



Effects of intellectual capital and ownership structure on financial outcomes and distribution dynamics in Indonesian State-Owned Enterprises (SOEs)

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Abstract

This study investigates the impact of intellectual capital disclosure and the distribution of its components. Components of intellectual capital in this study include human capital, structured capital, correlated capital, and employed capital skills. This study examines the impact of intellectual capital and structural ownership on financial performance, measuring financial performance using asset returns. The study investigated the distributive effects of intellectual capital by analyzing panel data from Indonesia's state-owned enterprises (SOEs) over the five years from 2018 to 2022. A modified intellectual capital value-added coefficient model is applied to examine the distributive effects of intellectual capital (IC) skills on financial performance. Empirical findings indicate that IC competence, human capital efficiency, structured capital efficiency, employed capital efficiency, and relational capital skills are positively and significantly related to financial performance in the distribution. However, the distribution of physical and structural capital is the most important component of profit-generating intellectual capital skills. The distribution of public and foreign ownership positively affects financial performance. This research will help managers, policymakers, and investors decide how the distribution of IC investments enhances performance and makes informed investment decisions in public and foreign-owned companies.

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Introduction

Background of the Study

Recent years have seen a growing emphasis on the economic performance of organizations through the lens of intellectual capital (IC), particularly in knowledge-driven economies (Xu & Liu, 2020). In Indonesia, state-owned enterprises (SOEs) are central to the economy but often struggle with performance and efficiency due to bureaucratic hurdles and a lack of innovation. Intangible assets, IC, composed of human, structural and relational capitals, if well harnessed, can improve an organization's performance and competitiveness. Yet the attention of the available literature, from the last years at least, is on the private practitioners so there is a lack of research on the practical application of IC in the context of SOEs. This study intends to examine the link between IC and the profitability of Indonesian SOEs in order to add to the corporate governance debate. Contextual factors of the country, such as collectivism, the specific regulatory system, and the level of dominance by the government determine what IC is and how it is used and require the adoption of appropriate strategies to address the relevant tendencies and the problems of the SOEs within a developing economy (Tjahjadi et al., 2024).

Research Gap

The association between intellectual capital and powerful performance has been explored as subjective evidence. However, such research on Indonesian SOE is absent. Much of the existing literature has focused too much on private sector companies and ignores some of the problems and nuances brought with state-owned enterprises. This has led to inadequate treatment of events related to the impact of ownership structures on specific government and foreign ownership, intellectual capital and the functioning of SOEs. This study was conducted by Indonesian SOE (Ackah et al., 2024).

Importance of the Study

There are several reasons for which deciphering the interplay of the intellectual capital and the financial performance among the SOEs in Indonesia is imperative. First, it offers perspectives on how these enterprises may utilize their intangible management in order to increase their efficiency and profitability, a very important aspect for the prosperity of these firms and their role to the

economy of the country. Secondly, the conclusions of this study can assist in developing strategies that will assist policymakers and managers in the enhancement of the management of the intellectual capital which will result in the improvement of the governance and performance in the SOEs. Finally, this research fills a gap in the literature by offering evidence based on the significance of the intellectual capital in an area where it has been mostly ignored and thus adding to the comprehension of the corporate governance in the context of developing countries.

Motivational Factors

This study has been prompted by a desire to highlight the importance of the intellectual capital and human resources management function in the organizational context. The significance of effective management of intellectual capital among SOEs is even more pronounced as the Indonesian economy matures. More than that, the government's determination to enhance the performance of SOEs through reform and modernization processes makes this study relevant. The aim of the research is to shed light on how intellectual capital interacts with ownership structure and financial performance in the hope that it will positively influence the SOEs in Indonesia.

