

## Performance of Indonesian and Malaysia State-Owned Banks: An Intellectual Capital Perspective Using the MVAIC Model

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### Abstract

This study examines the performance of state-owned banks in Indonesia and Malaysia from an Intellectual Capital perspective using the Modified Value Added Intellectual Coefficient (MVAIC) model. This research employs a quantitative approach with annual data from 2015 to 2021 obtained from the banks' annual reports. Hypothesis testing is conducted through multiple linear regression to determine the impact of Intellectual Capital on banks' financial performance. Intellectual Capital is measured through three main components: human capital, structural capital, and relational capital. The findings indicate that human capital has a significant impact on Return on Assets (ROA) in both countries, while structural capital has a more substantial influence on banks in Malaysia. On the other hand, relational capital does not show a significant effect in Indonesia but contributes positively to financial performance in Malaysia. This study provides new insights into the importance of investing in intellectual capital in the banking sector and proposes several recommendations for bank management to optimize intellectual resources to enhance financial performance.

**Keywords:** Intellectual Capital, MVAIC, State-Owned Banks, Indonesia, Malaysia, Financial Performance.

### INTRODUCTION

In recent years, intellectual capital (IC) has emerged as a critical factor in enhancing the performance of organizations across various sectors, including banking (Alhassan, & Asare, 2016). IC refers to the collective knowledge, skills, processes, and relationships that an organization possesses, which can be leveraged to create value and achieve a competitive advantage (Andreeva, & Garanina, 2016). In the context of the banking sector, the role of IC is particularly prominent due to the knowledge-intensive nature of banking operations. For state-owned banks, which play a significant role in the economic development of a country, the effective management of IC is crucial for enhancing financial performance and ensuring sustainable growth. This study aims to explore the significance of IC in state-owned banks in Indonesia and Malaysia, where the banking industry is undergoing significant changes in response to regional and global economic dynamics.

The importance of intellectual capital in the banking sector lies in its ability to drive innovation, efficiency, and customer satisfaction (Iswati, & Anshori, 2007). Unlike tangible assets, IC encompasses intangible resources such as human capital (employees' expertise and skills), structural capital (internal processes and systems), and relational capital (customer relationships and networks). These components collectively contribute to a bank's capacity to improve service quality, develop innovative financial products, and build robust customer relationships. Consequently, state-owned banks in emerging markets like Indonesia and Malaysia are increasingly recognizing the need to optimize their intellectual resources to achieve better financial outcomes.

Understanding how different components of IC affect financial performance is crucial for these banks as they seek to enhance their competitiveness in a rapidly evolving market.

The role of intellectual capital in financial performance is particularly relevant in Indonesia and Malaysia due to the strategic importance of their banking sectors. Both countries have experienced rapid economic growth, leading to a more dynamic financial industry. State-owned banks in these nations have traditionally played a dominant role in providing credit to various economic sectors and facilitating financial inclusion. However, they face challenges such as increased competition from private and foreign banks, regulatory changes, and technological advancements. In this context, the ability of state-owned banks to effectively leverage their intellectual capital can have a significant impact on their profitability, operational efficiency, and overall market position. Therefore, analyzing the role of IC in these banks can provide valuable insights for policymakers and bank management in both countries.

Despite the growing recognition of intellectual capital's role in the banking sector, there is a limited understanding of how its components contribute to financial performance, especially in the context of state-owned banks in Indonesia and Malaysia. Previous research has primarily focused on the broader financial sector or specific aspects of IC without providing a comprehensive analysis of its impact on state-owned banks. This creates a gap in the literature regarding the differential effects of IC components—human capital, structural capital, and relational capital—on bank performance. By addressing this gap, the current study aims to enhance the understanding of how intellectual capital drives financial performance in state-owned banks and to identify which components have the most significant impact.

