# Intellectual Capital and Corporate Governance on The Profitability of Indonesian State-Owned Enterprises

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# Abstract

The purpose of this research is to prove the decline in profitability of Indonesian-Owned Enterprises in the period due to lower disclosure of intellectual capital and governance in the annual reports of Indonesian Government-Owned Enterprises. The method of this research expected to provide convenience too Owned Enterprises. Data analysis uses multiple regressions with 51 populations with the results of the study stating a partial relationship that the disclosure of intellectual capital and corporate governance in the annual report can increase the profitability of state-owned companies.

*Keywords*: intellectual capital; corporate governance; profitability; ROA; Indonesian State-Owned Enterprises.

# Introduction

It has been more than two years since the Covid-19 pandemic began to hit the world, the beginning of the crisis made many businesses people experience many problems. Efforts to overcome these problems are to innovate so that business people can adapt to environmental uncertainty[1]. Innovating certainly requires knowledge and intellectual capital management [2]

Intellectual capital is used by business people to generate strategies to create value for their business and is unique compared to others[3]. Therefore, intellectual capital is an important thing that companies must have as capital to create competitive advantages so that they benefit the company[4]. Before the era where intellectual capital became the main thing, businesses relied on inputs such as labor, money capital, and raw materials used for productivity [5] until finally in the knowledge economy era interpreting the intangible resources of the company was considered as the basis for creating innovation, competence, business success

[5] Improving the operational performance of State-owned Enterprises (BUMN) can provide added value for customers, employees, and all stakeholders to achieve efficiency, reduce cost-effectiveness, reduce waste, and improve safety. This is realized because SOEs have made innovations. The source of innovation in BUMN comes from close innovation and open innovation. Closed innovation is an innovation that comes from internal inventors while open innovation comes from collaboration with external parties such as industry, startups, regulators, and academics.

Indonesian State-Owned Enterprises in this case is a business entity whose entire or most of the capital is owned by the state through direct participation originating from separated state assets[6]. BUMN has an important role in the implementation of the national economy to realize the welfare of the community. Over the last 10 years, the state has added up to IDR 3,295 trillion.

SOEs are the pillars of the Indonesian economy and of course, the financial performance of SOEs is very significant for the Indonesian economy. However, the fact is that in 2020 SOEs produced quite apprehensive performance, among others, PT Perusahaan Gas Negara Tbk had -3.51%; PT Timah Tbk owns -2.3%; PT Krakatau Steel (Persero) owns -14.72%; PT Waskita Karya (Persero) Tbk owns -8.99%.

Based on empirical data from several SOEs with poor financial performance, PT Krakatau Steel Tbk posted a net loss attributable to owners of the parent entity of US\$27.39 million as of the third quarter of 2020. Even though it still recorded a loss, this realization was still better than the net loss in the same period last year which reached 211.91 million US dollars. As of September 30, 2020, this steel producer company also experienced a decline in revenue. It was noted that KRAS' revenue decreased 10.85 percent on an annual basis, from 1.05 billion US dollars to 938.79 million US dollars. In detail, PT Krakatau Steel's revenue is still dominated by sales of steel products in the domestic market, which is 740.78 million US dollars, and steel sales to the export market worth 41.86 million US dollars (Ali, Lubis, Darsono, & Idris, 2019).

# Literature Review

Previous research [7-9] confirmed a strong and positive relationship between intellectual capital and organizational performance. However, this link has to be confirmed in other fields as well in different countries.

The understanding of intellectual capital from some experts has differences, but all of them contain a common thread. According to [10]intellectual capital is a collection of knowledge resources that are the basis for creating a competitive advantage. Managing intangible assets properly will make the business have a far superior competitive advantage, as well as better maintain the company's sustainability. The competitive advantage of an organization is formed by values that are intangible assets[11]. Therefore, stakeholders need to pay special attention to intellectual capital which has an impact on profitability[12]. Intellectual capital is also the main driver for achieving goals[13].

