Intellectual Capital and the Performance of Public Listed State-Owned Enterprises in the Digital Society Era

.

ABSTRACT

The shift from the industrial revolution 4.0 to the era of Digital Society 5.0 requires companies to develop strategies to optimize their resources. One way to optimize company resources is by developing intellectual capital. Intellectual capital is needed to improve the performance and competitiveness of the company, especially in the era of Digital Society 5.0, including Go Public SOEs companies which consist of various sectors that play an important role in Indonesia's development. Study of intellectual capital development in SOEs Go Public companies in entering the era of Digital Society 5.0 is still limited. This study aims to fill this gap. The data used is secondary data on the Indonesia Stock Exchange and analyzed quantitatively. Results show that intellectual capital has a significant and positive effect on company performance. This means companies must pay attention to intellectual capital in the era of digital society 5.0. The element of intellectual capital that has the greatest influence based on this research is human capital, while the element of structural capital has no significant effect on the company's performance. The results of this study are also in line with the resource-based theory where SOEs must maximize their competitive advantage to compete in the Digital Society 5.0 era. Go Public SOEs must continue to develop and maintain their intellectual capital. In addition, Go Public SOEs should not only acquire, maintain, and strengthen their intellectual capital but also need to make plans to increase the speed and quality of innovation to improve their performance.

Keywords: Digital society 5.0, Intellectual Capital, Resource-Based Theory, SOEs Go Public Performance

1. INTRODUCTION

The concept of digital society is growing rapidly. This is driven by the growth of science and technology applications that help in building digital infrastructure which includes improving network infrastructure, web infrastructure, database infrastructure, content infrastructure, and so on. A digital society (digital society) is a progressive society formed because of the adoption and integration of information and communication technology, computer science, information science, and business science & humanities in the home, workplace, education, and recreation (Paul, et al, 2018). Currently, there has been a shift from the industrial revolution 4.0 to the era of Digital Society 5.0. One of the countries that have launched the Society 5.0 program in Japan (Rosmida, 2019). Society 5.0 or Society 5.0 is a human-centered community technology concept that collaborates with technology (AI and IoT) to solve social problems that are integrated into virtual and real-world spaces. Digital Society 5.0 makes economic actors in Indonesia must find strategies to optimize their resources so they can survive, have good performance, and can outperform their competitors (Dhir et al., 2021; Chauhan et al., 2023; Fukuyama, 2018; Buallay, 2019; Salisu& Vo, 2021; Nazari&Herremans, 2007).

SOEs are one of the main actors in the Indonesian economy. State-Owned Enterprises (SOES) are corporations whose majority shares are owned by the government. SOEs are expected to be able to become a driver of the Indonesian economy and a source of

improving people's welfare and are expected to be able to make valuable contributions to all interested parties (stakeholders) (Sarafina and Saifi, 2017). SOEs in their functions and roles have various benefits provided to the state and Indonesian society. The first benefit is to provide convenience for the community in obtaining the necessities of life in the form of goods and services. The second benefit of the existence of SOEs is to open and expand employment opportunities for the workforce. SOEs also have a role to play in preventing the monopoly of the private sector in the market for the fulfillment of goods and services. In addition, SOEs also play a role in improving the quality and quantity of export commodities in the form of increasing foreign exchange for oil and gas and non-oil and gas. Therefore, SOEs as economic actors have close links with the state and society.

The number of Go Public SOEs in Indonesia is currently still limited. Until 2021, there were 20 SOEs Go Public listed on the Indonesia Stock Exchange. This is very unfortunate considering there are many advantages when a company decides to go public. According to the Financial Services Authority in Indonesia (OJK), the first advantage of Go Public companies is to get additional capital from the shares sold. This capital can be used to finance company growth, pay debts, pay for acquisitions, or even be reinvested. Go public companies can also increase the value of the company by going public because they get a valuation of the company's value. Any increase in operational performance and financial performance will generally have an impact on stock prices on the stock exchange, which in turn will increase the overall value of the company. Go public companies will also improve their image in the community, considering that SOEs are closely related to community activities, this is important for SOEs. SOEs will have the disclosure of information needed by the public. Disclosure of information will improve the company's image as well as wider product introduction to create new opportunities and new customers in the company's business.

SOEs must have the potential to compete with other companies to gain more trust from consumers. To be able to survive in the digitalization era, companies must not only maximize tangible assets but must go hand in hand with intangible assets. Hitt et al. (2001) suggest that intangible capital is more dominant than the role of tangible capital. One of the strategies developed is to develop intellectual capital, to create added value. Intellectual capital according to Marr and Schiuma (2001) is a group of knowledge assets related to an organization and has the most significant contribution to improving the organization's competitive position by adding value provided to key stakeholders. issues related to intellectual capital are more concerned today. Knowledge-based intellectual capital, including intangible assets and goodwill, can be considered a driving force for economic development (Ni et al, 2020).