Research Rationale

This study is assisted by the need of understanding the role of intellectual capital in Indonesian state owned enterprises (SOE). Previous studies demonstrated the correlation of the intellectual capital and the financial performance of various sectors, however, the detailed mechanism within SOEs is not quite the case (Rybalka, 2020). As Indonesia progresses in the globalization era, then human, structural and relational capitals, which are deemed to be defined as intellectual capitals, have to be fully utilized in ensuring competition and productivity of the economy. Also, SOE, as one of the important sectors, has to maximize the use of its intellectual capitals to lower cost and optimize revenue generation. Besides, the complex structure of the global environment makes it a must for the Indonesian SOEs to integrate international benchmarks in the use of intellectual capitals for further competitiveness. This study also stresses the intensifying of the need to present the value of Australian ci in its reporting as a result of increased investor and regulatory demands (Tiron-Tudor & Ciolomic, 2022). Knowing these factors may facilitate the policy suggestion aimed at

reinforcing the SOEs and enhancing economic activities in the country of Indonesia.

Objectives of the Study

The main aims of this research are as follows: (1) To explore the causal link between intellectual capital and the financial performance of state-owned enterprises in Indonesia; (2) To assess the influence of ownership structure (government and foreign ownership) on the efficiency of intangibles in earnings generation; and (3) To make policy and practice-related suggestions to policymakers and managers on the effective use of intangibles in the performance of SOEs.

Research Questions

For these objectives, consider the following research questions as follows: (1) What is the correlation linking intellectual capital with financial performance within the Indonesian SOEs? (2) In what manner does the ownership structure affect the application of intellectual capital in improving financial performance in the SOEs? (3) What policies can be put in place to enhance the management of intellectual capital in Indonesian SOEs?

Content Flexibility

The goal of this introduction is to give a summary of the study in its various parts while tiring repetition in writing. With the assistance of the background, the research is framed by outlining the relevance of intellectual capital in the perspective of Indonesian SOEs. The substantiation of the research gap clearly underlines the opportunities for this research study, while the significance and motivating factors justify the purposes of this study for both scholarly and practical perspectives.

Literature Review and Hypothesis Development

Intellectual Capital Efficiency on Company Performance

Investing in intellectual capital for sustainable competitive advantage

The literature illustrates how the investment for knowledge and intellectual capital has significant returns in competitive advantage as well as firm performance. Human, Structural and relational capital refers to intellectual components which cuts across all value driving levels of the firm (Paoloni et al., 2020).

The significance of intellectual capital

Intellectual capital has a direct impact on organizational performance and value. Structural capital improves employee and organizational performance, while relational capital fosters strong stakeholder relationships. Empirical evidence suggests a positive link between intellectual property assets and financial performance, making intellectual property a value enhancer across industries (Aljuboori et al., 2021).

Resource-Based view theory and intellectual capital

The resource-based view theory posits that organizations require valuable, rare, and non-imitable resources to achieve sustainable competitive advantage. This framework suggests that intellectual capital can enhance the performance of Indonesian state-owned enterprises (Suharman et al., 2023). Furthermore, four mechanisms of intelligent wealth, were rummage-sale in this education. Therefore, the primary theory is the future as follows:

H1: Modified value-added intellectual capital has a positive effect on financial performance.

1. Exploring the Relationship Between Intelligent Wealth and Financial Performance by Ting et al. (2021) in Indonesian State-Owned Enterprises: This study investigates the relationship between Intelligent Wealth and financial performance in Indonesian State-Owned Enterprises, building on previous research. Prior studies have shown that each component of Intelligent Wealth has a distinct impact on financial performance.

2. Previous Research Findings: A South African study found that higher human resource efficiency led to better revenues across all businesses. In Indian manufacturing firms, Harsh and Prasad (2020) discovered a significant association between employment relationship dimensions and perceived organizational performance. Other studies have highlighted the substantial influence of Efficient Management of Intellectual Capital (EMIC) on firm performance.

3. Structural Capital Efficiency and Firm Performance: Research has shown that Structural Capital Efficiency (EMS) significantly contributes to sales growth, profitability, and market value in Chinese companies. In Australia, it was found that Efficient Use of Capital (EPM) is positively related to firm profitability.

4. Relational Capital Efficiency and Financial Performance: Studies have also demonstrated that Relational Capital Efficiency (RCE) has a positive impact on revenue, profitability, and productivity in the Chinese textile industry. However, the relationship between Intelligent Wealth and financial performance in Malaysian monetary businesses remains unexplored.

