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Does intellectual capital efficiency improve islamic banking performance? The moderating effect of islamic governance

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Abstract

Research aims: This paper aims to examine the moderating effect of Islamic governance on the relationship between intellectual capital efficiency (ICE) and Islamic bank performance.

Design/Methodology/Approach: The population for this study covered Islamic banks in Indonesia. Purposive sampling was performed, and statistical analysis was conducted using moderating regression analysis by selecting among the common, fixed, and random effects models. The statistical tool utilized was E-Views 12.

Research findings: The primary finding of this study is related to the positive moderating effect of structural capital efficiency on the relationship between intellectual capital and Islamic banking performance. Furthermore, Islamic governance could not strengthen the influence of human capital efficiency and capital employed efficiency on the performance of Islamic banks.

Theoretical contribution/Originality: To the best of the authors' knowledge, no other research has examined whether intellectual capital significantly affects the performance of Islamic banks with a moderating effect on Islamic governance in Indonesia.

Practitioner/Policy implication: The results of this research provide input for the Sharia Supervisory Board to pay attention to the management of intellectual capital in Islamic banks and encourage Islamic banks to increase the value of intangible resources, capabilities, and asset knowledge to create and maintain competitive advantages in Islamic banks.

Research limitation/Implication: This study focused only on Indonesian Islamic banks; hence, future research should be extended to Islamic insurance and microfinance.

Keywords: Intellectual capital efficiency; Bank performance; Islamic governance



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Introduction

The growth and development of Islamic banks have been accelerating for more than 20 years. The number of Islamic commercial banks as of 2021 is 12, with Islamic banking assets reaching 418.77 trillion (www.ojk.go.id). This rapid development requires Islamic banking to have a competitive advantage to survive and be sustainable. Therefore, in creating a competitive advantage in Islamic banking, intellectual capital is crucial (Mondal & Ghosh, 2012).

Intellectual capital is now recognized by the industrial world as a crucial element in achieving business competitiveness and financial sustainability (J. Xu & Wang, 2018). Technologically advanced industries in a knowledge-based corporate place more emphasis on the value of intangible resources, capabilities, and asset knowledge (intellectual capital, hereinafter abbreviated as IC) (Cohen & Kaimenakis, 2007) because tangible resources are thought to be insufficient to create and maintain competitive advantage (Mondal & Ghosh, 2012; Ramirez et al., 2021). Specifically, banks are one of the industries included in knowledge-based corporations, where they are required to develop IC to increase value and have an impact on performance (Alhassan & Asare, 2016; Aslam et al., 2018; Buallay & Madbouly, 2020; Chowdhury et al., 2019; Rehman et al., 2022; Singh & Narwal, 2015).

Pulic (2004) asserts that a company's ability to efficiently use and generate value from its investment in knowledge assets is known as intellectual capital efficiency (hereinafter abbreviated as ICE). Human capital efficiency (hereinafter abbreviated as HCE), structural capital efficiency (hereinafter abbreviated as SCE), relational capital efficiency, and physical capital efficiency are the conceptual elements that constitute ICE (Nimtrakoon, 2015; Pulic, 2000). Human capital entails skilled, experienced, and knowledgeable personnel; structural capital comprises systematic procedure, culture, and efficient IT system; and relational capital encompasses a vibrant corporate image through good stakeholder relations (Bhattacharjee & Akter, 2022). Given that intellectual capital cannot generate value independently, physical capital efficiency (also known as capital employed efficiency) becomes a feature of the ICE concept (Pulic, 2004). Capital employed efficiency (hereinafter abbreviated as CEE) consists of physical and financial capital (Singh & Narwal, 2015).

In Islamic banks, Islamic governance is crucial (Neifar et al., 2020). The existence of a Sharia Supervisory Board (hereinafter abbreviated as SSB) is the unique trait that sets Islamic governance apart from governance in general. SSB is an autonomous organization comprised of professionals in Islamic business law (UU No. 40, 2007) and Islamic finance (AAOIFI, 2010). Further, this study adopted the IG-Score by Farook et al. (2011) to measure Islamic governance. The IG-Score was used to capture the role of SSB, which is not only based on one proxy but also covers various proxies as inherent characteristics of SSB from various previous studies.