Pulic (2000) explains that intellectual capital is human resources and capabilities that are owned and able to create added value for the company. Intellectual capital can create added value (Pulic, 1999), and has the potential as a creator of wealth in the company (Walker, 2001; Usoff et al., 2002; and Karp, 2003). Research by Brennan (2001) and Walker (2001) shows that intellectual capital influences company performance which is described by its profitability. Thus, SOEs are expected to be able to optimize their intellectual capital. Seeing the importance of the role of SOEs in the Indonesian economy, how the influence of intellectual capital on company performance, as well as the shift in the industrial revolution 4.0 to the era of Digital Society 5.0, makes researchers want to know how the role of intellectual capital for company performance in facing the era of Digital Society 5.0.

The urgency of this research can be seen from two points of view. The first point of view is that this study quantitatively analyzes the influence of intellectual capital on the performance of state-owned companies as a form of preparation for the Digital Society 5.0 era. Intellectual

capital development is very necessary, especially to improve the competitive ability of SOEs, especially in preparing SOEs for the Digital Society 5.0 era. This study conducted a study on SOES Go Public because the strategic role of SOES is very important in the Indonesian economy. The strategic roles of this SOES include: 1) Managers of a very large number of potential natural resources owned by the state, 2) Become a stabilizer for the Indonesian economy. 3) Pioneering business activities by paying attention to sectors that are still underdeveloped but have good potential, 4) Guide on economic issues to the private sector. The strategic role of SOEs, especially SOEs that have gone public, must be supported with better capacities through the development of intellectual capital. The urgency of this research seen from the second point of view is that currently studies discussing intellectual capital in SOES and relating it to the shift from the industrial revolution 4.0 to the era of digital society 5.0 are still limited, so this research has a high urgency. Currently, the government is trying to increase the number of SOEs that go public.Some literatures that used on this study are as follow:

Resource-Based Theory

The resource-based theory was first introduced by Wernerfelt (1984) which states that a company's competitive advantage can be created if the company can manage its resources and knowledge well. Good management will have a positive effect on the company's performance with the assumption that the company competes through its resources and capabilities. Competitive advantage can be created through the ownership and maximize the benefits of organizational resources (both tangible and intangible assets) held to add value (valuable), are scarce (rare), hard to imitate (imperfectly imitable), and is not replaceable by other resources (non- substitute). Intellectual capital is a means that can be used to achieve and maintain the company's strategic resources to achieve the company's competitive advantage.

Agency Theory

Agency theory emphasizes the importance of mechanisms designed to monitor the behavior of company management in managing the company so that agency conflicts can be minimized. Companies need good relationships between principals and agents so that the company's goal to increase company value is achieved (Retno and Priantinah, 2012). To minimize the information gap between the agent and the principal, supervision, and control is needed based on compliance with the applicable rules. This effort has resulted in costs known as agency costs

Stakeholder Theory

Freeman (1984) defines stakeholders as groups or individuals who can influence or be influenced by the process of achieving the goals of an organization. The stakeholders in question are shareholders, employees, customers, suppliers, creditors, government, and the community. The main purpose of stakeholder theory is to assist company management in increasing value creation as a result of the activities carried out and minimizing losses that may arise for stakeholders, at the same time stakeholders have the right to obtain real information from management that will influence their decisions

Theory Planned Behavior (TPB)

Theory Planned Behavior (TPB) is a further development of The Theory of Reasoned Action (TRA). Theory Planned Behavior (TPB) focuses on the factors that determine the actual behavior of individuals such as intention. In essence, the Theory of Planned Behavior (TPB)

assumes that humans are rational beings and use the information that is possible for them, systematically. People think about the implications of their actions before they decide whether or not to perform certain behaviors.

Goal-Setting Theory

The concept of goal setting theory is that someone can understand the goals desired by the organization, then that understanding will affect his work behavior. Goal Setting Theory explains that a person's behavior is determined by two cognitions, namely values (values) and intentions (goals). Values are what a person values as an effort to gain prosperity, while intentions (goals) are things to be achieved and are drivers of influencing behavior and will lead to higher performance.