Intellectual capital is measured by various approaches. The first is the disclosure approach in the annual report, namely by using a disclosure index which is grouped into internal capital, external capital, and human capital [13] while the other approach is to measure the value-added intellectual capital [14] Value-added intellectual capital is an effective measurement tool because it uses material, financial, and capital assessment indicators in the form of human capital efficiency, structural capital efficiency, and capital employed efficiency[15]. The VAIC approach model was first introduced by [16]by measuring and monitoring the efficiency of value creation in companies using accounting-based numbers [6]

Intellectual capital as an intangible and intangible asset used by companies to operate[17], [18]defines intellectual capital as a collection of knowledge resources that are the basis for creating competitive advantage [19] Companies that implement good governance practices can achieve financial performance (Arora & Sharma, 2016). The more complex the company's problems require more attention to the framework by governance[20]. Good governance can result in corporate responsibility, structured ethical practices, and adequate organizational accountability in the handling of resources[21]. Corporate governance has a goal to

manage conflicts between principals and agents so that it has an internal mechanism in managing group interests[22].

The studies on the use of intellectual capital in managing financial performance have been proven by[23]. [24]examines the added value of intellectual capital by using three models, including efficient use of capital, the efficiency of human capital, and the efficiency of structural capital. The results of the study [15] provide new insights for managers that to increase the value of the company it is necessary to increase the role of intellectual capital according to the results of their research that there is a relationship between intellectual capital and profitability. The same thing with research results [24]there is a significant relationship between values added intellectual capital and profitability as indicated by return on assets.

Corporate governance is always looking for ways to increase company profits[23, 25] Corporate governance is a set of internal and external rules that assist the company in achieving its goals, maintaining relationships with shareholders[18]. The results of the study show the corporate governance has a positive effect on financial performance.

### Methodology

This research uses multiple regression analysis, the independent variable is intellectual capital and corporate governance, while the dependent variable is profitability. The research subjects of BUMN are 51 in various sectors.

Each variable uses the following measurements:

Profitability is measured by ROI

IC measured by VAIC TM = VACA + VAHU + STVA

STVA = ((Total income - operating expenses except salary & benefits) - Salary & allowances)/(total income - operating expenses except salary & benefits)

VAHU = (total income - operating expenses except salary and employee benefits) / (total salary + employee benefits)

VACA = (total income - operating expenses except employee salaries and benefits) / total equity and net income

#### **Finding And Discussion**

Data analysis using multiple linear regression, with the proviso BLUE (best linear un-bias estimation has been met, among others, test the assumption of normality, assuming multikolinieritas, assuming heteroskedasticity and assumptions autocorrelation. The research model the effect of intellectual capital and corporate governance on profitability at state-owned enterprises in Indonesia as follows:



Figure: Research Model

 $\mathsf{Y} = \beta_0 + \beta_1 \mathsf{X}_1 + \beta_2 \mathsf{X}_{2.1} + \beta_3 \mathsf{X}_{2.2} + \beta_4 \mathsf{X}_{2.3} + \beta_5 \mathsf{X}_{2.4} + \beta_6 \mathsf{X}_{2.5} + \varepsilon$ 

Description:

Y = Profitability;  $X_1$  = Intellectual Capital;  $X_{2.1}$  = Board;  $X_{2.2}$  = BOC;  $X_{2.3}$  = Independent Commissioner;  $X_{2.4}$  = Audit Committee;  $X_{2.5}$  = Institutional Ownership.

Profitability is measured with return on assets, which is a ratio that shows the company's management ability in managing assets to generate profits. The results of the study show an average return on assets of 0.0289 (2.89%) in general, state-owned companies in Indonesia made a profit in 2019.