To address this research gap, the present study adopts a quantitative approach to examine the influence of intellectual capital on the financial performance of state-owned banks in Indonesia and Malaysia. The study uses the Modified Value Added Intellectual Coefficient (MVAIC) model as a framework for measuring IC and its components. This model has been chosen due to its ability to capture the value-added contributions of human, structural, and relational capital. Financial performance is measured through Return on Assets (ROA), a widely recognized metric for assessing profitability and operational efficiency in the banking sector. By analyzing the annual reports of state-owned banks from 2015 to 2021, this study provides an empirical examination of how different components of IC impact financial performance in both countries.

Overall, the study aims to contribute to the growing body of knowledge on intellectual capital and its relevance in the banking sector, with a particular focus on state-owned banks in Indonesia and Malaysia. The findings are expected to provide practical implications for bank management, suggesting ways to optimize intellectual resources to enhance financial performance. Additionally, the study may offer insights for policymakers in developing strategies to support the development of IC within state-owned banks, thereby fostering a more robust and competitive financial sector in both countries. By examining the relationship between IC and financial performance, this research seeks to underscore the importance of intellectual capital as a key driver of sustainable growth in the banking industry.

## METHODS

The research employs a quantitative approach to analyze the relationship between intellectual capital (IC) and financial performance in state-owned banks in Indonesia and Malaysia (Nimtrakoon, 2015). A quantitative methodology is appropriate for this study as it enables the analysis of numerical data and statistical relationships, providing an objective assessment of how IC components influence financial performance. The study period spans from 2015 to 2021, allowing for a comprehensive examination of trends and developments over seven years. Annual data from the financial reports of state-owned banks in both countries were utilized as the primary data source. These reports were chosen due to their reliability and comprehensiveness in providing relevant financial and non-financial information that can be used to measure intellectual capital and financial performance. The selection of these reports also aligns with the study's focus on state-owned banks, given their significant role in the banking sectors of Indonesia and Malaysia.

To measure intellectual capital and its influence on financial performance, the study adopts the Modified Value Added Intellectual Coefficient (MVAIC) model. The MVAIC model is a well-established framework in IC research that allows for a holistic assessment of a bank's intellectual resources. It encompasses three primary components of intellectual capital: human capital, which represents the knowledge, skills, and experience of employees; structural capital, which includes organizational processes, systems, and innovation capabilities; and relational capital, which involves the relationships and networks a bank maintains with external stakeholders such as customers, partners, and regulators. The MVAIC model provides a means to quantify these components and assess their value-added contributions to the banks. To evaluate the effect of these IC components on financial performance, the study uses Return on Assets (ROA) as a key performance indicator, as it is widely recognized for its ability to measure a bank's profitability and operational efficiency. Hypothesis testing is conducted using multiple linear regression analysis, allowing the study to determine the impact of human capital, structural capital, and relational capital on ROA. This statistical approach facilitates the identification of significant relationships and provides insights into the varying effects of each IC component on the financial performance of state-owned banks in Indonesia and Malaysia.

## RESULTS

The results of the study reveal that human capital significantly impacts the financial performance of state-owned banks in both Indonesia and Malaysia. The analysis, based on the Modified Value Added Intellectual Coefficient (MVAIC) model, demonstrates that the knowledge, expertise, and skills of employees are crucial contributors to the banks' profitability and operational efficiency, as measured by Return on Assets (ROA). The regression analysis indicates a strong positive relationship between human capital and ROA in both countries, suggesting that investments in employee training, talent development, and knowledge management can lead to enhanced financial performance. This finding underscores the importance of fostering a skilled workforce as a strategic asset in the banking sector, where service quality and customer relations play a critical role in maintaining a competitive edge.