Intellectual Capital

Marr and Schiuma (2001) define intellectual capital as a group of knowledge assets related to an organization and contribute significantly to improving the competitive position of the organization. Pulic (2000) defines intellectual capital as human resources and capabilities in creating added value for the company. The Chartered Institute of Management Accountants (CIMA) categorizes intellectual capital into 3, namely human capital, relational capital, and structural capital. Human Capital is a human resource that includes the knowledge, skills, and experience that employees bring with them when they leave the organization. Relational capital is a company's harmonious relationship with its partners such as with suppliers, customers, and the surrounding community and government. Structural capital is an organization's ability to fulfill its routine processes to produce optimal intellectual performance such as the company's operational system, manufacturing processes, organizational culture, management philosophy, and all forms of intellectual property belonging to the company. The competitiveness of a company results from having valuable and inimitable resources, which enable the company to achieve an advantageous competitive position to maintain its market position and obtain superior performance. Therefore, companies need to identify, maintain, and develop IC resources (Xu and Liu, 2020). According to Pulic (2008), the most important activity in current conditions is not the production of goods and services, but the production of knowledge which is then used to make these goods and services. There is a significant difference between the value-added of goods from science compared to the added value of physical only. This ability to provide added value is known as IC, where both knowledge and physical resources are utilized properly. This IC unit was introduced with the term VAIC (value-added intellectual coefficient) which is often used as material for analysis to determine the relationship between intellectual capital and company performance

Digital Society

A progressive society formed due to the adoption and integration of information and communication technology, computer science, information science, and business science & humanities in the home, workplace, education, and recreation is known as a digital society (Paul et al., 2018). The opportunities that Indonesia has in a digital society according to research conducted by Herdiana (2020) are the integration of the flow of information, public services, and business opportunities that are spread throughout Indonesia and as a means of equitable development which are the values contained in the digital society. The challenges that may be faced in developing a digital society in Indonesia according to Herdiana (2020) are technological infrastructure gaps, differences in values and culture due to Indonesia's diversity, differences in technology adoption and utility, and the existence of

an exclusive social structure point of view or the presence of foreigners. Foreign culture is a taboo subject (generally occurs in traditional villages and/or remote villages)

Digital Importance of Intellectual Capital in the Era of Digital Society 5.0

Society 5.0 focuses not only on the manufacturing sector but also on solving social problems with the help of the integration of physical and virtual spaces. The era of Society 5.0 is marked by the active use of IT technology, the Internet of Things, robots, artificial intelligence and augmented reality (AR) for the benefit and convenience of everyone. This can be done by emphasizing optimization of working time in completing responsibilities to workers, optimizing public knowledge with the help of machines, and simplifying work with the help of machines. To survive in the digital era, companies need to maximize tangible and intangible assets. Intellectual capital can create added value (Pulic, 1999), and has the potential as a creator of wealth in the company (Walker, 2001; Usoff et al., 2002; and Karp, 2003). Research by Brennan (2001) and Walker (2001) shows that intellectual capital has an effect on company performance which is described by its profitability.

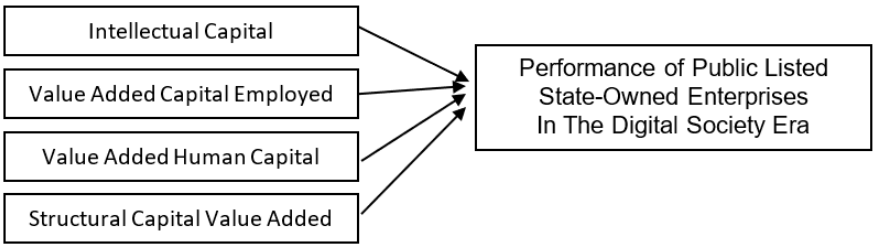

Fig. 1. Conceptual framework

2. MATERIAL AND METHODS

The population of this research is all SOEs that go public in Indonesia. A purposive sampling technique was used in this study. The population of this study is state-owned companies listed on the IDX, the sample is determined by purposive sampling that has been determined, then the number of state-owned companies that meet the criteria is 11 companies. The data is processed with the help of SPSS 25.0 software for windows. The sample of this research includes several SOES Go Public sectors in Indonesia, namely construction, banking, mining, cement, and telecommunications. The state-owned pharmaceutical sector is represented by PT. Kimia Farma and PT Indofarma, the mining sector represented by PT Aneka Tambang (Persero)Tbk and PT Timah (Persero) Tbk as well as the transportation and infrastructure sector represented by PT JasaMarga (Persero) Tbk did not pass the purposive sampling criteria due to losses in one year of observation. State-owned enterprises in the energy sector and the metal industry represented by PT Perusahaan Gas Negara (Persero) and PT Krakatau Steel (Persero) Tbk were not used as samples in this study due to issuing financial statements in currencies other than rupiah. PT Garuda Indonesia (Persero) Tbk also did not qualify for the purposive sampling criteria in this study because it did not publish financial statements in one of the observed years.

