Social Performance of Islamic Banks in South-East Asia: Is Intellectual Capital and Sharia Supervisory Boards Matters?

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Received: 14.11.2021

Accepted: 16.12.2021

Published: 02.02.2022

DOI: 10.47750/QAS/23.186.18

Abstract

This study aimed to examine Islamic banks' social performance by considering the effect of Intellectual Capital (IC) and Shariah Supervisory Boards (SSB) aspects which are SSB educational background and SSB gender diversity. This study employed longitudinal sample of Islamic banks in South-east Asia region with a sample of 32 Islamic banks during the period 2005-2020. To test the research hypotheses, panel data regression model analysis was applied. The findings revealed that intellectual capital has a positive impact on the social performance of Islamic banks, demonstrating that greater utilization of intellectual capital leads to improved social performance. Gender diversity among SSBs also has a positive impact on social performance, according to the findings. It can be concluded that the presence of woman in Supervisory Boards could give more broad perspectives in decision-making so that social performance conducted by Islamic banks will lead to an improvement in the activity's contribution. Meanwhile, Contrary to popular belief, PhD-qualified members with research and analytical skills appear to bring no value to social performance. The control variable of bank size doesn't have effect on Islamic banks' social performance. Overall, this research contributes to a better understanding of the impact of IC and SSB governance in improving Islamic banks' social performance functions.

Keywords: Intellectual Capital (IC), Sharia Supervisory Boards, Social Performance, Islamic Banks

1. Introduction

In Southeast Asia, Islamic banking and finance have seen remarkable expansion and development, and now the region is still developing (IFSB, 2020). The Islamic financial in South-east Asia is based on IFSB report 2020 is even bigger than Asia in 2014. South-east Asia's Islamic banking assets and financial products are significantly greater than those in other parts of the world, which now in the third position of dominating area largely due to the Malaysian and followed by Indonesia and Brunei Darussalam Islamic recent financial institution advancements have allowed them to increase the number of Shariah-compliant banking assets they hold. There is still opportunity for South-east Asian countries' Islamic finance to be developed and contribute more to the region, especially in terms of performance and contribution towards south-east Asia society. Moreover, in this pandemic era that caused by the spread of Covid-19 virus, the Islamic banks could contribute more to the society.

Social performance in Islamic banks refers to the essence of social justice and responsibility (Farook et al., 2011). Haniffa & Hudaib (2007) believed that Islamic banks must be more socially aware and conscious than their traditional counterparts, as Islam emphasizes social goal. In Islamic Economics, there is a concept of comprehensive social performance measurement, called as maqasid sharia, that is intended to assist (good)

people in the world and hereafter. This idea includes financial and social performance to maximize benefits and minimize harm (mudharat) to public wellbeing (Al-Zuhaily, 1997). This is assumed to be suitable for managing and accessing the performance of Islamic financial institutions, especially Islamic banks.

Maqasid Sharia is a global concept. Over time, Muslim scholars have considered how to integrate this notion in their context. Maslahah is located as the center of Maqasid Sharia by Al-Juwaini (1028-1087 AD), followed by Al Ghazali (1058-1111) according to Mohammed & Razak (2008), Mohammed & Taib (2015), and Mulawarman & Kamayanti (2018). The idea was further expanded by Ibn As-Syur (1879-1973), who was a Maliki Mazhab Tunisian scholar, and Muhammad Abu Zhrhah (1898-1974), that divided the three dimensions of Maqasid Sharia and placed maslahah (achieve the best benefit for the interest of the ummah and avoid harm/mudharat) as the ultimate objective of maqasid sharia (Sanusi & Sohari, 2015).

If financial institutions implement maqasid sharia as a business objective, a greater benefit will be produced for the community, in particular through supporting non-consumer (enterprise) activities with the notion of profit sharing. Shinkafi & Ali (2017) stated that Islamic banks should produce goods which contribute significantly to the welfare of the society and not only the legal form. Qoyum (2018) affirms the importance of the maqasid sharia in Islamic financial product creation. Iswanaji &

Wahyudi (2017) also believe that Islamic banking activities need spread across more customers throughout the world to achieve the ideal of maqasid sharia.

Given the importance of maqasid sharia as a metric for Islamic banks' social performance in guiding business players and motivating them to promote public welfare, the goal of this study is to comprehensively investigate the elements that may contribute to its improvement.

