Journal of Business Management and Islamic Banking
Vol. 03 No. 1, 2024
pp. 31–44
E-ISSN: 2964-2787

The Nexus between Intellectual Capital and Islamic Bank Performance in Indonesia

Dian Juliani[1]*, M. Arsyadi Ridha[2]

[1]Department of Accounting Education, Universitas Negeri Yogyakarta, Special Region of Yogyakarta, Indonesia
[2]Department of Islamic Accounting, Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Special Region of Yogyakarta, Indonesia

*Corresponding author: dianjuliani@uny.ac.id

Article Info

Article History
Received : 16-05-2024
Revised : 25-05-2024
Accepted : 25-05-2024
Published : 26-05-2024

Article DOI:
https://doi.org/10.14421/jbmibv3i1.2202

ABSTRACT

Research Aims: This research aims to investigate the impact of intellectual capital on the performance of Islamic Banking in Indonesia.
Design/methodology/approach: The population in this research is islamic banking, type of islamic commercial banks. A purposive sampling method is used in the research. This research employs secondary data in the form of annual islamic commercial banking reports from 2017 to 2022. Multiple regression analysis was utilized. The statistical tool used to analyse the research data is eviews 12.
Research Findings: This research shows that human capital efficiency and capital employed efficiency have a positive and significant effect on return on assets. Meanwhile, structural capital efficiency has a negative and significant effect on return on assets.
Theoretical Contribution/Originality: This research has not been examined much because it tests the direct influence of intellectual capital efficiency using the variables human capital efficiency, structural capital efficiency, and capital employed efficiency on the performance of Islamic banking in Indonesia.
Research limitation and implication: This article provides insight into Islamic banking and indicates that investing in intellectual capital has a major impact on islamic banking's the ability to generate profits. This study only examines some instances of Islamic banking in Indonesia. For further research can use islamic banking in ASEAN countries.

***Keywords**: Human Capital Efficiency, Structural Capital Efficiency, Capital Employed Efficiency, Return on Assets.*

INTRODUCTION

Islamic banking has experienced substantial expansion and transformation during the previous few decades. From its humble beginnings as a tiny financial sector, islamic banking has risen to become a prominent role in the global financial system. In recent decades, the number of islamic financial institutions, assets under management, and market

penetration in many nations have increased. Islamic banking has grown significantly in countries with sizable Muslim populations, like Indonesia, Malaysia, and the United Arab Emirates.

The importance of islamic banking as a driving factor in the economy has given rise to the concept of quantifying its capabilities. Measuring the performance of islamic banking to create returns from managed assets is an intriguing research topic. Improving banking performance is inextricably linked to the value of intellectual capital in banking. Youndt & Snell (2016) increasing intellectual capital in the organization will improve organizational performance. Intellectual capital is a substantially significant asset for an organization, regardless of it does not have a tangible asset like buildings or equipment. Intellectual capital encompasses information, skills, and experience, as well as other immaterial qualities possessed by persons in an organization.

Intellectual capital is an important asset for the enterprise since it is related to employees and will serve as an interface between stakeholders in the enterprise (Pulic, 2004). Ugalde-Binda et al. (2014) intellectual capital making investments in human, structural, and relational capital are all essential. Intellectual capital empowerment is capital in knowledge-based economic circumstances, where intellectual capital is the primary capital in current firm competition (Martín-de-castro et al., 2011). Based on the overview of the empirical study, it is evident that IC is an intriguing topic for research, that it is an important resource for the firm, and that it will influence the company's performance in the current economy.

Intellectual capital is an intangible asset related to organizational knowledge that is expected to generate profits for the organization (Osinski et al., 2017). Intellectual capital, which includes human capital, structural capital, and capital employed, has an impact on the performance of an organization (Chowdhury et al., 2019). According to research Akkas & Asutay (2023), human capital efficiency and capital employed efficiency in Islamic banking are no better than in conventional banking, and structural capital efficiency in islamic banking lags slightly behind conventional banking. According to the research findings (Chandra & Agnes, 2021), human capital efficiency and capital employed efficiency have an impact on corporate performance, however structural capital efficiency has no impact.