The sample in this study consists of several sectors and is divided into sub-sectors. The first sector is the mining sector with the coal sub-sector namely PT Bukit Asam. The second sector is the chemical industry sector which consists of PT Semen Baturaja and PT Semen Indonesia. The next sample is the financial sector with the banking sub-sector consisting of PT Bank Negara Indonesia, PT Bank Rakyat Indonesia, PT Bank Tabungan Negara, and PT

Mandiri. Other sectors that are sampled in this study are the infrastructure, utilities, and transportation sectors with the telecommunications sub-sector represented by PT Telekomunikasi. The last sector to be sampled in this study is the real estate, property, and building construction sector with the construction subsector represented by PT AdhiKarya, PT Pembangunan Perumahan, and PT Wijaya Karya. The approach used in this study is quantitative in the form of causal. The object of research is the development of intellectual capital in SOES Go Public following the era of Digital Society 5.0. The independent variable in this study is intellectual capital which is measured using the Value-Added Intellectual Coefficient (VAIC).

The dependent variable in this study is the company's performance. One indicator that can be used to measure the company's financial performance is profitability. Profitability is the company's ability to generate profits. Profitability in this study was measured using Return on Assets (ROA). ROA shows the efficacy of utilizing organizational resources in generating profits. It also shows the excess of revenue over costs and reflects the profitability of the company (Weqar and Haque, 2020). ROA can be used to determine the effect of intellectual capital as an asset owned by the company to generate returns for the company and can measure the operating efficiency of Ciptaningsih (2013); Dewi and Wirawati (2018). The greater the ROA value, the better the company's financial performance.

3. RESULTS AND DISCUSSION

Before conducting regression analysis, a classical assumption test is required to do first. The regression model will be more appropriate to use and produce more accurate calculations if the following assumptions can be met. Classical assumption tests that must be met in simple linear regression analysis include normality test, heteroscedasticity test, and autocorrelation test. Based on the tests that have been carried out, the data in this study are free from symptoms of classical assumptions, thus the calculation can be continued in the calculation of simple linear regression.

Table 1. Simple Regression Test Result

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	-1.638	0.712		2.299	0.032
VAIC	0.549	0.182	0.559	3.018	0.007
R Square			0.313		
Adjusted R Square			0.279		
F Count			9.110		
Significancy F			0.007		

**VACA =Value Added Intellectual Coefficient*

Based on the results of simple linear regression analysis as presented in table 1, the following regression equation can be made:

Y= -1,638 + 0,549X1 + e…….....(4.1)

Based on the equation model, it can be explained that:

1. Constant value -1.638 indicates that if the intellectual capital variable (X1) is constant then the company performance variable (Y) is worth -1.638.

2. Variable intellectual capital (X1) has a coefficient of 0.549 with a significance level of 0.007 indicates that there is a positive and significant impact on the variable performance of the company (Y), or does it mean that if the variable intellectual capital (X1) increased by one unit, assuming the variable others are considered constant, then the company's performance will increase by 0.549.

Determination Coefficient Test

The magnitude of the influence of the independent variable on the dependent variable is indicated by the total determination value (R Square) of 0.313 (Table 1), which means that 31.3 percent of the company's performance variation is influenced by intellectual capital, while the remaining 68.7 percent is influenced by other factors that are not entered into the models.

F Test (Model Feasibility Test)

Based on the data shown in Table 1, it can be explained that the calculated F value is 9.110 with a significance of 0.007 <0.05, it can be concluded that the tested group has a significant (significant) difference. This result means that there is a significant influence between intellectual capital on company performance.

Table 2. Intellectual Capital Element Multiple Linear Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	62.377	35.171		1.774	0.093
VACA	7.684	3.139	.456	2.448	0.025
VAHU	18.824	10.047	8.799	1.874	0.047
STVA	-80.732	44.405	-8.525	-1.818	0.086
R Square			0.509		
Adjusted R Square			0.427		
F Count			6.225		

**VACA =Value Added Capital Employed*
VAHU =Value Added Human Capital
STVA =Structural Capital Value Added.

Based on the results of simple linear regression analysis as presented in table 1, the following regression equation can be made:

Y = 62,377 + 7.864X1 + 18.824X2 -80,732 X3 +e……(4.2)

Based on the equation model, it can be explained that:

1. The constant value of 62,377 indicates that if the intellectual capital variable (X) is constant then the company's performance variable (Y) is 62,377

2. Variable VACA (X1) has a coefficient of 0.456 with a significance level of 0.025 indicates that there is a positive and significant impact on the variable performance of the company (Y) or does it mean that when variables VACA (X1) increased by one unit, assuming other variables are considered constant, then the company's performance will increase by 0.456.