However, some companies suffer losses of up to 15%, and some companies earn profits up to 26%. Intellectual capital is measured by the value-added intellectual coefficient (VAIC). The average value-added intellectual coefficient is 8117.3 times. This means that on average the output produced by state-owned companies in Indonesia is 8117.3 times greater than the input for intellectual capital. Then for the number of members of the board of directors, as regulated in the Limited Liability Company Law Number 40 of 2007 concerning Limited Liability Companies in article 92 paragraphs 1 to 6, the elected board of directors usually consists of two or more members and includes the president director. Through descriptive statistics can be seen the average number of members of the board of directors at state-owned companies in Indonesia in 2019 was 5.98 or rounded up to 6 people.

The board of commissioners is tasked with supervising the board of directors which is regulated based on the company's articles of association. The more the number of commissioners, it is expected that the supervision will be tighter, and for a limited liability company the number of commissioners is at least 3 people. Through descriptive statistics can be seen the average number of commissioners at state-owned companies in Indonesia in 2019 was 5.4 or rounded up to 6 people. In addition to the board of commissioners who come from within the company, there is also a board of commissioners who come from outside the company called independent commissioners. As the name implies, an independent commissioner must be independent in the sense that the commissioner is not involved in managing the company. Through descriptive statistics can be seen the average number of independent commissioners in state-owned companies in Indonesia in 2019 was 1.8 or rounded up to 2 people.

The audit committee assists the board of commissioners in carrying out their supervisory functions by conducting studies on the integrity of financial statements, risk management, internal control, compliance with laws and regulations, performance, qualifications, and independence of external auditors as well as the implementation of the internal audit function. Through descriptive statistics can be seen the average number of audit committee members at state-owned companies in Indonesia in 2019 was 3.7 or rounded up to 4 people. Finally, institutional ownership whose existence indicates a mechanism of corporate governance a strong that can be used to monitor company management. Through descriptive statistics can be seen the average institutional ownership in state-owned companies in Indonesia in 2019 was 0.568 or 56.8 percent.

The results of the Kolmogorov-Smirnov test concluded that the regression model was normally distributed. The heteroscedasticity test uses correlation Spearman rank [26]. The results of this test indicate that the regression model has a homogeneous variance (no heteroscedasticity). In the autocorrelation test, the VIF (Variance Inflation Factor) and Tolerance values are used. The test results show that there are no symptoms of multicollinearity among the six independent variables and globally, the classical assumption test concludes that the estimation results of the regression model have met the BLUE (requirements best linear unbiased estimation).

The regression equation model is used to estimate how much change in profitability is caused by changes in intellectual capital and corporate governance.

Estimation of multiple linear regression model equations using software IBM SPSS Statistics 22 obtained the following output.

The value of unstandardized coefficients as presented in the form of multiple linear regression equations as follows:

Y = -0.035 - 2.03E-7 X<sub>1</sub> – 0.003 X<sub>2.1</sub> + 0.016 X<sub>2.2</sub> – 0.018 X<sub>2.3</sub> + 0.002X<sub>2.4</sub> + 0.027 X<sub>2.5</sub>

Information:

Y = Profitability; X<sub>1</sub> = Intellectual Capital; X<sub>2.1</sub> = Board of Directors; X<sub>2.2</sub> = Board of Commissioners; X<sub>2.3</sub> = Independent Commissioner; X<sub>2.4</sub> = Audit Committee; X<sub>2.5</sub> =Institutional Ownership

Constant of -0.084, Intellectual capital has a negative coefficient of 0, 000000203, indicating that each increase in the value-added intellectual coefficient of 1 time is predicted to reduce profitability by 0.0000203%. This means that companies that have intellectual capital higher tend to have lower profitability.

The coefficient of determination to find out how much profitability is built by the influence of intellectual capital and corporate governance is 0.329, indicating that intellectual capital and corporate governance contribute 32.9% to the profitability of state-owned companies in Indonesia. Simultaneous testing is conducted with the hypothesis that intellectual capital and corporate governance simultaneously affect the profitability of state-owned companies in Indonesia in Indonesia.