Faozan et al. (2023) research indicates that intellectual capital has a negative effect on financial performance, resulting in different effects. According to F-Jardón & Martos (2009), structural capital efficiency is the intellectual capital element that effects performance, when the other intellectual capital elements have no effect. Acuña-Opazo & González (2021) suggests that intellectual capital, composed of human capital efficiency, structural capital efficiency, and capital employed efficiency, is an essential factor in corporate financial performance. The intellectual capital element, human capital efficiency, has a positive effect on corporate performance (Cisneros & Hernandez-Perlines, 2018).

Nasirwan et al. (2024) indicates that islamic governance can't enhance the effect of human capital efficiency and capital employed efficiency on islamic banking performance, but structural capital efficiency interacts with islamic governance. Research Nasirwan et al. (2024) did not directly examine the impact of intellectual capital, which included human capital efficiency, structural capital efficiency, and capital employed efficiency, on islamic banking performance. Based on multiple empirical studies conducted by various academics, this research will assess the impact of intellectual capital, specifically human capital efficiency, structural capital efficiency, and capital employed efficiency, on the performance of islamic banking. This research aims to investigate the impact of intellectual capital on the performance of islamic banking in Indonesia.

LITERATURE REVIEW

Resource-Based View (RBV) Theory

In this research, we will use resource-based view (RBV) to explain the phenomena of intellectual capital influence on islamic banking performance in Indonesia. This theory was proposed by Penrose (1959) in his book, the theory of the growth of the firm. Penrose (1959) identified a "resource approach" in his book, the theory of the growth of the firm, and focused on "the company's resource base". According to the Resource-Based View (RBV) theory outlined in Wernerfelt (1984), a firm is a resource, and resources are intrinsically related to the company's profitability. Organizations that manage their resources optimally obtain the greatest returns for the company.

The RBV highlights a company's internal strategy sources, specifically its employees (intellectual, physical, and motivational) and social-interactional skills and characteristics (Bechtel, 2007). According to Meso & Smith (2000) the firm's resource-based view (RBV) defines tangible assets are not strategic because they may be purchased or duplicated and intangible asset is a strategic asset as being scarce, valuable, difficult to replicate, and not replaceable. Based to the RBV theory, valuable asset resources in companies are intangible assets. Intangible assets in organizations are typically assets that are unpredictable and have qualities that are difficult to replicate. Intellectual capital is one of the most intangible assets utilized by companies nowadays. Intellectual capital is becoming more recognized as the one important strategic asset (Hamel, 1998).

Intellectual Capital

Intellectual capital is divided into three categories: human capital, structural capital, employed, or external capital (Kalkan et al., 2014; Nuryaman, 2015). Interestingly, if viewed more comprehensively, there is a sequential relationship between intellectual capital, capital structure and capital employed. Human capital is produced through internal relationships inside the organization, which result in the capital structure. When open to outside parties, this facilitates external relationships that produce capital employed or relational capital. Finally, employee capital which includes relationships with external and internal stakeholders (Chowdhury et al., 2019) will have an impact on company performance.

The resource-based view of the firm contends that disparities in profitability among organizations can be explained by differences in resource portfolios and how those resources are expressed (Wernerfelt, 1984). According to resource-based theory, intangible assets play a vital role in generating the long-term competitive advantage required to achieve superior company outcomes (Barney, 1991).

According to the RBV, businesses can outperform their rivals by strategically allocating their resources (Wernerfelt, 1984). Khan et al. (2019) argues that IC can provide businesses a competitive edge and also help enhancing performance. The study used intellectual capital efficiency components: human capital efficiency (HCE), structural capital efficiency (SCE) and capital employed efficiency (CEE) (Hamdan et al., 2017; Kalkan et al., 2014; Nuryaman, 2015; Pulic, 2000). Interestingly, if viewed more comprehensively, there is a sequential relationship between intellectual capital, capital structure and capital employed. Human capital is produced through internal relationships inside the organization, which result in the capital structure. When open to outside parties, this facilitates external relationships that produce capital employed or relational capital. Finally, employee capital

which includes relationships with external and internal stakeholders (Chowdhury et al., 2019) will have an impact on company performance.