Previous studies have examined the influence of governance on performance directly (Aslam et al., 2018) but have ignored the potential for interaction effects that could occur. In addition, empirical results regarding the direct effects of governance on performance are also mixed, such as positive effects (Baklouti, 2022; Mollah & Zaman, 2015; Nomran et al., 2018), negative effects (Alsartawi, 2019; Nomran & Haron, 2020), and no effects (Nugraheni, 2018). Furthermore, several earlier research also demonstrates that governance variables can play a significant moderating role (Ben Salah & Jarbou, 2022; Hamdan et al., 2017; Mutamimah & Saputri, 2023; Neifar et al., 2020). Meanwhile, the use of Islamic governance as a moderating variable in earlier research is still infrequent. For that reason, this research aims to fill the existing research gap by investigating

whether Islamic governance moderates the impact of ICE (HCE, SCE, and CEE) on Islamic banking performance.

Consequently, this study makes two contributions. First, the literature on intellectual capital suggests that the elements of ICE (i.e., HCE, SCE, and CEE) can energize organizations to enhance Islamic bank performance. Second, it contributes to the existing literature by including Islamic governance as a moderating variable in the relationship between intellectual capital (IC) and Islamic bank performance.

Literature Review and Hypotheses Development

This study uses two theories (agency theory and resource-based view theory) to clarify the relationship between these notions, i.e., intellectual capital, Islamic bank performance, and Islamic governance.

Intellectual capital and Islamic bank performance

The resource-based view (RBV) theory considers a company as a collection of strategic resources, such as abilities and tangible and intangible assets (Firer & Williams, 2003). Subsequently, Wernerfelt (1984) suggests that through the appropriate use of strategic resources, companies can gain a competitive advantage over their competitors. The RBV was used in this study because it is essential to understand how internal strategic resources, such as IC, may be established and utilized effectively and efficiently (Isola, 2020), also known as the value-added approach (Mondal & Ghosh, 2012). IC is also seen as an intangible asset related to knowledge that creates value-added for the company (Hashim et al., 2015). Therefore, RBV theory thus supports the idea that IC, as a strategic resource, may enhance company performance and value creation (Nadeem et al., 2017).

Intellectual capital and Islamic governance

IC is a strategic company resource that can improve performance and create value for the company, but in reality, companies face various problems in managing and controlling IC within the company (Appuhami & Bhuyan, 2015). Then, corporate governance can lessen conflicts of interest between managers and shareholders, according to the agency theory (Jensen & Meckling, 1976). In addition, Jensen and Meckling (1976) view that agency conflict can occur because no goal congruence exists between shareholders (principals), organization owners, and managers (agents) who govern the company, giving rise to opportunistic behavior on the part of managers. Opportunistic behavior escalates agency costs (Das & Teng, 2001). Agency costs can also potentially hinder the efficient acquisition and use of ICs (Appuhami & Bhuyan, 2015).

On the other hand, opportunistic managers tend to prioritize short-term interests by prioritizing their welfare through compensation (agency costs) and reducing the cash flow available for IC training and development. Then, corporate governance is essential to monitor IC developments to improve, protect, and maintain company performance

(Safieddine et al., 2009). Hence, the relationship between corporate governance, IC, and firm performance can be analyzed using a framework provided by agency theory (Jensen & Meckling, 1976).

Islamic bank performance and Islamic governance

According to the agency hypothesis, inefficiencies brought on by the segregation of ownership and control of the company can be solved by the presence of an independent board (Jensen & Meckling, 1976). By separating SSBs and managers, managers can be prevented from carrying out activities that directly benefit themselves and make shareholders bear the costs of these actions (Alsartawi, 2019; Fama & Jensen, 1983). Naturally, managers maximize profits to obtain incentives (agency costs). As such, companies need to adopt a good governance framework to reduce agency issues (Beasley, 1996; Jensen & Meckling, 1976). Therefore, implementing Islamic governance may reduce agency costs while enhancing company performance (Alsartawi, 2019; Gompers et al., 2003; Nawaz et al., 2021; Safieddine, 2009), especially in Islamic banks.

Additionally, corporations with good corporate governance should have higher value, and vice versa (Ben Salah & Jarboui, 2022). Effective governance can efficiently generate value from intellectual capital investments (Pulic, 2004). In this case, several researchers have investigated the impact of certain governance variables on Islamic bank performance, such as SSB characteristics (Baklouti, 2022; Mollah & Zaman, 2015; Nomran et al., 2018).

