provides empirical evidence on the issue that intellectual capital and green innovation influence to performance finance. In future, researchers should find other variables which may play mediating role in the relationship of intellectual capital and performance finance such as corporate governance or corporate social responsibility. The study can be carried out for the developed nations and developed model in this study can be utilized as base for future research. In future, researchers should identify firm not only grouped as LQ-45 but also all firm thar listed in BEI. Moreover, this mediation model can be applied in the others contexts such as the non-financial industry of east country and compare to west country or developed countries.

REFERENCE

[1] Abdullah, M. F. (2005). Dasar-dasar Manajemen Keuangan. Malang: Penerbitan Universitas Muhammadiyah.

[2] Abrudan, D. B., Rafi, N., Daianu, D. C., & Kalyar, M. N. (2022). Linking green intellectual capital with green innovation: Examining the roles of green dynamic capabilities and “motivation to achieve legitimacy.” Agricultural Economics (Czech Republic), 68(7), 250–258. https://doi.org/10.17221/97/2022-AGRICECON

[3] Agustia, D., Sawarjuwono, T., & Dianawati, W. (2019). The mediating effect of environmental management accounting on green innovation - Firm value relationship. International Journal of Energy Economics and Policy, 9(2), 299–306. https://doi.org/10.32479/ijeep.7438

[4] Ali, M.; Opulencia, M.J.C.;Chandra, T.; Chandra, S.; Dias, R.; Chetthamrongchai, P.; Jalil, A.T. (2022). An Environmentally Friendly Solution for Waste Facial Masks Recycled in Construction Materials. Sustainability. 14, 8739. https://www.mdpi.com/2071-1050/14/14/8739/pdf & https://doi.org/10.3390/su14148739

[5] Basana, S. R., Suprapto, W., Andreani, F., & Tarigan, Z. J. H. (2022). The impact of supply chain practice on green hotel performance through internal, upstream, and downstream integration. Uncertain Supply Chain Management, 10(1), 169–180. https://doi.org/10.5267/j.uscm.2021.9.010

[6] Berzkalne, I., & Zelgalve, E. (2014). Intellectual Capital and Company Value. Procedia - Social and Behavioral Sciences, 110, 887–896. https://doi.org/10.1016/j.sbspro.2013.12.934

[7] Chen, YS. The Positive Effect of Green Intellectual Capital on Competitive Advantages of Firms. J Bus Ethics 77, 271–286 (2008). https://doi.org/10.1007/s10551-006-9349-1

[8] Chiou, Tzu-Yun, Chang, K. H., Lettice, F., & Chung, H. S. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. Transportation Research Part E, 47:836.doi: 10.1016/j.tre.2011.05.016

[9] Darsono, & Ashari. (2005). Laporan Keuangan. Yogyakarta: Penerbit Andi.

[10] Edvinsson, L., & Sullivan, P. (1996). Developing a Model for Managing Intellectual Capital. European Management Journal, 356-364.

[11] Engström, T., Westnes, P., & Westnes, S. P. (2003). Evaluating intellectual capital in the hotel industry. Journal of Intellectual Capital, 4(3), 287-303.

[12] Fahmi, I. (2017). Analisis kinerja keuangan (panduan bagi akademis, manajer, dan investor untuk menilai dan menganalisis bisnis dari aspek keuangan. Bandung: ALFABETA.

[13] Gan, K., & Saleh, Z. (2008). Intellectual Capital and Corporate Performance of Technology-Intensive Companies: Malaysia Evidence. Asian Journal of Business and Accounting, 113-130.