Human Capital Efficiency and Performance

From the resource-based view (RBV) perspective, human capital is a crucial component of intellectual capital (Pulic, 2000). HCE includes experience, professional, knowledge, expertise, and creativity of employees of a company's personnel (Ismail & Karem, 2011; Onumah & Duho, 2020). Human capital development is critical for humans to increase their abilities and capabilities in performing all of the activities that are expected of them (Akkas & Asutay, 2023). Human capital in a company will increase when its employees have information, skills, and special knowledge that allows them to communicate efficiently and effectively, thereby minimizing errors in decision-making and enhancing performance (Luthans & Youssef, 2004). Investment in human resources is very crucial because enhancing skills and expertise will improve bank performance (Haris et al., 2019). Therefore, human capital are the primary source of a company's intangible assets (Kalkan et al., 2014), which can be a set of values, attitudes, talents, and capacities of employees that enable it to produce value for the company (Bontis et al., 2000).

Human resources are crucial in Islamic banks because employees are expected to not only have conventional knowledge and skills related to providing banking services but also have good knowledge of sharia, which will increase the performance, legitimacy, and reputation of Islamic banks. The theoretical positive relationship between HCE and performance is supported by several studies such (Haris et al., 2019), (Ismail & Karem, 2011), (Nawaz & Haniffa, 2017), and (Singh & Narwal, 2015). Therefore, our first hypothesis is stated as follows:

H1: There is a positive relationship between HCE and Islamic bank performance

Structural Capital Efficiency and Performance

From the RBV point of view, SCE is a component of IC (Pulic, 2000). Structural capital provides an atmosphere and infrastructure that enable firms to create and apply knowledge, thereby improving employee and organizational performance at the same time (Kalkan et al., 2014; Nawaz & Haniffa, 2017). Structural capital efficiency (SCE) includes the processes, systems, procedures, and controls that exist in an entity for use by employees to achieve organizational goals (Onumah & Duho, 2020). Organizational operational processes and commitment to proper resources will significantly affect performance (de Brentani & Kleinschmidt, 2004).

Islamic banks have unique and different structural systems and processes from conventional banks. The existence of these differences causes the need for development and investment in structural processes that can influence the performance of Islamic banks. According to earlier research, SCE has a good influence on companies, for example it has a positive effect on CSR (Musibah & Alfattani, 2014), performance (Al-Musali & Ku Ismail, 2016). Hence, our second hypothesis is stated as follows:

H2: There is a positive relationship between SCE and Islamic bank performance

Capital Employed Efficiency and Performance

From an RBV standpoint, CEE is a part of IC (Pulic, 2000). Companies use both tangible and intangible resources in their operations (Haris et al., 2019) because both

intellectual capital (IC) and physical capital play a significant role in enhancing performance. Tangible capital is an important factor in driving bank performance (Al-Musali & Ku Ismail, 2016). The positive impact between CEE and the firm performance is reported by (Akkas & Asutay, 2023; Haris et al., 2019; Ismail & Karem, 2011; Nawaz & Haniffa, 2017; Singh & Narwal, 2015). Thereby, our second hypothesis is stated as follows:

H3: There is a positive relationship between CEE and Islamic bank performance

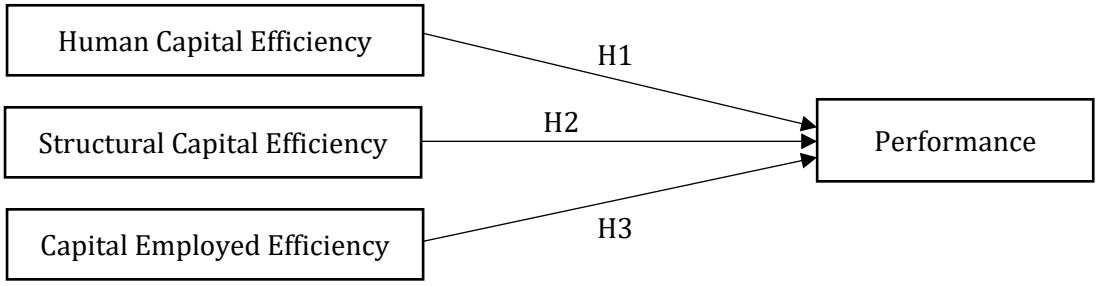

Figure 1. Hypotheses and Theoretical Models

RESEARCH METHOD

Research Data and Samples

This research is quantitative. The type of data used is secondary data. The secondary data used are annual reports of Islamic commercial banks registered in the period 2017–2022. The type of sampling used in this research is purposive sampling. The criteria for purposive sampling are islamic commercial banks that are registered during the research observation period, namely from 2017 to 2022, Islamic commercial banks disclose profits in the year of observation, and publish annual bank reports. Based on these criteria, the number of research samples was 14 Islamic commercial banks. This research uses panel data, namely data that combines time series and cross-section data. The total data that could have been analyzed was 84 data. The statistics used to analyze the research results are multiple regressions. The statistical tool used is Eviews 12. The Eviews statistical tool can test unbalanced data because there is eliminated data, so the test results can be guaranteed as to their validity.

The research model is as follows:

$$\boldsymbol{ROA = \alpha + \beta_1 HCE + \beta_2 SCE + \beta_3 CEE + \varepsilon}$$

explanation of the equation above:

ROA = return on assets

α = constant

β = coefficient

HCE = human capital efficiency

SCE = structural capital efficiency

CEE = capital employed efficiency

ε = error

Dependent Variable

The dependent variable in this research is performance. Performance is measured by the return on assets (ROA). ROA was chosen as a performance proxy because the ROA ratio provides an explanation regarding the company's ability to generate profits based on the total assets owned by the company (Hanafi & Halim, 2016). Companies that are able to maximize the use of total assets owned to generate profitabilitas are an effective type of measurement for measuring company performance. ROA formula:

$$ROA = \frac{Net\ Profit}{Total\ Asset}$$

Independent Variable

The independent variable in this study is intellectual capital. The three variables used to measure intellectual capital are human capital efficiency (HCE), structural capital efficiency (SCE), and capital employed efficiency (CEE). HCE, SCE, and CEE measurements using (Chowdhury et al., 2019).

Table 1. Measurement of Independent Variables

Components	Definition	Formula	Explanations
Value added (VA)	The value created by the firm calculated as operating profit before interest and tax (EBIT), adding back non-cash expenses like depreciation, amortisation and employee costs	$VA = P + C + D + A$	VA = value added P = operating profits C = employee cost D = depreciation A = Amortization
Human Capital (HC)	The expenses related to employee compensation and development	HC = total wages and salary costs	HC = human capital
Human Capital Efficiency (HCE)	The contribution made by every unit of money invested in HC to the VA	$HCE = \frac{VA}{HC}$	HCE = human capital efficiency VA = value added HC = human capital
Structural Capital (SC)	The supportive infrastructure that enables HC to function	SC = VA – HC	SC = structural capital VA = value added HC = human capital
Structural Capital Efficiency (SCE)	The contribution made by every unit of money invested in SC to the VA	$SCE = \frac{SC}{VA}$	SCE = structural capital efficiency SC = structural capital VA = value added
Capital Employed Efficiency (CEE)	The contribution made by every unit of physical capital to the VA	CE = TA – CL $CEE = \frac{VA}{CE}$	CE = capital employed TA = total assets CL = current liabilities CEE = capital employed efficiency VA = value added

RESULTS AND DISCUSSIONS

According to purposive sampling, there are a total of 14 islamic commercial banks that can be utilized as samples. The total quantity of data that can be executed is 68, however the panel data that has to be processed is 84. The data analyzed did not match the total panel data as it should have because 16 data missed the sampling criteria.

Table 2 shows the descriptive statistics for the research variables. The variable that is especially interesting to examine is the HCE variable at the maximum HCE value, which has a rather high ratio, 5.452535. The value of this ratio indicates that human capital efficiency is a company's investment in increasing its personnel resources by paying salaries based on the company's value added. This value indicates the company's effective investment in its employees with the goal of increasing the company's success. The mean HCE value of 1.846336 is relatively high when compared to the other independent variables, SCE and CEE. This could imply that islamic commercial banks are more efficient in investing intellectual capital in their personnel than in capital structure and capital employed. The results will be reviewed in greater detail in the hypothesis test analysis to explain the descriptive statistical findings.