In a number of previous studies, several components of corporate governance were combined to create indices that attempted to measure their aggregate impact, such as Farook et al. (2011) and Neifar et al. (2020). Farook et al. (2011) combined several variables as the proxies for SSB's attributes, known as the Islamic Governance Score (IG-Score). The IG-Score is the sum of the SSB's dichotomous characteristic values, specifically the SSB's presence, the number of SSB board members, the presence of SSB members with cross-memberships, and the presence of SSB members with doctoral qualifications.

The moderating role of Islamic governance in the relationship between human capital efficiency and Islamic bank performance

According to the resource-based view (RBV), human capital is one of the critical components of IC (Ahamad et al., 2023; Oppong & Pattanayak, 2019). The essence of human capital is the sheer intelligence of the organizational member (Bontis, 1998), which comprises education, knowledge, creativity, skills, capabilities, experience, morals, attitudes, and commitments (Scafarto et al., 2021). Therefore, strengthening human capital capabilities can promote company growth (Aslam et al., 2018; Cohen & Kaimenakis, 2007) and bank performance (Al-Musali & Ku Ismail, 2016; Ku Ismail & Karem, 2011).

In the Islamic banking system, SSB is a crucial Islamic corporate governance mechanism (Neifar et al., 2020). Then, the SSB is responsible for supervising adherence to ethical standards and Sharia compliance (Safieddine, 2009; Yaacob & Donglah, 2012). According

to agency theory, implementing Islamic governance may save agency costs (Jensen & Meckling, 1976). However, Islamic banks must sustainably invest in human capital (Nawaz et al., 2021). Thus, governance can play a role in monitoring human capital practices and development (Dashtbayaz & Salehi, 2020).

Several previous studies stated that governance impacts improving company performance (Alsartawi, 2019; Gompers et al., 2003; Nawaz et al., 2021; Safieddine, 2009). On the other hand, based on previous research, human capital has a significant effect on banking performance (Al-Musali & Ku Ismail, 2016; Ku Ismail & Kareem, 2011; Vidyarthi & Tiwari, 2020; Yalama & Coskun, 2007). Thus, the authors suggest that the influence of HCE on the performance of Islamic banks will be better in Islamic banks with good Islamic governance. Therefore, the authors proposed and tested the following hypothesis:

H₁: Islamic governance positively moderates the impact of human capital efficiency on Islamic bank performance.

The moderating role of Islamic governance in the relationship between structural capital efficiency and Islamic bank performance

Under the resource-based view (RBV), structural capital is one of the principal IC components (Ahamad et al., 2023; Aslam et al., 2018; Nawaz, 2019; Oppong & Pattanayak, 2019). Structural capital is knowledge gained within a company but not owned by humans, such as trademarks, patents, principles, culture, systems, strategies, and structures that generate chances for creative ideas for the organization (Nawaz, 2017; Nimtrakoon, 2015). Structural capital is also symbolized as the organizational capabilities to reach customers' requirements (Ahamad et al., 2023). The structural capital applied by the company can create value for the company (Nawaz, 2017), thereby increasing the success of the company's competitiveness (Ahamad et al., 2023). As a result, Islamic banks must also invest in structural capital to promote inventiveness in new business models and maintain competitive advantage (Nawaz et al., 2021).

The fundamental role of SSB is to guarantee that banks operate following Sharia principles (Alsartawi, 2019; Neifar & Jarboui, 2018). According to agency theory, implementing Islamic governance can potentially reduce agency costs (Jensen & Meckling, 1976). By lowering agency costs, Islamic banks can continue to invest structural capital efficiently to elevate their competitive advantage, which results in greater company performance. Several previous studies have stated that governance impacts improving company performance (Alsartawi, 2019; Gompers et al., 2003; Nawaz et al., 2021; Safieddine, 2009). On the other side, structural capital has a significant influence on firm performance in banking (Al-Musali & Ku Ismail, 2016; Ku Ismail & Kareem, 2011; Nawaz, 2017; Vidyarthi & Tiwari, 2020; Yalama & Coskun, 2007). Thus, the authors suggest that the impact of SCE on the performance of Islamic banks will be better in Islamic banks with good Islamic governance. Thereby, the authors put forward and examined the following hypothesis:

H₂: Islamic governance positively moderates the impact of structural capital efficiency on Islamic bank performance.