The VAIC Model, in this study, is applied because it is able to assist in measuring the value added by intellectual capital human, structural, and relational aspects in management. This model assists in value-adding processes, especially for firms that are in the knowledge-based sectors, as it helps them to locate the key areas that need to be targeted for enhancement. Based on the appropriate SAOC unit's empirical testing, it is known that an enhanced VAIC level score raises the positive relationship which is profitability (Marzo, 2021). For most users, this is crucial since there are several other models for measuring this relationship that are more complex, for example, free cash flow models, system Liabilities models, or Accounting models. In addition to that, the clarity and simplicity of the VAIC Model make it really advantageous to the users who wish to assess the impact of intellectual capital on a firm in relation to its performance. Regarding corporate governance, the model of Hossain et al. (2020) assumes some of the relevant facts in determining the level of a firm in the management of its intangible assets in a very fast-changing global environment. So, the VAIC model is good for measuring the link between IC and the financial performance of a company.

Therefore, this education goal is to explore more deeply the result of MVAIC on firm presentation. Based on the overhead influences, this education proposes the next theories:

H1a: Human capital efficiency positively affects financial performance;

H1b: Structural capital efficiency has a positive effect on financial performance;

H1c: Capital utilization efficiency has a positive effect on financial performance;

H1d: Relational capital efficiency has a positive effect on financial performance.

Ownership structure on financial performance of SOEs in Indonesia

The impact of ownership structure on firm performance has often been discussed with reference to the agency model which deals with the separation of ownership and control as a potential source of conflicts. Hermansjah et al. (2021) points out that in Indonesia, SOEs have the centralized ownership advantage which adds to the effectiveness of management control. With lower separation, agency costs are reduced and thus profitability is increased. According to Hermansjah et al. (2021), government ownership presence is a valuable vantage point as it positively contributes to Return on Assets (ROA) and Return on Equity (ROE). But at the

same time, the firm performance can also be affected by political considerations which in the first place led to such ownership by the government.

H2: Government ownership affects firm performance.

Foreign shareholders and institutional investors have similar roles in terms of their impact on ownership and structural ownership of the firm (Fu et al., 2022). In addition, foreign investors can play an effective supervisory role over the company. The presence of foreign institutional investors is associated with better levels of company operational performance. Foreign owners have a significant and positive influence on company presentation. Many have proven that the attendance of distant stockholders recovers commercial presentation. Therefore, the next theory is the future of this education:

H3: Foreign ownership has an effect on firm performance.

The link between ownership structure, firm performance and its reporting practices

Decision-making, strategies, and policies of a business always are subject to its ownership structure. In addition to this, it determines social and environmental reporting as well. This study in the Nigerian context, examined the relationship between the sociocultural environment as well as the reporting practices with moderating effects of intellectual capital disclosures.

Concentrated vs. Dispersed Ownership

With concentrated ownership, the major owners can exercise more control which enhances management concentration and increases the value of a firm. On the other hand, with diluted ownership, agency problems may arise where management activities do not coincide with the aims of the owners thereby reducing the value of a firm.

Intellectual Capital and Firm Performance

Three components that make up intellectual capital; human, structural, and relational, remain important in achieving value, especially in knowledge-focused businesses. Such companies, which effectively manage their intellectual capital, will have a competitive edge. Nevertheless, the effect of ownership structure on value is not uniform across industries. Such industries, as those that are focused on technology and are service-based, benefit from ownership structures that encourage innovation and collaboration while traditional industries are centered on asset and productivity intensiveness (Schmalz, 2021).

Interrelations and Competitiveness

It is significant to comprehend the links between ownership structure, intellectual capital, and firm performance in economy block competitiveness. In the context of Iran, studies have also examined the relationship between intellectual capital and social capital and internal control weaknesses which is applicable to firms operating in different economies (Ardito et al., 2021).