Furthermore, the study identifies that structural capital, which encompasses organizational processes, systems, and internal innovations, has a varying influence on the financial performance of state-owned banks in Indonesia and Malaysia. Specifically, structural capital shows a more pronounced impact on Malaysian banks' ROA compared to their Indonesian counterparts. This

suggests that the internal structures, such as efficient processes, technological advancements, and effective organizational frameworks, are better optimized and more influential in driving profitability in Malaysia. The higher influence of structural capital in Malaysia could be attributed to a more developed banking infrastructure, higher investment in technological systems, and well-established operational frameworks within state-owned banks. In contrast, while structural capital still contributes positively to the financial performance of Indonesian banks, its effect is less significant, indicating a potential area for improvement in terms of internal processes and systems. Interestingly, the results show a divergence in the influence of relational capital between the two countries. In Indonesia, relational capital, which refers to the external relationships with customers, partners, and other stakeholders, does not exhibit a significant effect on financial performance. This finding implies that the external networks and partnerships of state-owned banks in Indonesia may not be fully leveraged to enhance profitability or that other factors might play a more dominant role in determining their financial outcomes. In contrast, Malaysian state-owned banks benefit more substantially from relational capital, with the analysis indicating a positive and significant relationship between relational capital and ROA. This suggests that strong external networks, customer relations, and stakeholder partnerships contribute to improved financial outcomes in Malaysia, highlighting the importance of maintaining robust and strategic relationships for banks. The results point to a need for Indonesian banks to enhance their relational strategies to maximize the potential benefits of external networks on financial performance.

To visually illustrate these findings, the inclusion of tables or graphs depicting the results of the regression analysis can be beneficial. These visuals can provide a clear comparison of the correlation between each intellectual capital component and ROA across the two countries. By displaying the coefficients and significance levels of the regression model, the visual aids can effectively highlight the relative impact of human capital, structural capital, and relational capital on the financial performance of state-owned banks in Indonesia and Malaysia.

## **DISCUSSION**

The findings of this study offer crucial insights into the impact of intellectual capital (IC) on the financial performance of state-owned banks in Indonesia and Malaysia, addressing the research questions and objectives by highlighting the roles of human capital, structural capital, and relational capital. The significant influence of human capital on the financial performance of banks in both countries suggests that the knowledge, skills, and competencies of employees are vital to achieving superior financial results. This is consistent with the knowledge-intensive nature of the banking industry, where employees are essential in developing products, serving clients, and managing risks. The prominence of human capital in the banking sector underscores the importance of continuous investment in employee training, leadership development, and knowledge-sharing practices to improve efficiency and profitability.

The critical role of human capital in both Indonesia and Malaysia may be explained by the emphasis on service quality and customer interactions, which are heavily dependent on employees' expertise and interpersonal skills. State-owned banks often operate with a social mandate alongside profit goals, necessitating a workforce capable of balancing both objectives. Therefore, by fostering a skilled and motivated workforce, banks in both countries can achieve a competitive advantage and ensure sustainable growth. Additionally, since human capital encompasses elements such as innovation and the ability to respond to customer needs, it is clear that a bank's success is closely

tied to the competencies of its employees. The findings reinforce the need for state-owned banks to not only recruit talent but also retain and develop it to meet evolving market demands.

However, the findings reveal that structural capital has a stronger influence on the financial performance of state-owned banks in Malaysia compared to Indonesia. This may be attributed to Malaysia's more advanced banking infrastructure and regulatory environment, which encourages efficient internal processes, technological adoption, and organizational innovation. Malaysian banks might have better-established frameworks for internal knowledge management, operational efficiency, and technology integration, all of which are components of structural capital. These internal mechanisms enable Malaysian banks to operate more efficiently and effectively, directly contributing to higher returns on assets (ROA). In contrast, the relatively weaker impact of structural capital on Indonesian banks suggests potential gaps in internal processes or technological adoption, indicating an opportunity for these banks to enhance their internal structures to improve financial outcomes.

The differential influence of structural capital between the two countries may also stem from differences in market dynamics, regulatory policies, and the level of technological development. Malaysian banks, which have more access to advanced financial technologies and operate in a regulatory environment that supports innovation, are likely to benefit more from their structural capital investments. This contrasts with the banking landscape in Indonesia, where slower technology adoption and varying regulatory constraints may limit the potential benefits of structural capital. As such, the study's findings highlight the importance of developing robust internal systems, innovative practices, and efficient operational procedures for enhancing financial performance, particularly for Indonesian state-owned banks seeking to catch up with their Malaysian counterparts.