The moderating role of Islamic governance in the relationship between the capital employed efficiency and Islamic bank performance

Per the RBV, CEE is one of the vital components of IC (Ahamad et al., 2023; Nawaz et al., 2021), which can consist of physical or financial assets (Barney, 1991). CEE is an essential resource in production and operational processes (X. L. Xu et al., 2021). Assets that are maintained, managed, and used efficiently can generate strategic advantages, improve performance, and increase market value (Nawaz et al., 2021; Ting & Lean, 2009; Wernerfelt, 1984). Therefore, CEE is one of the critical factors in determining bank performance (Al-Musali & Ku Ismail, 2016; Ku Ismail & Karem, 2011).

Based on agency theory, good governance mechanisms can limit agency problems (Jensen & Meckling, 1976; Nawaz et al., 2021). In the Islamic bank governance mechanism, SSB plays a significant role in supervising, auditing, monitoring, and providing Sharia compliance opinions on Islamic bank operations (Grassa, 2013). An effective SSB role will reduce agency costs. Controlled agency issues will encourage management to manage the capital employed efficiently. Islamic banks must invest in capital employed, such as financial and infrastructure assets, to increase their performance (Nawaz et al., 2021). Hence, SSB contributes to creating value and enhancing Islamic banks' performance (Neifar et al., 2020).

Several previous studies have revealed that governance impacts improving company performance (Alsartawi, 2019; Gompers et al., 2003; Nawaz et al., 2021; Safieddine, 2009). Moreover, in a number of earlier studies, capital employed efficiency has significant effects on firm performance in banking (Al-Musali & Ku Ismail, 2016; Alhassan & Asare, 2016; Buallay & Madbouly, 2020; Nawaz et al., 2021). Thus, the authors suggest that the impact of CEE on the performance of Islamic banks will be better in Islamic banks with good Islamic governance. Accordingly, the authors brought forward and investigated the following hypothesis:

H₃: Islamic governance positively moderates the impact of capital employed efficiency on Islamic bank performance.

Based on the hypothesis formulation above, Figure 1 illustrates the research hypothesis and theoretical model.

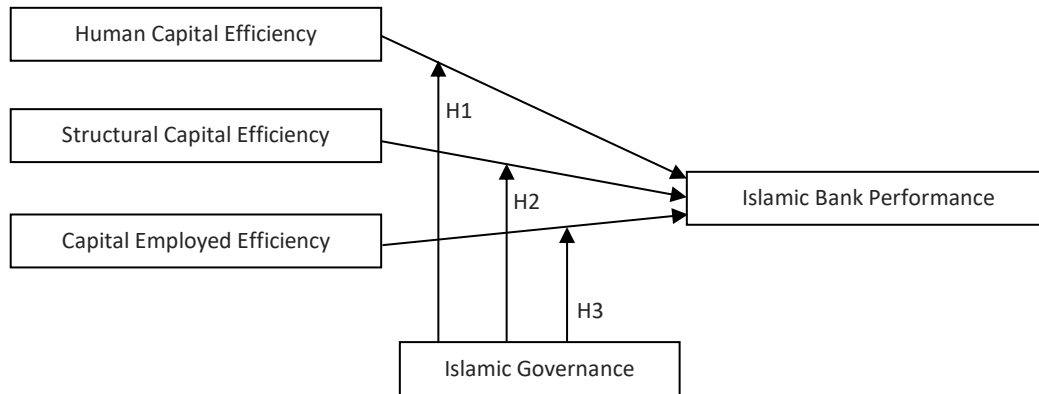


Figure 1 The Theoretical Model and Hypotheses

Research Method

Sample and data

This study used a quantitative approach. This study employed secondary data acquired from the annual reports of each Islamic bank. The population in this study covered Islamic banks in Indonesia. The sampling technique utilized was purposive sampling with a judgment sampling type. The sample criteria drew on included 1) Islamic banks in Indonesia with Islamic Commercial Bank (BUS) status, 2) publishing an annual report for the 2017-2022 period, and 3) earning a profit during the observation year. Addressing these criteria, 14 Islamic banks were obtained as research samples with 84 observations over six years, from 2017 to 2022. However, there were some incomplete data, so the tested data fell into the unbalanced panel data criteria. Accordingly, the data that could be tested was 64. The measurement of the variables can be observed in Table 1.