3. Variable VAHU (X2) has a coefficient of 8.779 with a significance level of 0.047 indicates that there is a positive and significant impact on the variable performance of the company (Y) or does it mean that when variables VAHU (X2) increased by one unit, assuming other variables are considered constant, then the company's performance will increase by 8,779.

4. Variable STVA (X3) has a coefficient of -8.525 yet has a significant level of 0.086 which indicates that there is a negative but not significant effect on the firm performance variable (Y).

Coefficient of Determination Test (R2) Elements of Intellectual Capital. The magnitude of the influence of the independent variable on the dependent variable is indicated by the total determination value (R Square) of 0.509 (Table 2) which means that 50.9 percent of the variation in company performance is influenced by VACA, VAHU, and STVA which are elements of intellectual capital. While the remaining 49.1 percent is influenced by other factors that are not included in the model.

Based on the data shown in Table 2, it can be explained that the calculated F value is 6.225 with a VACA significance of 0.025 <0.05, it can be concluded that the tested group has a significant (significant) difference. This result means that there is a significant influence between intellectual capital on company performance. The significance of the VAHU is 0.047 < 0.05, so it can be said that the tested group has a significant difference. STVA variable has a significance value of 0.086> 0.05 so that this variable does not have a significant effect or does not have a significant difference.

The average value of company performance (ROA) in descriptive statistics shows that the minimum and maximum values have a wide range. This shows that there is still a performance gap between SOES Go Public companies. The results of the regression test in this study indicate that intellectual capital has a positive influence on the company's performance which in this study is reflected by the company's Return on Assets. Variable intellectual capital (X1) has a coefficient of 0.549 with a significance level of 0.007 indicates that there is a positive and significant impact on the variable performance of the company (Y) or does it mean that if the variable intellectual capital (X1) increased by one unit, assuming other variables are considered constant, then the company's performance will increase by 0.549. This result is similar to the research of Kurniasih and Heliantono (2016) which explains that the presence of intellectual capital in a company affects the company's financial performance. The better the company can manage the intellectual capital they have, the greater the Return on Assets (ROA) value generated by the company.

The VACA test results show a value of 0.456 with a significance level of 0.025 indicating that there is a positive and significant effect on the company's performance variable (Y) or it means that if the VACA variable (X1) increases by one unit assuming other variables are held constant, then the company's performance will increase by 0.456. Value Added Capital Employed has a positive effect on improving company performance. The existence of this

capital will provide a greater ability for the company to increase its income. Thus the company will improve the company's performance significantly. Assets owned by the company must be used by the company for its operational activities efficiently to achieve company goals. Capital Employee Efficiency (VACA) is an indicator of value-added created from efficiently managed physical capital. Capital employed is a type of tangible asset that is used for company operations, such as buildings, equipment, land, and technology that can be obtained in the market. So that SOES Go Public must utilize and optimize the use of these assets to produce a good performance.

Test Results VAHU show the value of 8.779 with a significance level of 0.047 indicates that there is a positive and significant impact on the variable performance of the company (Y) or does it mean that when variables VAHU (X2) increased by one unit, assuming other variables held constant, then the performance of the company will increase amounted to 8,779. Value Added Human Capital (VAHU) shows the contribution of funds invested in human capital to the company's value-added. Human capital is very important because the source of innovation, strategy, company dreams, re-engineering processes, and everything that creates a positive market perception for the company in the eyes of the market is the personal skills possessed by employees owned by the company, so the company can outperform the company. competition and sales. The results of this study indicate that VAHU has a positive and significant role in the performance of Go Public SOEs so that Go Public SOEs should pay attention to the development of the value of human capital in their agencies to support good company performance. The development of this VAHU can be done by setting a more directed vision of the agency, understanding the needs of employees, providing skill training for employees according to the interests of employees and those related to the interests of SOEs.

The results of the STVA variable testing in this study showed insignificant results. This is supported by research by Artinah (2011), Salim &Karyawati (2013) which states that structural capital has no significant effect on company performance. The effect of STVA on company performance cannot be proven empirically, perhaps due to the limited number of samples in this study. Another thing that might cause the insignificant effect of STVA on the company's performance in this study is the COVID-19 pandemic in the year this research was observed. SOES Go Public may do forecasting but does not yet have adequate software and is not following the goals set by the company. Companies must do better planning so that structural capital can optimally benefit performance. This affects the database, organizational structure, series of processes, strategies, most of which are not following the initial plan set by the company before the COVID-19 pandemic. This may also be since this study measures using VAIC which according to Ovechkin, et al . (2021) when VAIC is applied, the researcher can only calculate the set of efficiency ratios that may be related to the intellectual capital stock.