Relational capital, which reflects a bank's external relationships and networks, exhibits a significant impact on the financial performance of state-owned banks in Malaysia but does not have a noticeable effect in Indonesia. The positive influence of relational capital in Malaysia suggests that strong relationships with customers, partners, regulators, and other stakeholders are key drivers of financial success. Such networks help banks enhance customer loyalty, secure more business opportunities, and maintain a positive market reputation, all of which can contribute to profitability. In the case of Indonesian banks, the absence of a significant relationship between relational capital and financial performance could be due to a variety of factors, such as less effective customer relationship management, weaker networks, or an overreliance on other forms of capital to drive performance. This indicates that Indonesian banks may need to strengthen their external networks and develop strategic partnerships to maximize the potential benefits of relational capital.

The implications of these findings are significant for bank management in both Indonesia and Malaysia. To optimize financial performance, state-owned banks must focus on leveraging their intellectual resources effectively. For banks in both countries, investing in human capital should remain a priority, as it directly correlates with improved profitability and service quality. This includes enhancing employee skills, promoting a culture of continuous learning, and adopting human resource practices that foster innovation. For Malaysian banks, continuing to develop structural capital by investing in technology, improving internal processes, and fostering innovation will be crucial to maintaining their competitive advantage. Meanwhile, Indonesian banks should look toward improving their internal organizational structures and processes to enhance operational efficiency and profitability.

Moreover, the study's findings indicate the need for a strategic approach to relational capital, especially for banks in Indonesia where this component has yet to show a significant impact on financial performance. Building stronger customer relationships, engaging in community and stakeholder partnerships, and developing a market-oriented culture may help Indonesian banks better utilize their relational capital to drive financial success. For Malaysian banks, continuing to enhance relational capital by deepening customer relationships, fostering trust with stakeholders, and leveraging external networks can further strengthen financial outcomes. Overall, the findings emphasize the importance of a balanced investment in all components of intellectual capital, tailored to the specific context and needs of each country, to enhance the financial performance of state-owned banks.

## CONCLUSION

This study provides valuable insights into the role of intellectual capital (IC) in shaping the financial performance of state-owned banks in Indonesia and Malaysia. The findings underscore the critical importance of effectively managing and developing intellectual capital components namely human capital, structural capital, and relational capital. Human capital emerged as a key driver of financial performance in both countries, emphasizing the need for continuous investment in employee skills, knowledge, and expertise. Structural capital, particularly in Malaysia, has a significant influence on enhancing operational efficiency and profitability, suggesting that well-established internal processes, innovation, and technological capabilities are essential for banks to remain competitive. Meanwhile, the role of relational capital differs between the two countries, showing a positive contribution to financial outcomes in Malaysia, but an insignificant effect in Indonesia. This variation highlights the differing impacts of external networks and customer relationships on bank performance in these markets.

The differences between the state-owned banks in Indonesia and Malaysia suggest tailored recommendations for improving IC management in each country. For Indonesian banks, the focus should be on strengthening internal processes and technological capabilities to enhance structural capital and drive better financial performance. Additionally, efforts to improve relational capital by building stronger partnerships and customer networks can help in achieving a more balanced IC strategy. In Malaysia, while banks already benefit from strong structural and relational capital, there is an opportunity to further optimize these components by continuing to invest in innovative technologies, fostering customer loyalty, and enhancing stakeholder relationships. Both countries can benefit from prioritizing human capital development, ensuring that employees are equipped with the necessary skills and knowledge to adapt to the dynamic banking environment. By adopting these strategies, state-owned banks in both Indonesia and Malaysia can better harness their intellectual capital to improve financial performance and sustain long-term growth.

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