#### Conclusion

Meanwhile, based on the test results, it can be concluded that intellectual capital does not affect the profitability of state-owned companies in Indonesia. The next hypothesis is that the number of members of the board of directors does not affect the profitability of state-owned companies in Indonesia. The number of members of the board of commissioners affects the profitability of state-owned companies in Indonesia. Companies that have total more members of the board of commissioners affects the profitability of state-owned companies in Indonesia. Companies that have total more members of the board of commissioners affects the profitability of state-owned companies in Indonesia. Companies that have total more members of the board of commissioners affects the profitability of state-owned companies in Indonesia. Companies that have a total more independent commissioners tend to have lower profitability. The institutional owner does not affect the profitability of state-owned companies in Indonesia. The number of audit committees affects the profitability of state-owned companies in Indonesia. The profitability of state-owned companies in Indonesia. The number of audit committees affects the profitability of state-owned companies in Indonesia. The profitability of state-owned companies in Indonesia. The number of audit committees affects the profitability of state-owned companies in Indonesia. The profitability of state-owned companies in Indonesia. The number of audit committees affects the profitability of state-owned companies in Indonesia.

#### References

- Hult, G.T.M., R.F. Hurley, and G.A. Knight, *Innovativeness: Its antecedents and impact on business performance*. Industrial marketing management, 2004. 33(5): p. 429-438.DOI: <a href="https://doi.org/10.1016/j.indmarman.2003.08.015">https://doi.org/10.1016/j.indmarman.2003.08.015</a>.
- Gogan, L.M., et al., *The impact of intellectual capital on organizational performance*. Procediasocial and behavioral sciences, 2016. 221: p. 194-202.DOI: https://doi.org/10.1016/j.sbspro.2016.05.106.
- 3. Rahajeng, D.K. and N.Z. Hasibuan, *Does Intellectual Capital Matter? A Case Study of Indonesia Sharia Banks.* The Indonesian Journal of Accounting Research, 2020. **23**(2): p. 155-182.DOI: <u>https://doi.org/10.33312/ijar.475</u>.
- 4. Igielski, M. The role of intellectual capital in building a competitive advantage for companies from the Baltic Sea Region in the transport, shipping and logistic industry (TSL). EDP Sciences.
- 5. Andriessen, D., *Making sense of intellectual capital, 1st Edition, 456.* 2004: Routledge.DOI: https://doi.org/10.4324/9780080510712.
- 6. Rachmawati, R., N. Romdani, and S. Ganiah, *Does Disclosure of Intellectual Capital Increase the Profitability of State-Owned Enterprises in Indonesia? PalArch's Journal of ..., 17(March), 4074–* 4083. 2020.