1. Recognizing and Defining the Relationship Between Intellectual Capital, Corporate Governance Mechanisms, and Financial Performance: Intellectual capital (IC) is an intellectual resource which encourages the achievement of corporate strategic goals, innovation and competitiveness. This resource comprises a blend of human, structural and relational capital, which contribute to value creation and attainment of competitive edge through sustainability.

2. Understanding the Relationship Between Intellectual Capital and Contractual Costs: In Oman's financial sector, relating IC is advantageous in controlling the contract cost, especially when RPT is in practice. Various contract-related expenses arise as a result of agency issues that manifest due to existing conflicting interests.

3. The Influence of Intellectual Capital on Audit Fees Stickiness: High IC firms are usually exposed to low risk, and because of this, audit fees are expected to be quite stable. High IC allows the companies to have a good image thus limiting the incentives of auditors to change their prices in hard times.

4. State of Financial Performance and Ownership Structure: Implication to Firm Value by Leverage: There is a direct relation between the ownership structure and the financial performance of a firm as well as its market value. The companies that have dispersed shareholding behaves in a different way regarding the leverage compared to those which have concentrated ownership.

5. The Contribution of Intellectual Capital Towards Corporate Performance: Corporate performance is propelled by IC which acts as an engine of innovations, efficiency and competitive edge over the rivals. Those firms who appreciate the importance of IC invest in training, knowledge and networking, thus better performance in business.

6. The Relation Between Intellectual capital and Readability of Financial Statements: The comprehension of financial statements is in line with management characteristics, namely, their experience, education, and communication. Those managers who know what IC is are more efficient in creating it and they also usually know how to manage it so that financial reports remain readable.

7. The Relation Between Social and Intellectual Capital with Fraud and Money Laundering: In the context of Iraq, the social and intellectual capital combination is indispensable in the combat against fraud and money laundering. Firms that have well established social capital and developed intellectual capital are able to adhere to the required compliance and risk management practices.

8. The Role of Human Capital in Foreign Market Performance: Human capital is crucial in the foreign market performance of SMEs. Owner ethnicity can also impact how business capital is utilized in international markets. Diversity in human capital can enhance SME performance in foreign markets.

9. The Impact of Board's Human Capital on Firm Performance: Directors' human capital significantly shapes the relationship between board characteristics and firm performance. Policies focusing on enhancing board human capital can improve firms' strategic control and financial performance.

10. Influence of Financial Architecture and Intangible Assets on Financial Performance: In the Indonesian capital market, a company's financial structure and intangible assets interact to enhance performance and overall value. Companies with better control over intangible assets, especially IC, tend to perform better.

11. The Effect of Intellectual Capital and Board Characteristics on Value Creation and Growth: A study of board characteristics, including management of boards' IC, influences corporate value and growth. The results depict a significantly inelastic relationship, implying that allocating resources to both board configuration and IC management is crucial for sustained growth and competitiveness.

Research Framework

This education evaluates the association amid intellectual capital (IC) competence, the situation mechanisms, then possession structure on the presentation of state-owned companies in Indonesia cutting-edge the setting of Intelligent Wealth Disclosure and Physical Ownership. In this case, Momani et al. (2021) intelligent wealth is rummaged by way of self-governing variable Indicators of humanoid prosperity competence, physical wealth competence, autochthonous wealth competence, and employed wealth competence. Possession construction with indicators of state ownership and foreign ownership. In addition, the firm's activity is rummage-sale by way of a subordinate mutable, which protects resource-based approaches and activity philosophy. So, the field of research used is illustrated in [Figure 1](#) below.

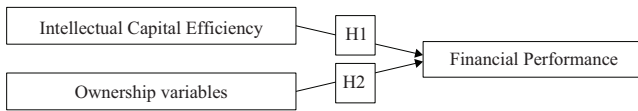


Figure 1 Research framework

Methodology

Samples and Data

This review highlights state-owned businesses in Indonesia, focusing on intelligent wealth disclosure and structural ownership's influence on financial performance. It excludes companies that fixed non-consume whole information during the review period or that have missing annual reports for two years. The sample consists of 40 companies with a total of 200 observations from 2018 to 2022, using data from annual reports and company websites. The main indicator of company performance in this study is profitability, focusing on the Return on Asset (ROA) ratio, which measures the efficiency of the company in converting investment into profit.