Table 2. Descriptive Statistics

Variable	N	Mean	Maximum	Minimum	Std. Deviation
ROA	68	0.013675	0.090986	1.13E-05	0.021158
HCE	68	1.846336	5.452535	1.056345	0.705206
SCE	68	0.401012	0.816599	0.053339	0.170695
CEE	68	0.042311	0.202310	0.010384	0.045301

This study uses Eviews 12 for statistical testing. As Eviews may predict the optimal model for research, this study will also test the best model that will be utilized in the analysis. Eviews allows researchers to choose between three research models: the common effect model (CEM), the fixed effect model (FEM), and the random effect model (REM). The first model test is the Chow test. The Chow test is a model test that determines if the optimal model is CEM or FEM. If the probability is greater than 0.05, the best model is CEM; if it is less than 0.05, the best model is FEM. If the selected model is CEM, no further model testing will be performed; however, if the selected model is FEM, the Hausman test will be used for the following model selection test.

The Hausman test is used to find the best model, either REM or FEM. If the probability result is >0.05, the selected model is REM, and if the probability result is <0.05, the selected model is FEM. If the selected model is FEM, the next model is not tested; if the selected model is REM, the next model is tested using the legrange multiplier method. The legrange multiplier test is the final model test used to determine the best model between CEM or REM; if the probability is greater than 0.05, the best model is CEM. If the probability is less than 0.05, the best model in this study is REM. therefore, this study will test the first model, the chow test.

Table 3 displays the Chow test findings, which demonstrate that the probability value is 0.0090<0.05, indicating that the selected model is FEM. The next model should be examined using the Hausman test.

Table 3. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section Chi-square	28.033046	13	0.0090
Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			

Table 4 provides the results of the Hausman test, which a probability value of 0.1431>0.05, indicating that the selected model is REM, that requires the following model test, the legrange multiplier.

Table 4. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.426997	3	0.1431

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

Table 5 shows the results of the legrange multiplier test using the Breusch-Pagan probability value. Because this study employs panel data, the probability value for Both values is 0.1380, which is greater than 0.05, indicating that CEM is the best model. As a result, CEM is used in classic assumption and hypothesis testing.

Table 5. Legrange Multiplier Test Results

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	(0.1393)	(0.9044)	(0.1380)

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided

Classic Assumption Test

This research uses panel data so that, according to Widarjono (2007), the classic assumption tests that will be carried out are only the multicollinearity test and the heteroscedasticity test.

Multicollinearity Test

Table 6 shows the results of the multicollinearity test, the correlation coefficient between the independent variables. According to Napitupulu et al. (2021), there is no evidence of multicollinearity in data if the correlation between independent variables is less than 0.9. The test findings showed that all correlation values between independent variables were <0.9, indicating that the data did not have multicollinearity and passed the test.

Table 6. Multicollinearity Test Results

Variable	HCE	SCE	CEE
HCE	1.000000	0.893165	0.419042
SCE	0.893165	1.000000	0.501939
CEE	0.419042	0.501939	1.000000

Figure 2 represents the results of the heteroscedasticity test as a residual graph. According to the figure, none of the graphs reach the values 500 or (-500), indicating that the data in this study does not exhibit heteroscedasticity.