Intellectual capital is one of the factors driving good company performance. Intellectual capital is a unique value (which is not owned by other companies) in the company, this is evidenced in this study by the presence of different intellectual capital values in the company resulting in different company performance as well. So the company must pay attention to the value of intellectual capital owned by the company if the company wants good performance. This is following the RBT (Resource-Based Theory) theory where a company will have a competitive advantage if the company can manage its resources and knowledge well. This good management will have a positive effect on the company's performance. The assumption is that firms compete based on their resources and capabilities.

The results of this study are also in line with the Goal Setting Theory. Goal Setting theory explains the goals that have been set and how these commitments provide positive

feedback for the company. For this reason, the motivation that is owned is poured into the form of goals so that the motivation that is owned becomes more focused. In this case, the motivation in question is a good performance. Stakeholders and management need to know what information is related to the company's performance, which in this case is intellectual capital. The results of this study are also related to stakeholder theory. According to stakeholder theory, management is expected to carry out activities that will have a good impact on the company's operations. Following research findings show that intellectual capital affects the company's performance. Intellectual capital is non-financial information that is not explicitly stated in the company's financial statements. The achievement of good performance will give a positive signal to stakeholders that agents are trying to create symmetrical information (agency theory) as agency problems are often encountered.

The company not just has to maximize tangible assets only, but should also maximize the intangible assets to survive in the era of digitalization. One manifestation of intangible assets is Intellectual capital. Based on this, companies need to pay attention to intellectual capital. What's more, Society 5.0 is not limited to the manufacturing sector but solves social problems with the help of the integration of physical and virtual spaces. Seeing the benefits and advantages of intellectual capital for the company's performance, SOES Go Public should pay attention to its intellectual capital. Moreover, currently leading to the era of digital society 5.0, where companies are required to have a competitive advantage to compete with other companies in the global market. This will be more important for SOEs to go public where SOEs must gain trust and a good image in the community who act as investors. Managers of Go Public SOEs should strive to continuously develop and maintain their IC, through investments in staff recruitment and selection, employee training and development, procedure design and optimization, and other HRM activities. SOEs Go Public should not only acquire but also strengthen and maintain their IC. Instead, they need to incorporate plans to increase the speed and quality of innovation in their overall IC strategy. If the speed and quality of innovation are neglected and lags competitors, IC's potential to improve company performance will be very limited.

4. CONCLUSION

Intellectual capital is one of the factors driving good company performance. This is evidenced in this study where the results of the regression test show a positive and significant influence on intellectual capital on the company's performance variables. Companies must pay attention to the value of intellectual capital owned by the company if the company wants good performance, such as human capital, structural capital, and relational capital.

The results of this study indicate that intellectual capital has a positive and significant effect on company performance. This study also shows that intellectual capital is one of the factors driving good company performance. This is an important reason for companies to pay attention to intellectual capital, especially in the era of digital society 5.0. The element of intellectual capital that has the greatest influence based on this research is human capital, while the element of structural capital has no significant effect on the performance of SOES Go Public companies. The results of this study are also in line with the resource-based theory where SOEs must maximize their competitive advantage to compete in the Digital Society 5.0 era. Go Public SOEs must continue to develop and maintain their intellectual capital through investments in staff recruitment and selection, employee training and development, design and optimization of procedures. In addition, Go Public SOEs should not only acquire, maintain and strengthen their intellectual capital but also need to make plans to increase the speed and quality of innovation to improve their performance. Go Public SOEs must maximize their intellectual capital to survive and compete in the digital 5.0 era, this is

because companies are required to have a competitive advantage to compete with other companies in the global market. SOES Go Public needs to increase efficiency in managing physical capital, increase employee competence and create efficiency in the company's routine operational processes.

Human Capital development can be carried out by SOES Go Public in several ways. PSOES Go Public conducts recruitment and placement of employees in the right positions. This is necessary to be able to bring the company to achieve its goals optimally. The first step is how the company conducts human capital recruitment and placement in the right field. SOES Go Public must conduct recruitment with a gradual screening process, either directly or indirectly. SOES Go Public can also develop human capital by providing training and education to employees following the fields of interest. Training and development of human capital are important for the company to anticipate changes in the environment that often occur quickly. Training for employees is carried out by teaching certain knowledge and skills as well as attitudes so that employees are more skilled and able to carry out their responsibilities better, following standards. While development has a scope, it can be in the form of efforts to increase knowledge that may be used immediately or often for future purposes. Development is often categorized explicitly under management, organizational, and individual employee development. SOES Go Public can also develop human capital by providing appropriate compensation and rewards to employees to maintain and improve the quality of their human resources.