Variable Operationalization

Intellectual Capital Variables: Various models have been proposed to measure Intellectual Capital (MI) due to the absence of agreement among experts. In academic and practical studies, researchers have used the Value Added Intellectual Coefficient (VAIC) model. VAIC starts its measurement by calculating Value Added (VA):

$$VA = OUT - IN$$

Description: OUT: includes all profits and revenues derived from the production of goods and services, while; IN: is all costs (including depreciation and amortization) except for employee costs, interest, dividends, and taxes (source replaced with relevant research from Indonesia or SOEs).

The above formula is known as the entire worth additional method. Furthermore, the primary constituent of Intellectual Capital is that HCE represents the capability of human capital (MM) in creating worth in the firm. Pays, salaries, aids, and exercise costs are considered proxies for MM costs.

$$HCE = VA / HC$$

The second component is SCE. SCE describes how structural capital (SC) contributes to the development of value.

$$SC = VA - HC$$

$$SCE = SC / VA$$

The third component is EVD. A company's used capital arises from the retirement of intangible assets (EC). The EEA is an AV indicator created by a unit of physical capital.

$$CEE = VA / CE$$

An additional component is RCE (Relationship Capital Efficiency) for the original VAIC model. However, relationship capital (RC) is based on marketing expenses such as sales and advertising.

$$RCE = RC / VA$$

This study uses the VAIC formulation calculated based on the sum of the three mechanisms rendering the next formulation:

$$VAIC = HCE + SCE + CEE$$

Ownership variables

Ownership variables in this study are measured based on the fraction of administration stocks used to compute administration possession. The fraction of stocks possessed by distant stockholders is rummage-sale to compute distant possession.

Control variables

This review usages two switch variable stars, namely, business scope measured as the log of the business's total possessions and another control variable is the age of the business, namely, the number of years since the company was founded. A complete list of variables is also presented in [Table 1](#).

Table 1 Variable operationalization

Variable	Operationalization
Dependent Variable	
Return on asset (ROA)	Net income / total asset
Independent Variabel	
Human capital efficiency (HCE)	VA / HC
Structural capital efficiency (SCE)	SC / VA
Capital employee efficiency (CEE)	VA / CE
Relational capital efficiency (RCE)	RC / VA
Modified VAIC (MVAIC)	HCE + SCE + CEE + RCE
Government ownership (GVOWN)	The proportion of shares owned by the government
Foreign ownership (FROWN)	The proportion of shares owned by the foreigners
Control Variabel	
Firm size (SIZE)	Ln of Total Assets
Firm Age (AGE)	Number of years the firm was established

Source: Prepared by the author (2024)

Empirical Model

This section discusses data analysis techniques, particularly highlighting the endogeneity in the association amid intelligent wealth and secure presentation. In response to this issue, a two-step Generalized Method of Moments (GMM) technique is used, which is effective in managing both endogenous and exogenous variables. The system GMM method is superior in overcoming heteroscedasticity and serial correlation and is more efficient for data with short time periods. It also reduces bias, especially in data with a short observation time and a large number of observations. Then, the following equation is given:

$$\text{ROAit} = \alpha_0 + \beta_1 \text{ROAit-1} + \beta_2 \text{MVAICit} + \beta_3 \text{GVOWNit} + \beta_4 \text{FROWNit} + \beta_5 \text{Xit} + \text{YEAR} + \text{INDUST} + \varepsilon_{it} \quad (1)$$

$$\text{ROAit} = \alpha_0 + \beta_1 \text{ROAit-1} + \beta_2 \text{HCEit} + \beta_3 \text{SCEit} + \beta_4 \text{CEEit} + \beta_5 \text{RCEit} + \beta_6 \text{GVOWNit} + \beta_7 \text{FROWNit} + \beta_8 \text{Xit} + \text{YEAR} + \text{INDUST} + \varepsilon_{it} \quad (2)$$

Description: ROAit is the return on assets for the company; ROAit-1 is the performance of the company delayed by one year; MVAICit is the modified value added to intellectual capital; HCEit is humanoid wealth competence, SCEit is physical wealth competence, CEEit is capital employed efficiency, and RCEit is relational capital efficiency; GVOWNit is government ownership, FROWNit is foreign ownership, Xit is a switch variable; and YEAR and INDUST are dummy variables for year and manufacturing, and ε_{it} is a stochastic mistake period.