Following that, descriptive statistical analysis, classical assumption tests, and moderated regression analysis (MRA) were some of the methods used in data analysis in this study. MRA is a statistical analysis employed to examine the role of moderating variables (Islamic governance), which can increase or decrease the impact of independent variables (HCE, SCE, and CEE) on the dependent variable (Islamic bank performance). The statistical test tool utilized in this research was E-Views version 12. The research formula is detailed as follows:

$$IBP_i = \alpha + \beta_1 HCE_i + \beta_2 SCE_i + \beta_3 CEE_i + \beta_4 IG_i + \beta_5 HCE_i IG_i + \beta_6 SCE_i IG_i + \beta_7 CEE_i IG_i + \epsilon_i$$

Where IG describe to Islamic governance; HCE to Human capital efficiency; SCE to Structural capital efficiency; CEE to Capital employed efficiency; and IBP to Islamic bank performance.

In this study, panel data, which is a hybrid of time-series and cross-sectional data, were used. Before doing MRA on the data, the authors first conducted tests for

heteroscedasticity, multicollinearity, and normality. Then, descriptive statistical methods were employed to examine the data: mean, standard deviation, and maximum and minimum values.

Afterward, in panel data regression, the best model was selected from among the three available model options: common effect model (CEM), fixed effect model (FEM), and random effect model (REM). To select the best model, the Chow, Hausman, and Lagrange multiplier tests were performed.

Table 1 Measurement of the Variables

Abbreviation	Variable	Measurement
IBP	Islamic bank performance	ROA = Net income/total assets
HCE	Human capital efficiency	The ratio of value added is divided by human capital. Where: the value added = operating profit + employee cost + depreciation. Where: the human capital = total costs invested on employees (Chowdhury et al., 2019; Gupta & Raman, 2021)
SCE	Structure capital efficiency	The ratio of structural capital is divided by value-added. Where: the structural capital = value-added – human capital Where: the value added = operating profit + employee cost + depreciation. (Chowdhury et al., 2019)
CEE	Capital employed efficiency	The ratio of value added is divided by capital employed. Where: the value added = operating profit + employee cost + depreciation. Where: the capital employed = total Asset – current liabilities (Chowdhury et al., 2019; Gupta & Raman, 2021)
IG	Islamic governance	IG-Score = existence of SSB + number of SSB members + cross memberships + doctorate qualification of SSB member (Farook et al., 2011)

Result and Discussion

Results

Based on the results of the purposive sampling technique that was carried out, the sample obtained was 14 BUS, with a total of 64 observations from seven years of observation (2017–2022). Based on these data, the data obtained should total 84 observations. However, some data did not meet the sample criteria, such as Islamic banks that did not report profits in a particular year, and there were outlier data, so this data had to be excluded from the research data. Therefore, the final data from Islamic banks that could be tested was 64 observations.

Subsequently, Table 2 displays descriptive statistics for the years 2017–2022. It reports the minimum, the maximum, the mean, and the standard deviations of all the variables used in the study. The ROA variable's mean value indicates that most Islamic banks performed well. Then, the means of HCE, SCE, and CEE were 1.804, 0.389, and 0.038 respectively. This signifies that intellectual capital development in Islamic banks focuses on human capital. Therefore, the IG variable revealed that most Islamic banks had a good governance index.

Table 2 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ROA	64	0.0000113	0.084093	0.012082	0.018809
HCE	64	1.056345	5.452535	1.804437	0.700676
SCE	64	0.053339	0.816599	0.388891	0.168077
CEE	64	0.008815	0.202310	0.038054	0.040049
IG	64	1	4	2.906250	0.867742

Note: HCE = Human Capital Efficiency; SCE = Structure Capital Efficiency; CEE = Capital Employed Efficiency; IG = Islamic Governance.

The model of this study focused on panel data. The final data collected was 64, and some did not meet the criteria for several reasons stated previously, so the research data tested was unbalanced panel data. The statistical test tool that can be used for unbalanced panel data is E-views version 12. As such, the E-views statistical tool is appropriate for this research. E-views could determine the best research model to be used in this research. Therefore, this research carried out tests to obtain the best model, whether CEM, FEM, or REM.

The first model test was the Chow test. The Chow test was carried out to compare the common effect model with the fixed effect model. If the Chow test results show a probability value > 0.05, it states that the CEM is better than the FEM, and vice versa. In this study, the Chow test results produced a probability value of 0.0000 ($p < 0.05$), implying that the FEM was better than the CEM. Table 3 presents the Chow test results.