SOES Go Public can develop value-added capital employed in various ways. What SOES Go Public can do is manage physical and financial capital efficiently to generate added value for the company. One way is to sell unprofitable or unnecessary assets. For example, a company that successfully sells a machine that is beyond its useful life will allow less capital to be used to facilitate the same amount of production. SOEs can carry out effective inventory management to improve the company's overall performance. Monitoring, organizing, and coordinating orders for goods properly can significantly increase the company's cash flow and available working capital. This allows the company to reinvest capital back into the company regularly, which allows it to grow and increase its market base.

The development of structural capital for Go Public SOEs tends to differ from one sector to another given the different structures and types of business for each sector. For SOEs that go public in the mining and chemical industry sectors such as PT Bukit Asam and PT Semen Indonesia, development can be done through better planning, preparation of software that is following the characteristics of state-owned companies. Software and planning can be optimized, especially those related to waste management, considering that these two sectors produce waste that affects the environment around the community. SOES Go Public in the mining and chemical industry sectors should also report this waste management in the company's Sustainability Reporting, to gain better public trust.

Go Public SOEs with the telecommunications sub-sector can develop their structural capital by providing wider services and being able to reach remote areas (coverage) at affordable prices, as well as improving service quality by making it easier for customers to use payment methods that are integrated with various payment platforms. In the era of pandemic COVID-19, the public tends to reduce direct payments/cash and preferred method of payment utilizing cashless. By improving services, namely providing convenience to customers, investors will be more interested and have more confidence in this company. This is because the company is considered MAMP u retain customers as well as has the ability of marketing to expand the company's market.

SOES Go Public in the property sector with the construction subsector such as PT AdhiKarya, PT Pembangunan Perumahan, and PT Wijaya Karya can develop and pay attention to ESG (Environmental, Social and Good Governance) in their company operations. Investors who are interested in ESG usually invest in issuers whose business processes pay attention to environmental, social, and good governance factors. This type of investment is in high demand by investors so that SOES Go Public in the construction sub-sector must pay attention to environmental, social impacts and also good governance in company operations.

This study contributes to the still limited research and literature on intellectual capital, especially in developing countries such as Indonesia, especially in Go Public SOES companies. In addition, this research can contribute to increasing the awareness of stakeholders, especially managers and investors, about the importance of intellectual capital in improving company performance. This study has a limitation that refers to the Value Added Intellectual Coefficient (VAIC) method used in calculating intellectual capital. Although the VAIC method is relatively the most popular financial indicator of intellectual capital and doable for secondary data, this method has several limitations. One of the limitations is the capital stock assessment cannot be measured. In addition, such a method focuses more on the efficiency ratio. Future studies could use a better method for calculating intellectual capital if the required data is available. The future study also could obtain primary data through interviews to obtain comprehensive information regarding any possibilities in developing the intellectual capital to improve companies' performance.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

Option 2:

Author(s) hereby declare that generative AI technologies such as Large Language Models, etc. have been used during the writing or editing of manuscripts. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology

Details of the AI usage are given below:

1.

2.

3.

REFERENCES

Artinah, B. (2011). The Influence of Intellectual Capital on Profitability (Empirical Study on Banking Companies). Journal of Social Sciences "Socioscientia", Vol. 3 (1).

Brennan, Niamh. (2001). Reporting Intellectual Capital In Annual Reports: Evidence From Ireland. Accounting, Auditing & Accountability Journal, Vol. 14 (4), 423- 436.

Brigham, E.F And Houston. (2006). Fundamental Of Financial Management: Dasar-DasarManajemenKeuangan. Edition 10. Jakarta: SalembaEmpat.

Freeman, R. E. (1984). Strategic Management: A Stakeholder Approach. Boston: Pitman

Hitt, Michael A. Et All. (2001). Direct And Moderating Effects Of Human Capital On Strategy And Performance In Professional Service Firms: A Resource-Based Perspective. Academy Of Management Journal, Vol. 44(1), 13-28.

Karp, Tom. (2003). Is Intellectual Capitalism The Future Wealth Of Organizations? Foresight, Vol. 5(4), 20-27.