Descriptive statistics

Based on Table 2, state-owned enterprises (SOEs) in Indonesia have an average ROA of 2.36 percent. The average value of MVAIC reached 1.1064, indicating that each monetary unit used by SOEs generated 1.1064 between 2018 and 2022. The highest value was recorded for HCE with 1.5752, while RCE, SCE, and CEE had nasty standards of 0.0616, 0.3568, and 0.1184, respectively. The total average for intangible components (HCE, SCE, and RCE) is 0.6645, much more advanced than CEE, which is only 0.1184. This indicates that Indonesian SOEs generate more value from intangible assets than tangible assets. In terms of ownership structure, the average foreign (FROWN) and government (GVOWN) ownership is 7.1664 and 3.6816 respectively, with government ownership ranging from 0 percent to 25.2032 percent and foreign ownership from 0 percent to 40.464 percent. Meanwhile, company size (SIZE) and company age (AGE) have averages of 10.5856 and 29.2752.

The correlation test results presented in Table 3 reveal that none of the coefficients exceed 0.9. This indicates a significant correlation in the data, thus eliminating the threat of multicollinearity to the variable estimates. The highest correlation was recorded at 0.184 amid intelligent capital disclosure and structural ownership with the financial presentation of SOEs in Indonesia. Furthermore, Table 3 shows a positive correlation between intellectual capital disclosure, structural ownership, secure scope, and age with Return on Assets (ROA). In the same table, the Variance Inflation Factor (VIF) values for an apiece mutable range from 0.904 to 5.064, all of which are below the limit of 10, confirming that the data are free from multicollinearity issues.

Table 2 Statistic descriptive

Variable	N	M	Min	Max	SD	Skewness	Kurtosis
ROA (%)	200	2.36	-8.696	12.704	5.1272	-0.1248	2.3800
MVAIC	200	1.1064	-1.6016	6.1864	1.1864	-0.2272	3.4016
HCE	200	1.5752	-0.7248	4.4112	1.6568	0.2864	2.8592
SCE	200	0.3568	-0.6744	1.2768	0.4136	-0.2808	3.3480
CEE	200	0.1184	-0.0224	0.3808	0.0936	0.5384	2.2856
RCE	200	0.0616	-0.1104	2.2208	0.7160	0.0184	4.7848
GVOWN	200	3.6816	0	25.2032	7.0304	1.6104	4.6840
FROWN	200	7.1664	0	40.4640	10.9440	1.5624	4.7160
SIZE	200	10.5856	4.8584	15.2128	1.2368	0.5744	3.2792
AGE	200	29.2752	0.8	109.6	15.7144	1.4064	6.2576

Source: Prepared by the author (2024)

Table 3 Correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	VIF
ROA (%)	1										3.616
MVAIC	0.0392	1									5.064
HCE	0.0432	0.068	1								2.528
SCE	0.0392	0.0328	0.0368	1							1.592
CEE	0.0424	0.0328	0.0352	-0.016	1						2.216
RCE	0.0496	0.0424	0.056	0.008	0.048	1					1.488
GVOWN	0.0064	0.0176	0.184	0.0136	0.088	-0.048	1				0.904
FROWN	0.0456	0.0208	0.08	0.0136	0.184	-0.016	-0.048	1			0.944
SIZE	0.0152	0.0232	0.0336	0.0048	0.048	-0.008	0.056	0.104	1		1.352
AGE	0.0544	0.036	0.008	-0.0056	0.008	0.072	-0.008	0.04	0.096	1	0.872

Source: Prepared by the author (2024)

Result and Discussion

Table 4 shows the results of the GMM examination on the effect of intelligent wealth disclosure and possession construction on the financial presentation of SOEs in Indonesia. It can be seen that intelligent wealth consumes an optimistic result on the ROA of SOEs in Indonesia. The consequences of this education are in line with the discovery of a positive association between intelligent wealth disclosure and ROA, proving Hypothesis 1 that intellectual capital affects financial performance. Kamath (2021) added that companies with advanced heights of intelligent wealth disclosure are inclined to be more profitable, proving that intelligent wealth is a significant contributor to corporate success in Indonesia.