As the need for knowledge-based resources increases its urgency for wealth determination and organizations' sustainability, the emergence of the knowledge-based economy has brought about an integral change in the current market. The economy is shifting once again to the fourth industrial revolution (industry 4.0) (Ismoyowati et al., 2020), with goods, supply chains and business models becoming more digitalized and interconnected. The digital revolution is expected to transform the sector significantly, requiring substantial investment. Currently, the new economy has enormous potentials and abilities in providing good opportunities for improving foreign competitiveness and maintaining a high pace of economic development. New economic growth has raised intellectual capital's importance (Mustapha & Abdullah, 2004). IC is a general concept that considers intelligence and learning skills as a critical component for economic development and substitutes for physical and other resources (Cohen & Vlasmas, 2013).

In today's economy, intellectual capital is essential for the competitiveness of organizations, regardless of benefit or profit. Ignorance in managing intellectual capital development can contribute to problems such as employee incompetence, low service quality, poor work processes and bad external relationships. As intellectual capital consists of intangibilities that include knowledge that the institutions use to fulfill their objectives and maximize effectivity and efficiency of the organizations, intellectual capital presence is essential to Islamic banks and financial institutions.

Intellectual capital may describe as the principal driving force for value formation in the knowledge-based economy. In other words, welfare can be obtained by an IC's presence (Hall, 2001; Lev & Zambon, 2003). RBT (Resource-based theory) notes that IC is the core value development and the strategic advantage of an organization (Barney, 1991). With the continuous competitive advantage of IC, the business would be able to deliver success and boost performance (Chen et al., 2005; Wang, 2008). Human capital (HC), relational capital (RC), and structural capital (SC) are the three elements of IC (SC). Human Capital is a key element that can improve a company's performance through development of strategic competitive advantage (Martin-de-Castro et al., 2011) Companies with high standards of education and training should promote Islamic Theory practice in IBs, to effectively contribute to and eventually to the social performance of IBs.

To achieve the expected performance of banks, in terms of social and financial, it is needed a governance mechanism. The presence of a Sharia Supervisory Board within an Islamic bank's organization is one of the main features that distinguishes it from a traditional bank. One of the most essential parts of Islamic bank corporate governance is the Sharia Supervisory Board (SSB). According to Ibrahim et al. (2004), CG encourages IBs to achieve and contribute to economic activities. Any Islamic bank should have a Sharia Supervisory Board to ensure that those who work with Islamic banks have their religious beliefs and tenets that are being met. According to AAOIFI, a Sharia Supervisory Board is an autonomous body of Islamic commercial jurisprudence specialists (Fiqh Al-mu'amalat) who have the right to attend Board of Directors meetings to authenticate and certify the religious elements of their judgments. SSB is a stakeholder with an interest in Islamic banks' social functions, such as contribution to economic

development, the society, stakeholders, and public education (Setiawan, 2009). The SSB performs both supervisory and consultative functions; it examines the activities of financial institutions to ensure that Sharia compliance is maintained and issues a fatwa (religious edict) on the validity of modern forms of investment and financing, as well as whether they are sharia compliant. The board's decisions are final.

The key objectives of the SSB include helping Islamic banks to implement Sharia-based policies and regulations. SSB also has regulatory approval for financial transactions. Then evaluate facts and records including circulars, financial and operational reports, and policies. The SSB also ensures full access to and trust in the knowledge and reports of all stakeholders of Islamic banks and the society at large. It comprises the establishment of laws on banking activity, ex ante and ex post audits of transactions and financial instruments to certify Sharia compliance which is the Sharia Supervisory Board's duties. Then calculates and pays zakat, disposes of income that is non-Sharia-compliant, advice consumers and shareholders on income distribution. Finally, the bank would publish a declaration in its annual reports indicating whether or not it operated in compliance with Sharia law. In general, the SSB's role is to make sure that IBs' activities are conforms with Sharia law's principles. As a result, the SSB's emphasis is on how the IB performs its social functions. Therefore, it is also important to examine the effect of SSB on the social performance of Islamic banking.

In addition, bank size is also concerned because it relates to the Islamic bank image in society. The larger a firm, the more visible it will be in the eyes of stakeholders. In such cases, the firm must make a concerted effort to gain the legitimacy of stakeholders in order to promote social values alignment of activities with existing societal norms of behavior. As a result, the larger the firm, the more obliged it will be to provide more precise statistics concerning social performance.

