

INTELLECTUAL CAPITAL PERFORMANCE OF STATE-OWNED ENTERPRISES IN INDONESIA

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Abstract

The purpose of this study is to measure the performance of intellectual capital management in State-Owned Enterprises using the Pulic's model known as Value Added Intellectual Capital. The data used is the financial statements of SOEs for 2020. The results of the study show 10 SOE's in the top performance category and 11 SOE's in the bad performance category. The implications of this assessment encourage SOE's to continue to improve in utilizing intellectual capital to create value in order to be able to survive and have competitiveness in the current Knowledge Age.

Keywords: *value added intellectual capital, intellectual capital performance, BUMN.*

1. INTRODUCTION

The discussion of the concept of intellectual capital which is the basic topic of this writing highlights the concept of Value Added Intellectual Capital (VAIC) from Ante Pulic (Pulić, 2008), starting implementing this VAIC in 1998.

In the current era of information technology revolution, value creation is no longer based on the creation of quantity of goods produced but rather the creation of value that will be added to the product that is different and able to satisfy the user.

The concept of capital as we know it is something that can change in value creation, such as buildings, machinery, raw materials used to create new value. The same thing with intellectual capital is the knowledge that can turn into actions to create value that will cause a market reaction. In the new economy, the term for an innovative employee can incorporate elements of knowledge into the products he created according to (Pulić, 2008) referred to as intellectual capital.

A superior company is a company that can create value so that from its expertise in terms of creating value that the company is said to have competitiveness, companies that have competitiveness can survive. Likewise with the economic growth of a country, one of the factors that support is human capital (Amri & Munir, 2020).

The phenomenon that occurs today some State-Owned Public Bodies (SOEs) are risking their competitiveness. The statement of the President of the Republic of Indonesia that some SOEs are experiencing financial pain. However, because the SOEs do not dare to compete, do not dare to compete, and do not dare to take risks so that seven SOEs will be closed (Yolandha, 2021).

State-Owned Enterprises (SOEs) is one of the economic actors in the national economy that has the intention and purpose of contributing to state revenues, pursuing profits, providing benefits in the form of the provision of high-quality goods and/or services to meet the lives of many people (Undang-undang Republik Indonesia Nomor 19 Tahun 2003 tentang Badan Usaha Milik Negara, n.d.).

According to Law No. 19 of 2003 State-Owned Enterprises (SOEs) was established by the Indonesian government to contribute to state revenue, organize business processes to provide the needs of many people, as well as SOEs as economic actors in the national economy.

The chronic fate of SOEs indicates that the weak management of their knowledge capital so that companies are unable to create value and unable to be competitive. Here, the importance of intellectual capital to be the center of attention of top management in creating value in its superior products/services.

This article will discuss the valuation portrait of the extent to which SOEs can manage intellectual capital in creating value (Pulić, 2008) which is the concept of value-added intellectual capital to assess how able SOEs is to create new value from each resource it sacrifices. The higher the value of VAIC, the more efficient the intellectual capital of SOEs in creating new value.

2. LITERATURE REVIEW

Stakeholder theory becomes the foundation in explaining the concept of intellectual capital. As explained by (Freeman, Harrison, Wicks, Parmar, & de Colle, 2010) that stakeholder theory addresses morals and values in governing organizations. This theory maintains the corporate relationship of all stakeholders as well as minimizing the possibility of losses for stakeholders (Gunawan & Ramadhani, 2018).

Intellectual capital is related to the company's ability to create value (value creation). By using the existing potential ranging from the potential of human capital, structural capital, and relational capital the company manages the potential well to create value in the products / services it produces to encourage competitive capabilities and improve the company's performance to meet stakeholder interests.

Before the concept of intellectual capital, the creation of value in products / services by relying on tangible assets. But the value created is not able to beat competitors with innovation strategies. Innovation itself is born from intangible assets namely knowledge, skills, experience and technology. As stated by (Sullivan, 2000) intellectual capital is used to create value for the company.

The concept of intellectual capital was first introduced by Thomas Stewart in 1991, defined that intellectual capital is all that is known to the people in the company who provide a competitive advantage, the intellectual capital material itself namely knowledge, information, intellectual property, and experience all of which are used to create corporate value (Stewart & Ruckdeschel, 2007). Similar to (García Castro, Duque Ramírez, & Moscoso Escobar, 2021) intellectual capital is a hidden set of intangibles.

The importance of the concept of intellectual capital becomes a challenge to make changes to the composition of fixed assets and intangible assets. Characteristics of intellectual capital; (1) invisible, (2) relating to knowledge, employee experience, customers, and information technology (3) providing opportunities to become a more successful organization in the future (Gogan, Artene, Sarca, & Draghici, 2016). These characteristics of intellectual capital become corporate capital to be able to compete sustainably over time (García Castro et. al., 2021). Because human capital is considered as the main driver of

economic growth so that it can determine the competitiveness status of a country (Hejase, Hejase, Tabsh, & Chalak, 2016).