Table 3 Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	16.257775	(13.46)	0.0000

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

The second model test was the Hausman test, comparing a FEM with a REM. If the Hausman test results show a probability value > 0.05, it states that the REM is better than the FEM, and vice versa. Since the Hausman test results yielded a probability value of 0.0000 ($p < 0.05$) in this research, the FEM was better than the REM. Then, Table 4 provides the Hausman test results.

Table 4 Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section F	150.065131	4	0.0000

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

According to the Chow and Hausman Tests, FEM was the best model that could be used in this research. Consequently, FEM would be used to test classical assumptions and Moderating Regression Analysis (MRA).

Normality test

The normality test used was a histogram diagram. Figure 2 shows that the data in this study were normally distributed, as indicated by a probability of 0.088 ($p > 0.05$).

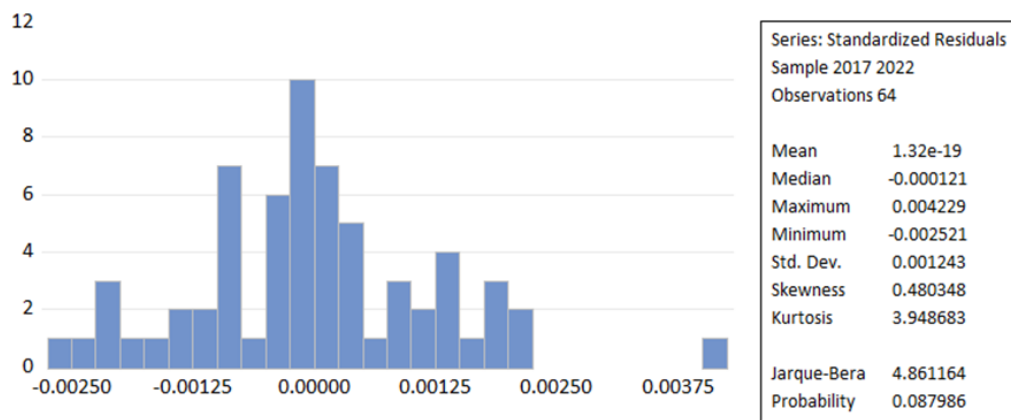


Figure 2 Normality Test Results

Heteroscedasticity test

Table 5 Park Test Results

Variable	t-Statistic	Prob.
HCE	-1.440799	0.1564
SCE	1.658995	0.1039
CEE	-1.370574	0.1772
IG	-0.995	0.3249
Prob (F-Statistic)		0.088506

Note: HCE= Human Capital Efficiency; SCE = Structure Capital Efficiency; CEE = Capital Employed Efficiency; IG = Islamic Governance

The heteroscedasticity test was carried out using the Park Test. Table 5 presents the Park Test results, where each variable's probability value was >0.05 . This indicates that in the research model, there were differences in variance and residuals from one observation to another, or it can be concluded that heteroscedasticity did not occur.

Multicollinearity Test

The multicollinearity test was performed by testing the correlation between the independent variables in the study. Table 6 displays that the correlation value between independent variables was below 0.9, so it can be stated that there was no multicollinearity.

Table 6 Multicollinearity Test Results

Variable	HCE	SCE	CEE	IG
HCE	1	0.8859645	0.39141029	-0.2070269
SCE	0.8859645	1	0.47524201	-0.2152408
CEE	0.39141029	0.47524201	1	-0.2440497
IG	-0.2070269	-0.2152408	-0.2440497	1

Note: HCE= Human Capital Efficiency; SCE = Structure Capital Efficiency; CEE = Capital Employed Efficiency; IG = Islamic Governance

Autocorrelation test

To test the autocorrelation problem in the study models, the authors used the Durbin Watson (D-W) test. The D-W value was 1.903214, while the du value at k=4 and n=64 was 1.7303. There is no autocorrelation in the data if the value $du < dw < 4-du$ ($1.7303 < 1.903214 < 2.2697$). Therefore, there was no autocorrelation in the observation data in this study.

Moderating Regression Analysis (MRA)

Hypothesis testing employed moderated regression analysis (MRA) with previously selected FEM.