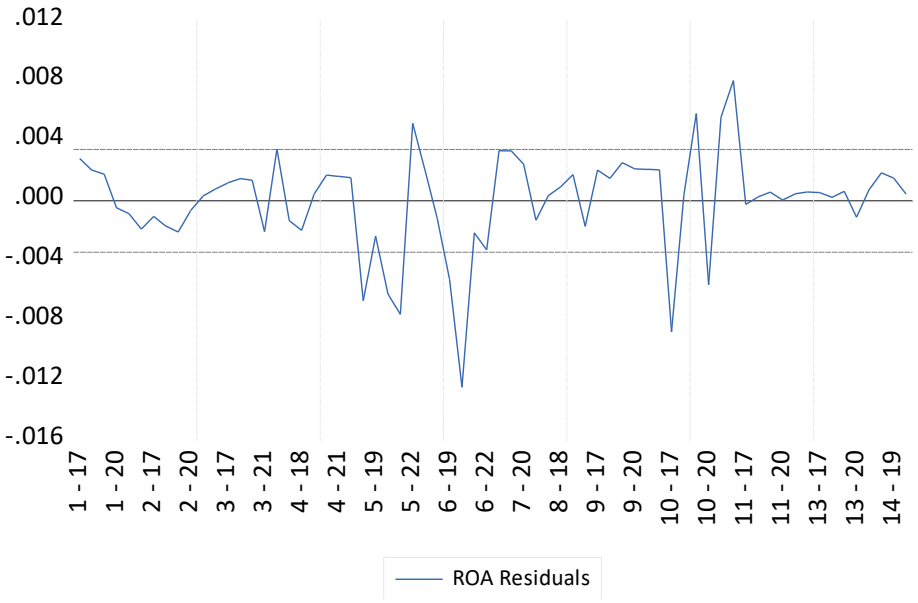

Figure 2. Heteroscedasticity Test Result

Hypothesis Testing Results

Table 7 shows the regression findings from this study using the CEM model. These findings indicate a very high adjusted R-squared value of 0.973777, or 97.34%. This value indicates an important impact of the independent variable on the dependent variable. The F probability shows a significant value of 0.000000, indicating that the model used in this study is sufficient or fit for estimating the impact of intellectual capital, specifically the HCE, SCE, and CEE variables, on islamic banking performance with the ROA ratio.

Table 7. Hypothesis Testing Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.015360	0.001175	-13.07261	0.0000
HCE	0.008868	0.001324	6.700279	0.0000
SCE	-0.012493	0.005740	-2.176272	0.0332
CEE	0.417638	0.010714	38.98199	0.0000
R-squared				0.974951
Adjusted R-squared				0.973777
F-statistic				830.3282
Prob(F-statistic)				0.000000

Dependent Variable: ROA
Periods included: 6
Cross-sections included: 14
Total panel (unbalanced) observations: 68

Hypothesis 1 states that there is a positive relationship between HCE and Islamic bank performance; the coefficient value is 0.008868 and the probability value is 0.0000<0.05, indicating that the results of H1 are supported. This is in accordance with research (Haris et al., 2019; Ismail & Karem, 2011; Nawaz & Haniffa, 2017; Singh & Narwal, 2015) and in accordance with the expectations in this research. These findings strongly support the previous descriptive statistical values, implying that Islamic commercial banks are making efficient investments in human capital in the banking sector, with the potential

to improve the company's performance in generating profits from all assets owned by the company.

Hypothesis 2 states that there is a positive relationship between SCE and Islamic bank performance. Table 7 shows the coefficient value of -0.012493 and the probability value of 0.0332<0.05. The results of this research are quite interesting because the coefficient value shows the opposite direction to the hypothesis, with a negative value, but shows a significant value with a probability value of <0.05, so H2 is not supported.

Hypothesis 3 states that there is a positive relationship between CEE and Islamic bank performance. Table 7 shows the coefficient value of 0.417638 and the probability value is 0.0000<0.05 so that H3 is supported. Based on these results, it shows consistent results with research (Akkas & Asutay, 2023; Haris et al., 2019; Ismail & Karem, 2011; Nawaz & Haniffa, 2017; Singh & Narwal, 2015).

CONCLUSION AND RECOMMENDATION

This research shows that HCE and CEE have a positive and significant effect on ROA. Meanwhile, SCE has a negative and significant effect on ROA. The limitation of this research is that it only uses samples from Islamic commercial banks in Indonesia. Further research can use samples from islamic banking in ASEAN countries. The results of this research show that there is one variable that is not supported, namely SCE, so for further research, other analyses can be carried out regarding results that are different from the hypothesis made. This research only uses the intellectual capital variable using the HCE, SCE, and CEE variables. Future research can add other independent variables that might influence a company's performance. Future research can add interaction variables or moderating variables to provide stronger results in company performance research.