This is in agreement with the resource-based view philosophy stating that businesses with modest advantages have valuable resources that cannot be imitated by other companies that improve corporate performance. Yun (2022) Intellectual capital is indeed considered a significant investment in driving sustainable growth.

An assessment of ownership structure and the level of intellectual capital (IC) disclosure among the Indonesian state owned enterprises (SOE) confirms that these two factors have a significant effect on Return on Asset (ROA). The research determines three types of IC on which ROA is stated to positively relate to human capital, physical capital and social capital. For employees' knowledge and competencies associated with processes and products' innovation which are also applied in practice, human capital is needed.

Table 4 Results of GMM regression

Variables	Model 1	Model 2
ROAt-1	.2768*** (0.0368)	.1848*** (0.0336)
MVAIC	1.1760*** (0.2264)	—
GVOWN	.3712*** (0.1400)	.1752* (0.1024)
FROWN	.3391*** (0.0976)	.1312** (0.0656)
HCE	—	1.1728* (0.2368)
SCE	—	5.6064*** (1.1448)
CEE	—	19.0192** (9.5030)
RCE	—	3.9672*** (0.0672)
SIZE	-1.0576** (0.7064)	-.0528 (0.8192)
AGE	.0704 (0.1200)	.0144** (0.1074)
Constant	2.5536 (10.2328)	-12.9600 (10.7032)
Industry Dummy	Included	Included
Year Dummy	Included	Included
Observations	1,309	1,309
Number of Groups	327	327
Number of Instruments	47	47
AR(1) <i>p</i> -value	.000	.000
AR(2) <i>p</i> -value	.688	.328
Hansen J (<i>p</i> -value)	.640	.544
Prob > <i>F</i>	.000	.000

Notes: *p* < .01 ***, *p* < .05 **, and *p* < .10 *.

Physical capital is also of paramount importance, especially in a developing economy like Indonesia, as it relates scientifically to the value of the firm. Relational capital helps the organization during times of difficulties as it increases the organization's profitability through strong stakeholder relations and acts as an economic resource. Such findings concur with the findings of studies done in South Africa and Bangladeshi garment factory on government ownership and profitability as well as explaining the extent of government ownership. The study demonstrates that right models of ownership such as government and foreign ownership increase ROA.

However, this relationship between ownership structure and performance is also influenced by other factors, namely, the size of the company as well as the stage at which the company operates. Company size and year since incorporated as control variables further show that ROA is influenced differently depending on the model employed. The sequential character of research design is particularly confirmed by Hensen J tests and AR (2) tests thereby providing confidence on instruments employed.

Finally, the authors contend that there is a direct link between the level of efficiency of intellectual capital and the earning performance of the Indonesian SOEs, thus supporting investments in human, physical and relational capital for better financial results and value creation in a knowledge economy. Government ownership seems to encourage performance assessment, adding to the intricacy of the role of state-witnessed ownership on business engagement.

In order to enhance the understanding of the primary findings presented here, the following activities can be undertaken as future research directions: (1) Longitudinal Studies: Conduct longitudinal studies so as to establish the trajectories and the eventual outcomes of intellectual capital and ownership structure on performance over the years; (2) Comparative Analysis: Test these relationships with other studies done in other contexts and other industries to establish whether other industries have similar relationships; (3) Qualitative Research: Use qualitative methods for example interviews and focus group discussions to explore more on the management of knowledge and its perception from organizations; (4) Robustness Checks: Perform robustness checks employing different statistical techniques or models in order to see whether the outcome is sensitive to particular assumptions or methods; (5) Subgroup Analysis: Investigate whether the relationships are moderated by particular characteristics such as size of the firms,