Table 7 Hypothesis Testing Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HCE*IG	-0.002621	0.001980	-1.323841	0.1926
SCE*IG	0.012682	0.007419	1.709453	0.0946*
CEE*IG	-0.043354	0.037308	-1.162323	0.2515
C	-0.004844	0.005240	-0.924504	0.3604

Notes: ***Significance at 1%; ** Significance at 5%; * Significance at 10%; HCE= Human Capital Efficiency; SCE = Structure Capital Efficiency; CEE = Capital Employed Efficiency; IG = Islamic Governance

Table 7 summarizes the results of testing H1, H2, and H3, where each hypothesis described the role of the moderating effect of IG on ICE (HCE, SCE, and CEE) and Islamic bank performance. Based on Table 7, while both H1 and H3 were not supported ($p > 10\%$), H2 was supported ($p < 10\%$).

Discussion

In this study, of the three hypotheses, two (H1 and H3) were not supported, and one was supported (H2). H1 and H3 stated that IG moderates the effect of HCE and CEE on Islamic banks' performance. The results of this statistical test (Table 7) present that the interaction coefficient of IG with each HCE and CEE was 0.0026 (negative) and 0.0433 (negative), with a probability value of 0.1926 and 0.2515, respectively, at a significance level of 10%. This denotes that H1 and H3 were unsupported. In other words, implementing IG as a supervisory mechanism for Islamic banks is ineffective in improving their performance. In the context of intellectual capital, monitoring human capital and capital employed development does not seem to be a priority for SSB. However, SSB still focuses on Islamic banks' operational compliance with Sharia principles. This finding is confirmed by Rahman and Bukair (2013) that SSB has a role in assessing further information and reports, such as circulars, operational, financial reports, and policies.

On the other hand, more than 50% of Islamic banks in Indonesia were founded in 2010 or earlier, indicating that the majority of Islamic banks are still very young. Therefore, there might be concerns that high investment policies, both in human and physical resources, could reduce Islamic banks' profits and market value. This study's findings contradict those of Ku Ismail and Karem (2011) and Yalama and Coskun (2007), who found that HCE and CEE positively affected performance.

Secondly, H2 declares that IG moderates the impact of SCE on Islamic banks' performance. The results of this study's statistical test (Table 7) show that the coefficient of IG interaction with SCE was 0.0127 with a probability value of 0.0946 at a significance level of 10%. This signifies that H2 was supported. This positive effect suggests that the role of an effective IG could amplify the influence of SCE on the performance of Islamic banks. SCE concerns brand building, organizational processes, systems, and procedures (Bontis, 1998). Since most Sharia banks in Indonesia are still young, SSB can encourage Sharia banking to focus on improving SC, namely brand building, organizational processes, systems, and procedures.

This is not surprising because the newly growing Islamic banking sector is a service sector that is still trying to convince its customers that Islamic banks are more reliable, even better than conventional banks. Investment in SC is carried out to improve the services provided by Islamic banks towards customer satisfaction (Musibah & Alfattani, 2014) so that, in the long term, it can improve the performance of Islamic banks. This finding is consistent with Neifar et al. (2020), who revealed that SSB could positively moderate the relationship between board effectiveness and Islamic bank performance.

Conclusion

This study examined how IG influenced the relationship between ICE (HCE, SCE, and CEE) and Islamic bank performance. It has been revealed that IG was only effective when utilized in SCE but not in HCE and SCE. In the condition that the majority of sharia banks

in Indonesia are still young, there is a possibility that SSB tends to encourage sharia banks to focus on improving SC rather than HCE and SCE. Building the image and brand of a Sharia bank that is still relatively young is undoubtedly a priority and is necessary to increase public interest in using Sharia banking services. Meanwhile, building human capital (HC) and capital employed (CE) requires significant investments.

This research can be used as a basis for the government to make policies to accelerate the growth of Islamic banking to compete with conventional banking, significantly increasing intellectual capital. Another practical implication is that SSB must start paying attention to the importance of intellectual capital in creating value and competitive advantage for Islamic banks. Thus, Islamic banks can compete with conventional banks. The theoretical ramification of this study is that it can contribute to advancing the resource-based view (RBV) theory in tandem with agency theory.

The limitation of this research is that it only used Islamic commercial bank data. Hence, upcoming studies can include Islamic insurance companies or Islamic microfinance. Furthermore, this research only used the IG variable as a moderating variable. In future research, governance variables from other perspectives, such as ownership structure, can be used as moderating variables.

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Conflicts of Interest

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