Intellectual capital research has been widely conducted in various stages, among others, the first stage, namely in the 1980s to 1990s focused on understanding the concept of intellectual capital and the concept of intellectual capital to gain a competitive advantage. The second stage is in the 1990s to 2000s, intellectual capital about the achievement of financial performance. The third stage, from the 2000s to the 2010s, was used by managers to manage and run their businesses. The fourth phase of the 2010s to the present is used to build a strong ecosystem, economy, and environment in which organizations can improve healthily and robustly (Li, Song, Wang, & Li, 2019).

Using Pulic's model, the results of his research (Marcelia & Purnomo, 2016) prove that the added value of intellectual capital does not affect intellectual capital disclosure. The Public's model is also used by Researchers (Nasution & Ovami, 2021) by separating VACA, VAHU, and STVA as free variables in assessing companies. (Situmorang & Purba, 2021) uses the public model to measure the level of intellectual capital efficiency in consumer goods companies with research results showing the company has a level of efficiency to create added value.

The Public model is also used by (Nuryaman, Kartadjumena, & Arnan, 2019) to measure the efficiency level of intellectual capital use, in this study also integrated elements of intellectual capital in reducing profit management behavior. Meanwhile, according to (Asadi, 2013) intellectual capital measurement models include organizational capital, customer satisfaction, and innovation. Intellectual capital has indicators including human capital, structural capital, and customer capital these three factors increase creativity and stimulate innovation (Örnek & Ayas, 2015). Public's model is widely used by research including (Haris, Yao, Tariq, Malik, & Javaid, 2019) by grouping intellectual capital into used capital efficiency, human capital efficiency, and structural capital efficiency.

VAIC calculation steps are as follows:

1. Added value is the result of the business, will be calculated based on the excess input to the output.

$$\text{Value Added} = \text{OUT} - \text{IN}$$

Information:

VA = Company added value

OUT = total Sales

IN = cost of purchase – raw materials, components, and services.

VA can be calculated from existing accounts in the company.

2. $VA = \text{operating profit} + \text{Employee cost} + \text{depreciation} + \text{amortization}$

Calculating Human Capital Efficiency (*HCE*)

$$\text{HCE} = \text{VA} / \text{HC}$$

Information:

HCE = Coefficient of human capital efficiency

VA = Added value

HC = Total salary and wages for the company

3. Structural capital, calculated as follows:

$$\text{SC} = \text{VA} - \text{HC}$$

Information:

SC = Structural Capital for Company

VA = Value Added

HC = Total salary and wage duty's for company

4. Structural capital efficiency is calculated in the following ways:

$$\text{SCE} = \text{SC} / \text{VA}$$

SCE = Structural capital efficiency for company

SC = Structural capital

VA = Value added

5. By summing the efficiency of human capital markets and structural capital, Intellectual Capital Efficiency (*ICE*) is calculated:

$$\text{ICE} = \text{HCE} + \text{SCE}$$

Information:

ICE = Intellectual capital efficiency coefficient

HCE = human capital efficiency coefficient

SCE = Structural capital efficiency coefficient

6. Working capital efficiency is calculated in the following ways:

$$\text{CEE} = \text{VA} / \text{CE}$$

Information:

CEE = capital employed efficiency coefficient

VA = value added

CE = book value of the net assets for a company

7. The final step is to calculate the overall value creation efficiency comparison.

$$\text{VAIC} = \text{ICE} + \text{CEE}$$

Information:

VAIC = Value added intellectual coefficient

ICE = Intellectual capital efficiency coefficient

CEE = Capital employed efficiency coefficient

This aggregate indicator shows the overall efficiency of the company and demonstrates its intellectual ability to create value. In simple words, VAIC shows how far value can be created from the amount of Rupiah that has been sacrificed. The higher this coefficient, the better the intellectual capital of the company, which creates more value and is more efficient.

3. RESEARCH METHODS

The study used The Pulic Model's quantitative approach to create VAIC research. Secondary data used in this study is the financial statements of SOEs that are still active in 2020, as many as 51 companies are grouped into 12 sectors. The model (Pulić, 2008) used in this study is as follows:

$$\text{VAIC}^{\text{TM}} = \text{VACA} + \text{VAHU} + \text{STVA}$$

VAIC performance grouping follows research (Ulum, 2008) with the VAIC group as follows:

Top performers (TP) – VAICTM score above 3

Good performers (GP) – VAICTM score between 2.0 to 2.99

Common performers (CP) – VAICTM score between 1.5 to 1.99

Bad performers (BP) – VAICTM score below 1.5

4. RESULTS AND DISCUSSION

The average VAICTM score rate is 39.9 GP for 2020. The group will be explained per category of SOEs based on VAIC. Table 1 is a list of SOEs that fall into the top performance category. According to the concept described in the theory section that companies with top performance categories have meant that the company can manage its intellectual mode so that it can generate value for the company itself.