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- 7. Bontis, N., *Intellectual capital: an exploratory study that develops measures and models.* Management decision, 36(2), 63–76. , 1998.DOI: <u>https://doi.org/10.1108/00251749810204142</u>.
- 8. Bontis, N., W.C.C. Keow, and S. Richardson, *Intellectual capital and business performance in Malaysian industries*. Journal of intellectual capital, 1(1), 85–100., 2000.DOI: https://doi.org/10.1108/14691930010324188.
- Bontis, N., A. Seleim, and A. Ashour, Human capital and organizational performance: A study of Egyptian software companies. Management Decision, 45(4), 789–801. 2007.DOI: https://doi.org/10.1108/00251740710746033.
- Marr, B., G. Schiuma, and A. Neely, Assessing strategic knowledge assets in e-business. International Journal of Business Performance Management, 2002. 4(2-4): p. 279-295.DOI: <u>https://doi.org/10.1504/IJBPM.2002.000119</u>.
- 11. Marr, B. and J. Chatzkel, Intellectual capital at the crossroads: managing, measuring, and reporting of IC. Journal of intellectual capital, 5(2), 224–229., 2004.
- 12. Gupta, K., S. Goel, and P. Bhatia, *Intellectual capital and profitability: Evidence from Indian pharmaceutical sector*. Vision, 2020. **24**(2): p. 204-216.DOI: <u>https://doi.org/10.1177/0972262920914108</u>.
- 13. Al-Hajaya, K., M.S. Altarawneh, and B. Altarawneh, *Intellectual capital disclosure by listed companies in Jordan: A comparative inter-sector analysis*. International Review of Management and Marketing, 2019. **9**(1): p. 109.
- 14. Singla, H.K., *Does VAIC affect the profitability and value of real estate and infrastructure firms in India? A panel data investigation.* Journal of intellectual capital, 21(3), 309–331. , 2020.DOI: <u>https://doi.org/10.1108/JIC-03-2019-0053</u>.
- 15. Nguyen, A.H. and D.T. Doan, *The impact of intellectual capital on firm value: Empirical evidence from Vietnam*. International Journal of Financial Research, 2020. **11**(4): p. 74-85.DOI: <u>https://doi.org/10.5430/ijfr.v11n4p74</u>.
- 16. Pulic, A., *VAIC*<sup>TM</sup>–*an accounting tool for IC management*. International journal of technology management, 2000. **20**(5-8): p. 702-714.DOI: <u>https://doi.org/10.1504/IJTM.2000.002891</u>.
- 17. Nawaz, T., Intellectual capital profiles and financial performance of Islamic banks in the UK. International Journal of Learning and Intellectual Capital, 2019. **16**(1): p. 87-97.DOI: <u>https://doi.org/10.1504/IJLIC.2019.096934</u>.
- Benvenuto, M., et al., Assessing the impact of corporate governance index on financial performance in the Romanian and Italian banking systems. Sustainability, 2021. 13(10): p. 5535.DOI: <u>https://doi.org/10.3390/su13105535</u>.
- Nuryaman, E. Kartadjumena, and S.G. Arnan, *The influence of intellectual capital on earnings management through real activities manipulation in Indonesian manufacturing companies*. International Journal of Economics and Business Research, 2019. 18(3): p. 277-291.DOI: <u>https://doi.org/10.1504/IJEBR.2019.102724</u>.
- 20. Limijaya, A., Y. Hutagaol-Martowidjojo, and S. Annisa. Corporate governance award and performance of Indonesian LQ45 firms. IOP Publishing.
- Al-Homaidi, E.A., et al., The influence of corporate governance characteristics on profitability of Indian firms: An empirical investigation of firms listed on Bombay Stock Exchange, 18(1), 114– 125. 2021.DOI: <u>https://doi.org/10.21511/imfi.18(1).2021.10</u>.
- Kyere, M. and M. Ausloos, Corporate governance and firms financial performance in the United Kingdom. International Journal of Finance & Economics, 2021. 26(2): p. 1871-1885.DOI: https://doi.org/10.1002/ijfe.1883.
- 23. Liu, S., et al., *Does intellectual capital investment improve financial competitiveness and green innovation performance? Evidence from renewable energy companies in China.* Mathematical Problems in Engineering, 2021. **2021**.DOI: <u>https://doi.org/10.1155/2021/9929202</u>.
- 24. Yaseen, H. and A. Al-Amarneh, *Intellectual capital and financial performance: case of the emerging market banks*. Journal of Governance and Regulation, 2021. **10**(1): p. 35-41.DOI: <u>https://doi.org/10.22495/jgrv10i1art4</u>.
- 25. Lu, J., et al., *The moderating role of corporate social responsibility in the association of internal corporate governance and profitability; evidence from pakistan.* International journal of environmental research and public health, 2021. 18(11): p. 5830.DOI: https://doi.org/10.3390/ijerph18115830.
- 26. Gujarati, A., F. Cerqueira, and B.B. Brandenburg, *Multiprocessor real-time scheduling with arbitrary processor affinities: from practice to theory.* Real-Time Systems, 2015. **51**(4): p. 440-483.DOI: <u>https://doi.org/10.1007/s11241-014-9205-9</u>.