types of industry or the ownership structure; (6) Cross-Validation: Also, cross-validation procedures can be used in explaining the predictive power of the models employed; (7) Sensitivity Analysis: Sensitivity analysis can also be conducted in assessing the extent to which the findings are stable under a different set of assumptions or parameters; (8) Integration of Additional Variables: Add other variables which are likely to be related to the variables of interest, for instance, market factors, legal factors or even political factors; (9) Peer Review and Feedback: Communicate the results to colleagues or professionals in the field to solicit critiques and attempt to identify any form of bias or weakness in the study undertaken; and (10) Replication Studies: Request other researchers to carry out replication studies to confirm the findings in alternate contexts or with different datasets.

By undergoing such additional analyses, the researchers will augment assurance to the reported outcomes and broaden the scope of investigation especially in relation to the link between intellectual capital, ownership structure, and financial performance.

Conclusion

Over the past twenty years, global academics and researchers have focused on the association amid intelligent wealth disclosure, ownership structure, and financial presentation in Indonesian SOEs, by applying intellectual capital indicators that include additional components such as Relational Capital and using government and distant possession as an amount of ownership structure. The method used is dynamic retroactivity of the GMM system panel, distinct from the OLS, FE, or RE methods, with empirical results, demonstrating the significance of efficient intelligent wealth organization to improve the profitability of Indonesian state-owned enterprises and that foreign governments and properties have a positive impact on profitability. These findings provide a reference for investors who want to predict the efficiency of Indonesian SOEs' Intellectual Capital and for policymakers and business managers in designing more effective intellectual capital management methods. However, this research has limits, such as the use of the MVAIC model still under discussion, the view of a sample of non-financial firms, limited to two indicators of ownership and shareholder structure, and the failure to explore the moderating or intermediary function of other variables in the association amid intelligent wealth and safe activity. This paper discusses how the level of ownership and intellectual

capital affects the performance of Indonesian SOEs from 2018–2022. There are several findings which are worth mentioning in this regard. First and foremost, it is clear that financial performance improves due to cognitive learning and all interactive activities including human, structural and relational capital as well. This brings in the need to focus on investments in these areas to improve the operational efficiency and ultimately the profitability.

Also, the degree of the ownership structure, especially the government ownership, has an impact on the performance of the SOEs. Political institutions are noted to strengthen the effectiveness of such enterprises and therefore, more favorable outcomes are possible where there is a good governance structure. This research uses the modified value-added intellectual coefficient model which is based on the distributional aspects of the financial performance metric seeing the results of the interaction of the Intellectual capital with these metrics.

The implications for policymakers and practitioners are considerable. We urge both political and business leaders to invest in human capital through training and development so as to improve the creativity and skills of the workforce. Moreover, it is also advisable to improve the structural capital by creating adequate organizational processes and using technology to make better decisions and improve operational efficiency. The study finds that building relational capital is equally important as it includes creating networks and alliances with the stakeholders in order to harness valuable inputs. In addition, utilizing the state's ownership as an opportunity can improve accountability and transparency in enhancing stakeholders' confidence.

The author of managing in a crisis situation calls for evidence based management decision adding that measuring— performance evaluations against benchmarks of the best in the industry should be done regularly. It further points out the need to address the participating in designing policies that would help increase the level of development of the intellectual and organizational capabilities of SOEs self, which is a requirement for upgrading SOE performance.

Lastly, though it examines important contributions to the knowledge, this study is limited by, particular reference to financial firms only and specific measures of intellectual capital. Such studies would provide insights to understanding these dynamics in other sectors, broaden the applicability of the study and examine the cross cut variables moderating the relationship. Overall, this study adds to the understanding of the relationship between intellectual capital, ownership structure and financial performance of the Italian SOEs. Addressing the

challenges of increasing the efficiency of the SOEs in the restructuring economic conditions is a key consideration of this work.

Conflict of Interest

The author declares that there is no conflict of interest.

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