[14] Gürlek, M., & Tuna, M. (2018). Reinforcing competitive advantage through green organizational culture and green innovation. The Service Industries Journal, 38(7–8), 467–491. https://doi.org/10.1080/02642069.2017.1402889
[15] Haque, S. M., & Weqar, F. (2022). The influence of intellectual capital on the Indian firms financial performance. International Journal of Learning and Intellectual Capital, 19, 169–188. https://doi.org/10.1504/IJLIC.2021.10039514
[16] Haris, M., Yao, H., Tariq, G., Malik, A., & Javaid, H. (2019). Intellectual Capital Performance and Profitability of Banks: Evidence from Pakistan. Journal of Risk and Financial Management, 12(2), 56. https://doi.org/10.3390/jrfm12020056
[17] Hery. (2016). Analisis Laporan Keuangan. Jakarta: Grasindo.
[18] Horne, C. V., & Wachowicz, J. M. (2014). Prinsip-prinsip Manajemen Keuangan.
[19] Ikantan Akuntansi Indonesia. (2009). Standar Akuntansi Keuangan. Jakarta: Salemba Empat.
[20] Irawati, N., Maksum, A., & Sadalia, I., (2019). Financial performance of Indonesian's banking industry: The role of good corporate governance, capital adequacy ratio, non-performing loan and size. International Journal of Scientific and Technology Research, 8(4), 22-26.
[21] Jihene, F., & Paturel, R. (2013). The Effect of Intellectual Capital Disclosure on the Value Creation An Empirical Study Using Tunisian Annual Report. International Journal of Accounting and Financial Reporting, 3 (1): 81-107.
[22] Jiwa, Z., Tarigan, H., & Chandra Tanuwijaya, N. (2020). DOES TOP MANAGEMENT ATTENTIVENESS AFFECT GREEN PERFORMANCE THROUGH GREEN PURCHASING AND SUPPLIER COLLABORATION? In Academy of Strategic Management Journal (Vol. 19, Issue 4).
[23] Kannan, G., & Aulbur, W. (2004). Intellectual Capital Measurement Effectiveness. Journal of Intellectual Capital, 5, 389–413. https://doi.org/10.1108/14691930410550363
[24] Kaloh, T., Ilat, V., & Pangerapan, S. (2018). Analisis laporan arus kas untuk menilai kinerja keuangan perusahaan makanan dan minuman yang terdaftar di bursa efek indonesia. Jurnal Riset Akuntansi Going Concern 13(4), , 741-751.
[25] Kasoga, P. S. (2020). Does investing in intellectual capital improve financial performance? Panel evidence from firms listed in Tanzania DSE. Cogent Economics & Finance, 8(1), 1802815. https://doi.org/10.1080/23322039.2020.1802815
[26] Kasmir. (2012). Analisis Laporan Keuangan . Jakarta: PT Raja Grafindo Persada.
[27] Lasisi, T. T., Lazareva, E. I., Abramyan, G. A., Gavrilova, J. V., & Murzin, A. D. (2023). Intellectual Capital and Technology as Factors of Career Success: Role of Income Inequality. Economies, 11(2). https://doi.org/10.3390/economies11020063
[28] Lee, J. W., Kim, Y., & Kim, Y. (2018). Antecedents of Adopting Corporate Environmental Responsibility and Green Practices. Journal of Business Ethics, 148. https://doi.org/10.1007/s10551-016-3024-y
[29] Leitão, J., de Brito, S., & Cubico, S. (2019). Eco-innovation influencers: Unveiling the role of lean management principles adoption. Sustainability (Switzerland), 11(8). https://doi.org/10.3390/su11082225
[30] Lisha, L., Mousa, S., Arnone, G., Huerta-Soto, R., & Shiming, Z. (2023). Natural resources, green innovation, fintech, and sustainability: A fresh insight from BRICS. Resources Policy, 80, 103119. https://doi.org/10.1016/j.resourpol.2022.103119
[31] Luthy, H. D. (1998). Intellectual capital and its measurement. In Proceedings of the Asian Pacific Interdisciplinary Research in Accounting Conference (APIRA). Osaka (Japan).
[32] Manzaneque, M., Ramírez, Y., & Diéguez-Soto, J. (2017). Intellectual Capital Efficiency, Technological Innovation and Family Management. Innovation, 1–22. https://doi.org/10.1080/14479338.2016.1272828
[33] Martínez, M. T. (2006). A procedure to design a structural and measurement model of intellectual capital: an exploratory study. Information and Management 43 (5), 617-626.
[34] Maruta, H. (2017). Pengertian, Kegunaan, Tujuan Dan Langkah-Langkah Penyusunan Laporan Arus Kas. JAS (Jurnal Akuntansi Syariah), 1(2), 239-257. Retrieved from https://ejournal.stiesyariahbengkalis.ac.id/index.php/jas/article/view/115.