Table 1
List Of Soes With Top Performances Category

Number	SOEs	VAIC
1	PT Perusahaan Gas Negara Tbk.	7,3
2	PT Timah Tbk.	21,4
3	PT Perkebunan Nusantara X	17,0
4	PT Perkebunan Nusantara XII	9,7
5	PT Telekomunikasi Indonesia	37,1
6	PT Berdikari	28,1
7	PT Pupuk Indonesia	24,7
8	PT Rajawali Nusantara Indonesia	26,4
9	PT Indofarma Tbk	10,4
10	PT Semen Baturaja (Persero) Tbk	29,2

Source: Data Processed, 2021

While on the other hand, some SOEs are included in the bad performance as described in the table 2 list. Some companies have poor judgment in the management of their intellectual capital so they are unable to create value for the company.

Table 2
List of SOEs with Bad Performances category

Number	BUMN	VAIC
1	PT Bank Rakyat Indonesia Tbk.	-7,8
2	PT Asuransi Jasa Indonesia	1,2
3	PT Asuransi Jiwasraya	-16,8
4	PT Asuransi Kerugian Jasa Raharja	1,1
5	PT Perusahaan Listrik Negara	-10,7
6	PT Bukit Asam Tbk	1,5
7	PT Asuransi Jasa Indonesia	1,2
8	PT Jasa Raharja	1,1
9	PT Garuda Indonesia (Persero) Tbk	1,2
10	PT Krakatau Stell (Persero) Tbk	-1,4
11	PT ASDP Indonesia Ferry (Persero)	1,4

Source: Data Processed, 2021

Value-added intellectual capital created by Ane Punic describes the company's ability to manage its intellectual capital to create value creation. In 2020 there are 10 SOEs in the top performance category, meaning that the ten SOEs have the intellectual ability they have in creating value. In other words, VAIC shows how much new value it creates from the monetary unit invested in each resource. The higher the VAIC value the better the intellectual capital in creating value. In the top performance group, PT Telekomunikasi Indonesia which has the largest VAIC value is 37.1 meaning PT. Telecommunications Indonesia manages intellectual capital effectively. This can be seen the share price obtained by PT Telekomunikasi Indonesia in the period of 3 consecutive months from August 2020 to December 2020 changes in the stock price show a positive value. Through the performance of the stock can be interpreted that PT. Telekomunikasi Indonesia has an attraction for investors to invest and it indicates that the company can create value from the management of its intellectual capital.

On the other hand, there are 11 SOEs in the bad performance category. PT. Garuda Indonesia which is currently hotly discussed due to its inability to manage finances with

negative equity worth Rp 40.04 trillion as of September 2021 (Wareza, 2021) proves that the SOE is not able to create value as it should be generated by the utilization of intellectual capital. SOEs that take part in the aviation business is also one of the SOEs that will be closed in 2021.

Another SOE in the bad performance category is PT Krakatau steel. SOEs established to meet the needs of steel in all sectors, both household and defense sectors, in fact only process imported steel raw materials and not produce steel raw materials for import substitution, even though the steel sector industry is currently experiencing shortages and difficulties obtaining raw materials (Taufan, 2021). PT. Jiwasraya on November 30, 2020 received negative equity of Rp38.6 trillion (Wareza, 2021). PT. Perusahaan Listrik Negara (The State Electricity Company) also has difficulty in running electricity programs with investment needs of Rp78 trillion must borrow to the bank due to cashflow difficulties while in the Covid pandemic it is not possible to increase electricity tariffs (Laoli, 2021).

Some SOEs that fall into the category of bad performance have an unlucky financial performance so they are unable to compete and can even lead to bankruptcy. The picture is clear evidence that companies that have poor management of intellectual capital cause difficult financial conditions, because of their intellectual strength will be able to face environmental uncertainty.

Table 3
Value Added Intellectual Capital Per SOE Sector in 2020

Number	SOEs Sector	VAIC
1	Financial Services and Insurance	-2,7
2	Energy, Oil and Gas	-1,7
3	Minerals and Coal	19,7
4	Insurance Services and Pension Funds	9,1
5	Plantations and Forestry	13,4
6	Telecommunications and Media	237,1
7	Food and Fertilizer	215,8
8	Tourism and its Supporters	3,0

9	Health	7,4
10	Manufacturing	4,3
11	Infrastructure	30,3
12	Logistics	36,5
VAIC Average		39,9

Source: Data Processed, 2021

5. CONCLUSION

The results of this study showed the performance of intellectual capital management of SOEs diverse performance, ranging from top performers, good performers, common performers, and bad performers. Its role as an organizer of the national economy to prosper the community of course the performance of SOEs has a great influence. SOEs with good management of intellectual capital can certainly be able to produce value for the products / services they produce, with the value they have certainly impact on the ability to compete both at the national and global levels.

6. BIBLIOGRAPHY

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