REFERENCES

Acuña-Opazo, C., & González, O. C. (2021). The impacts of intellectual capital on financial performance and value-added of the production evidence from Chile. *Journal of Economics, Finance and Administrative Science*, *26*(51), 127–142. https://doi.org/10.1108/JEFAS-08-2019-0178

Akkas, E., & Asutay, M. (2023). The impact of intellectual capital formation and knowledge economy on banking performance: a case study of GCC's conventional and Islamic banks. *Journal of Financial Reporting and Accounting*, *21*(5), 1149–1170. https://doi.org/10.1108/JFRA-08-2021-0251

Al-Musali, M. A., & Ku Ismail, K. N. I. (2016). Cross-Country Comparison of Intellectual Capital Performance and Its Impact on Financial Performance of Commercial Banks in GCC Countries. *International Journal of Islamic and Middle Eastern Finance and Management*, *9*(4), 512–531.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Bechtel, R. (2007). Calculating Human Capital : The Market Based Valuation of the Human Resource. *German Journal of Research in Human Resouces Management*, *21*(3), 206–231.

Bontis, N., William Chua Chong, K., & Richardson, S. (2000). Intellectual capital and business performance in Malaysian industries. *Journal of Intellectual Capital*, *1*(1), 85–100. https://doi.org/10.1108/14691930010324188

Chandra, B., & Agnes. (2021). Pengaruh intellectual capital terhadap kinerja perusahaan pada perusahaan di indonesia. *Akuntabel*, *18*(3), 2021–2399. http://journal.feb.unmul.ac.id/index.php/AKUNTABEL

Chowdhury, L. A. M., Rana, T., & Azim, M. I. (2019). Intellectual capital efficiency and organisational performance: In the context of the pharmaceutical industry in Bangladesh. *Journal of Intellectual Capital*, *20*(6), 784–806. https://doi.org/10.1108/JIC-10-2018-0171

Cisneros, M. A. I., & Hernandez-Perlines, F. (2018). Intellectual capital and Organization performance in the manufacturing sector of Mexico. *Management Decision*, *56*(8), 1818–1834. https://doi.org/10.1108/MD-10-2017-0946

de Brentani, U., & Kleinschmidt, E. J. (2004). Corporate Culture and Commitment: Impact on Performance of International. *The Journal of Product Innovation Management*, *21*(9), 309–333.

F-Jardón, C. M., & Martos, M. S. (2009). Intellectual capital and performance in wood industries of Argentina. *Journal of Intellectual Capital*, *10*(4), 600–616. https://doi.org/10.1108/14691930910996670

Faozan, A., Syah, T. A., Kusuma, H., & Adawiyah, W. R. (2023). Good Corporate Governance and Moderating the Influence of Intellectual Capital on the Financial Performance: the Study of the Islamic Banking Industry. *Corporate and Business Strategy Review*, *4*(2 Special Issue), 225–237. https://doi.org/10.22495/cbsrv4i2siart2

Hamdan, A. M., Buallay, A. M., & Alareeni, B. A. (2017). The Moderating Role of Corporate Governance on The Relationship between Intellectual Capital Efficiency and Firm's Performance: Evidence from Saudi Arabia. *International Journal of Learning and Intellectual Capital*, *14*(4), 295–318.

Hamel, G. (1998). *Strategic Flexibility : Managing in a Turbulent Economy*. John Wiley and Sons, Chichester.

Hanafi, M., & Halim, A. (2016). *Analisis Laporan Keuangan* (Edisi Keli). UPP STIM YKPN Yogyakarta.

Haris, M., Yao, H. X., Tariq, G., Malik, A., & Javaid, H. M. (2019). Intellectual Capital

Performance and Profitability of Banks: Evidence from Pakistan. *Journal of Risk and Financial Management*, *12*(2), 1–26. https://doi.org/10.3390/jrfm12020056

Ismail, K. N. I. K., & Karem, M. A. (2011). Intellectual capital and the financial performance of banks in Bahrain. *Journal of Business Management and Accounting*, *1*(1), 63–77.

Kalkan, A., Bozkurt, Ö. Ç., & Arman, M. (2014). The Impacts of Intellectual Capital, Innovation and Organizational Strategy on Firm Performance. *Procedia - Social and Behavioral Sciences*, *150*, 700–707. https://doi.org/10.1016/j.sbspro.2014.09.025

Khan, S. Z., Yang, Q., & Waheed, A. (2019). Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance. *Corporate Social Responsibility and Environmental Management*, *26*(2), 285–295. https://doi.org/10.1002/csr.1678

Luthans, F., & Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, *33*(2), 143–160. https://doi.org/10.1016/j.orgdyn.2004.01.003