[35] Mazodier, M., Carrillat, F., Sherman, C., & Plewa, C. (2020). Can donations be too little or too much? European Journal of Marketing, ahead-of-print. https://doi.org/10.1108/EJM-03-2019-0278
[36] Meyliza, & Efrianti, D. (2020). Analisis Laporan Arus Kas Untuk Menilai Kinerja Keuangan Perusahaan Farmasi. Jurnal Ilmiah Akuntansi Kesatuan, 57-68.
[37] Mulyadi. (2007). Sisten Terpadu Pengelolaan Kinerja Personel Berbasis Balanced Scorecard. Yogyakarta: UPP STIM YKPN.
[38] Munawir, S. (2004). Analisis Laporan Keuangan, edisi Keempat. Yogyakarta: Liberty.
[39] Nadeem, M. (2017). The Importance of Intellectual Capital for Firm Performance: Evidence from Australia. Australian Accounting Review, 28. https://doi.org/10.1111/auar.12184
[40] Nazari, J., & Herremans, M. I. (2007). Extended VAIC model: Measuring intellectual capital components. Journal of Intellectual Capital, 8(4), 595-609.
[41] Nevado-Peña, D., López-Ruiz, V.-R., & Alfaro-Navarro. (2015). The Effects of Environmental and Social Dimensions of Sustainability in Response to the Economic Crisis of European Cities. Sustainability, 8255-8269.
[42] Oktari, I., Widiastuty, E., & Handajani. (2016). Determinan Modal Intelektual (Intellectual Capital) Pada Perusahaan Publik Di Indonesia Dan Implikasinya Terhadap Nilai Perusahaan. Simposium Nasional Akuntansi XIX, 1-29.
[43] Ousama, A., & Fatima, A. (2015). Intellectual Capital and Financial Performance of Islamic Banks. IJLIC, 12.
[44] Ozkan, N., Cakan, S., & Kayacan, M. (2017). Intellectual Capital and Financial Performance: A Study of the Turkish Banking Sector. Borsa Istanbul Review, 17, 190-198. https://doi.org/10.1016/j.bir.2016.03.001
[45] Prasinta, D. (2012). Pengaruh Good Corporate Governance Terhadap Kinerja Keuangan. Accounting Analysis Journal, 2(1), 4-17.
[46] Pedro, E., Leitão, J. C., & Alves, H. (2018). Intellectual capital and performance: Taxonomy of components and multi-dimensional analysis axes. Journal of Intellectual Capital, 19. https://doi.org/10.1108/JIC-11-2016-0118
[47] Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2019). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. Corporate Social Responsibility and Environmental Management, 27. https://doi.org/10.1002/csr.1780
[48] Rahmadhani, N., Lie, D., Tarigan, P., & Susanti, E. (2017). analisis laporan arus kas untuk menilai kinerja keuangan pada PT Handjaya Mandala Sampoerna, Tbk. yang terdaftar di bursa efek indonesia. Jurnal Financial ISSN : 2502-4574 Vol. 3, No. 1, 19-26.
[49] Rana, S. M., & Hossain, S. Z. (2023). Intellectual Capital, Firm Finance, and Growt Sustainability : Study Firm Non-Finance Listed DSE at Bangladesh. Multidiciplinary Digital Publishing Institute , 1-23.
[50] Roos, J., Roos, G., Dragonetti, N. C., & Edvinsson, L. (1997). Intellectual Capital Navigating The New Business Landscape. London: MacMillan Press Ltd.
[51] Rudianto. (2013). Akuntansi Manajemen Informasi Untuk Pengambilan Keputusan Strategi . Jakarta: Erlangga.
[52] Sadalia, I., Daulay, I. E., Marlina, L., (2019). The influence of intellectual capital towards financial performance with brand value as an intervening variable. Calitatea, 20(168), 79-85.
[53] Sáez-Martínez, F. J., Díaz-García, C., & González-Moreno, Á. (2016). Factors promoting environmental responsibility in European SMEs: The effect on performance. Sustainability (Switzerland), 8(9). https://doi.org/10.3390/su8090898
[54] Shahwan, T., & Fathalla, M. (2020). The mediating role of intellectual capital in corporate governance and the corporate performance relationship. International Journal of Ethics and Systems, ahead-of-print. https://doi.org/10.1108/IJOES-03-2020-0022