Kurniasih, A. And Heliantono. (2016). Open Soes Bank Intellectual Capital and Its Influence on Company Performance." Mix: Management Scientific Journal, Vol. 6 (2), 195-212.

Marr, B., And Schiuma, G. (2001), 'Measuring And Managing Intellectual Capital And Knowledge Assets In New Economy Organisations', In Bourne, M. (Ed.), Handbook Of Performance Measurement, Gee, London.

Ni, Y., Cheng, Y.-R., & Huang, P. (2020). Does Intellectual Capital Matter To Firm Value Enhancement? Evidence From Taiwan. Journal Of Intellectual Capital, Ahead-Of-Print. Doi:10.1108/Jic-10-2019-0235

Paul, Prantosh And Aithal, P. S., (2018). Digital Society: Its Foundation And Towards An Interdisciplinary Field. Proceedings Of National Conference On Advances In Information Technology, Management, Social Sciences And Education, 1-6.

Ovechkin, D.V., Romashkina, G.F., Davydenko, V.A., The Impact Of Intellectual Capital On The Profitability Of Russian Agricultural Firms. Agronomy, 11(286), 1-16.

Pulic, Ante And Manfred Bornemann. (1999). The Physical And Intellectual Capital Of Austrian Bank. Http:/Www.Measuring-Ip.At.

Pulic, A. (2000). Vaic - An Accounting Tool For IC Management. International Journal of Technology Management. https://Doi.Org/10.1504/Ijtm.2000.002891

Pulic, Ante. 2008. "The Principles of Intellectual Capital Efficiency – A Brief Description".

Retno M., RenyDyah and Denies Priantinah. (2012). The Influence of Good Corporate Governance and Disclosure of Corporate Social Responsibility on Company Value

(Empirical Study on Companies Listed on the Indonesia Stock Exchange for the Period 2007-2010), Nominal Journal, 1(1).

Rosmida. (2019). Transformation of the Role of Accountants in the Era of the Industrial Revolution 4.0 and the Challenges of the Society 5.0 Era. Journal of Business Innovation, 7 (1), 206-212.

Salim, S.M., &Karyawati, G. (2013). The Influence of Intellectual Capital on Financial Performance. Journal of Business and Entrepreneurship, Vol. 1 (2).

Sarafina, S., Saifi, M. (2017). The Influence of Good Corporate Governance on Financial Performance and Company Value. Journal of Business Administration, Vol. 50 (3), 108-117. Usoff, Catherine A., Jay C. Thibodeau, Priscilla Burnaby. (2002). The Importance of Intellectual Capital and Its Effect on Performance Measurement Systems. Managerial auditing Journal. 1/17/2, pp. 9-15.

Walker, Dana Charles. (2001). Exploring the Human Capital Contribution to Productivity, Profitability, and the Market Evaluation of the Firm. http:/wwwlib.umi.com/ dissertations/preview_all/3010003.

Wernerfelt, B. (1984). A Resource-based View of the Firm. Strategic Management Journal, 5, 171–180.

Weqar, F., & Haque, S. M. I. (2020). Intellectual capital and corporate financial performance in India's central public sector enterprises. International Journal of Learning and Intellectual Capital, 17(1), 77. doi:10.1504/ijlic.2020.105323

Xu, J., & Liu, F. (2020). The Impact of Intellectual Capital on Firm Performance: A Modified and Extended VAIC Model. Journal of Competitiveness, 12(1), 161–176. https://doi.org/10.7441/joc.2020.01.10.

Dhir, A., et al. (2021). "Role of intellectual capital in driving innovation performance: A study of the technology sector." *Journal of Business Research*, 128, 411–423.

Chauhan, et al. (2023). “Linking Intellectual Capital and Financial Performance in Pharmaceutical Companies”. *Delhi Business Review*, 24(1), 65-73.

Fukuyama, M. (2018). "Society 5.0: Aiming for a new human-centered society." *Japan Spotlight*, 1, 47–50.

Buallay, A. (2019). "Intellectual capital and performance of public sector companies: Evidence from GCC." *Journal of Intellectual Capital*, 20(5), 644–661.

Salisu, A. A., & Vo, X. V. (2021). "Assessing the impact of COVID-19 on corporate performance." *Economic Modelling*, 94, 299–311.

Nazari, J. A., &Herremans, I. M. (2007). "Extended VAIC model: Measuring intellectual capital components." *Journal of Intellectual Capital*, 8(4), 595–609.

Herdiana D. Inovasi proses pembelajaran daring bagimahasiswakelaskaryawan di masa pandemi covid-19. InUrbanGreen Conference Proceeding Library 2021 Aug 25 (pp. 129-137).