Martín-de-castro, G., Delgado-verde, M., López-sáez, P., & Navas-lópez, J. E. (2011). *Towards "An Intellectual Capital-Based View of the Firm": Origins and Nature*. *98*(4), 649–662. https://doi.org/10.1007/sl0551-010-0644-5

Meso, P., & Smith, R. (2000). A resource-based view of organizational knowledge management systems. In *Journal of Knowledge Management* (Vol. 4, Issue 3, pp. 224–234). https://doi.org/10.1108/13673270010350020

Musibah, A. S., & Alfattani, W. S. B. W. Y. (2014). The Mediating Effect of Financial Performance on The Relationship Between Shariah Supervisory Board Effectiveness, Intellectual Capital and Corporate Social Responsibility, of Islamic Banks in Gulf Cooperation Council Countries. *Asian Social Science*, *10*(17), 139–164.

Napitupulu, R. B., Simanjuntak, T. P., Hutabarat, L., Damanik, H., Harianja, H., Sirait, R. T. M., & Tobing, C. E. R. L. (2021). Penelitian Bisnis : Teknik dan Analisa Data dengan SPSS - STATA - EVIEWS. *Madenatera*, *1*, 230. https://scholar.google.co.id/citations?view_op=view_citation&hl=id&user=T1nJQ0cAAAAJ&citation_for_view=T1nJQ0cAAAAJ:D03iK_w7-QYC

Nasirwan, N., Ridha, M. A., & Juliani, D. (2024). Does intellectual capital efficiency improve islamic banking performance? The moderating effect of islamic governance. *Journal of Accounting and Investment*, *25*(1), 193–209. https://doi.org/10.18196/jai.v25i1.20786

Nawaz, T., & Haniffa, R. (2017). Determinants of financial performance of Islamic banks: an intellectual capital perspective. *Journal of Islamic Accounting and Business Research*,

8(2), 130–142. https://doi.org/10.1108/JIABR-06-2016-0071

Nuryaman. (2015). The Influence of Intellectual Capital on The Firm's Value with The Financial Performance as Intervening Variable. *Procedia - Social and Behavioral Sciences*, *211*(September), 292–298. https://doi.org/10.1016/j.sbspro.2015.11.037

Onumah, J. M., & Duho, K. C. T. (2020). Impact of intellectual capital on bank efficiency in emerging markets : evidence from Ghana Joseph Mensah Onumah and. *Int. J. Banking, Accounting and Finance*, *11*(4), 435–460.

Osinski, M., Selig, P. M., Matos, F., & Roman, D. J. (2017). Methods of evaluation of intangible assets and intellectual capital. *Journal of Intellectual Capital*, *18*(3), 470–485. https://doi.org/10.1108/JIC-12-2016-0138

Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. John Wiley, New York.

Pulic, A. (2000). VAIC™ – An Accounting Tool for Intellectual Capital Management. *International Journal Technology Management*, *20*(5/6/7/8), 702–714.

Pulic, A. (2004). Intellectual capital – does it create or destroy value? *Measuring Business Excellence*, *8*(1), 62–68. https://doi.org/10.1108/13683040410524757

Singh, R. D., & Narwal, K. P. (2015). Intellectual capital and its consequences on company performance: A study of Indian sectors. *International Journal of Learning and Intellectual Capital*, *12*(3), 300–322.

Ugalde-Binda, N., Balbastre-Benavent, F., Canet-Giner, M. T., & Escribá-Carda, N. (2014). The Role of Intellectual Capital and Entrepreneurial Characteristics as Innovation Drivers. *Innovar*, *24*(53), 41–60. https://doi.org/10.15446/innovar.v24n53.43793

Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, *5*(2), 171–180. https://doi.org/10.4337/9781035308767.ch29

Widarjono, A. (2007). *Ekonometrika: Teori dan Aplikasi untuk Ekonomi dan Bisnis*. Yogyakarta: Ekonisia.

Youndt, M. A., & Snell, S. A. (2016). *Human Resource Configurations , Intellectual Capital , and Organizational Performance Author (s): Mark A . Youndt and Scott A . Snell Published by : Pittsburg State University Stable URL : http://www.jstor.org/stable/40604485 REFERENCES Linked reference*. *16*(3), 337–360.

This page is intentionally left blank