[55] Soewarno, N., & Tjahjadi, B. (2020). Measures that matter : an empirical investigation of intellectual capital and financial performance of banking firms in Indonesia. Journal of Intellectual Capital.
[56] Stuart, H., & Brandenburger, A. (1996). Value Based Business Strategy. Journal of Economics & Management Strategy.
[57] Subani. (2015). Analisis arus kas untuk mengukur kinerja keuangan (studi pada kud sido makmur lumajang). Jurnal WIGA Vol. 5 No. 1 ISSN NO 2088-0944, 58-67.
[58] Sugiyono. (2010). Metode Penelitian Pendidikan Pendekatan Kuantitatif, kualitatif, dan R&D. Bandung: Alfabeta.
[59] Tang, M., Walsh, G., Lerner, D., Fitza, M., & Li, Q. (2018). Green Innovation, Managerial Concern and Firm Performance: An Empirical Study. Business Strategy and the Environment, 27, 39–51. https://doi.org/10.1002/bse.1981
[60] Tsinopoulos, C., Sousa, C., & Yan, K. (2017). Process Innovation: Open Innovation and the Moderating Role of the Motivation to Achieve Legitimacy: OPEN AND PROCESS INNOVATION. Journal of Product Innovation Management, 35. https://doi.org/10.1111/jpim.12374
[61] Ulum, I., Ghozali, I., & Purwanto, A. (2014). Intellectual Capital Performance of Indonesian Banking Sector: A Modified VAIC (M-VAIC) Perspective. Asian Journal of Finance & Accounting, 6(2), 103. https://doi.org/10.5296/ajfa.v6i2.5246
[62] Wong, C. W., Kee-hung Lai, Kuo-Chung Sha, Chin-Shan Lu, & Leung, T. (2012). Green operations and the moderating role of environmental management capability of suppliers on manufacturing firm performance. International Journal of Production Economics, 140: 283-94.
[63] Xie, X., Huo, J., & Zou, H. (2019). Green process innovation, green product innovation, and corporate financial performance: A content analysis method. Journal of Business Research, 101. https://doi.org/10.1016/j.jbusres.2019.01.010
[64] Xu, J., & Wang, B. (2018). Intellectual capital, financial performance and companies' sustainable growth: Evidence from the Korean manufacturing industry. Sustainability (Switzerland), 10(12). https://doi.org/10.3390/su10124651
[65] Yang, M., Bento, P., & Akbar, A. (2019). Does CSR influence firm performance indicators? Evidence from Chinese pharmaceutical enterprises. Sustainability (Switzerland), 11(20). https://doi.org/10.3390/su11205656
[66] Yusliza, M., Yong, J. Y., Tanveer, M. I., Ramayah, T., Faezah, J. N., & Muhammad, Z. (2020). Model struktural dampak modal intelektual ramah lingkungan terhadap kinerja berkelanjutan. Journal Clean Prod., 119334.
[67] Zhu, Qinghua, Sarkis, J., & Geng, Y. (2005). Green supply chain management in China: Pressures, practices, and performance. International Journal of Operations &Production Management , 25:449-68.