2. Literature Review

In creating value and sustainably growing companies, IC plays a key part. In accord with Resource-based theory (RBT), IC is at the heart of a company's value creation and competitive advantage. The establishment of a sustainable competitive advantage, according to RBT, is closely related to the company's capacity to efficiently administrate, assign, and deploy valuable, limited, and irreplaceable resources (Barney, 1991). Companies that use them should get a competitive advantage in the market in order to create value and reach peak performance in the future (Pratama et al., 2019).

Several previous studies have also found that the company's competitive advantage can be related to corporate social performance (Greening & Turban, 2000; Gregory et al., 2016). From the perspective of Islamic banking, previous studies (Nawaz & Haniffa, 2017; Ousama & Fatima, 2015; Setianto & Sukmana, 2016) have shown positive impact of IC on the performance of Islamic banking. Several previous studies on the relationship between IC and company performance discovered a correlation between the two. Chen et al. (2005) discovered IC's corporate performance has a beneficial influence and may be a consequence of future financial performances. Meanwhile, Clarke et al. (2011) show that IC has a direct correlation with business performance. According to certain other research, IC has a positive impact with company performance (Tan et al., 2007; Ulu et al., 2008). The following is the hypothesis presented in this study based on the prior description:

H1: Intellectual Capital has a positive effect on Social Performance of South-east Asia Islamic banks

Referring to Rahman & Bukair (2013), the upper echelons theory is extended to explain the SSB educational background's impact on IBs performance. Experts have studied demographic

characteristics and performance of upper echelons. In his study of market share and profit growth in the USA, Hambrick et al. (1996) showed that an average degree of education for top management team members has a positive effect. Cheng et al. (2010) demonstrated in the Chinese context that the board's education degree is favorably related to seven success metrics: EPS changes, earnings per share, ROA, ROA changes, abnormal cumulative returns, total returns, and market-to-book ratios. Secondly, a number of previous literature studies examine the association between the characteristics of mutual fund managers and their performances. Golec (1996) provides observational evidence that managers of MBAs are likely to have higher performance funds. Few research also look at the effect on the business success of the CEO's educational background. Jalbert et al. (2002) found a survey of Forbes 800 firms to have a good ROA-related image for the CEO graduate school.

Finally, it is expected that the education degree would affect human knowledge and understanding. Knowledge such as Islamic law, economy, finance, and accounting practice is required to supervise the Islamic banking industry (Rahman & Bukair, 2013). The SSB should have skills, know-how and experience in the fields of shariah and accounting, as well as finance, which is important, according to the Bank of Indonesian regulations. The banks can not only address sharia issues, but also the economic challenges of highly qualified SSB members (Rahman & Bukair, 2013). SSB members with a post-graduate degree in economics and business would also be better at supervising IB performance, including social performance (Almutairi & Quttainah, 2017; Farook et al., 2011). Therefore, from the explanation above, the hypothesis proposed is as follow:

H2: Sharia Supervisory Boards Educational Background has a positive effect on Social Performance of Islamic banks

Because of the unique characteristics of its members, the substantial literature on the board of Directors has shown that board diversity may improve an organization's performance (Adams & Ferreira, 2009; Carter et al., 2003; Erhardt et al., 2003). A diverse board may help increase performance by contributing to high-quality decision-making, creativity and innovation, and problem-solving abilities (Westphal & Milton, 2000). In empirical research, gender diversity as one component of board diversity has gotten a lot of attention.

Female directors have a different attitude, communication style, academic background, professional experience, and competency than male directors (Liao et al., 2015). The board of directors' diversity may contribute to a broader perspective in decision-making. Women are also more diligent (Nielsen & Huse, 2010), more involved and dedicated (Adams & Ferreira, 2009), more caring, benevolent, and less self-interested (Carter et al., 2003; Cox & Blake, 1991; Liao et al., 2015), and less power-oriented and risk-averse than their male counterparts (Adams & Funk, 2012).

Previous research (e.g. Campbell & Minguez-Vera, 2008; Krishnan & Park, 2005; Nguyen et al., 2015) has found a positive association between gender diversity and organizational performance. Despite this, the relationship remains inconclusive. Gender diversity has a positive influence on performance when corporate governance is bad, according to recent research, since women provide the Board with additional oversight (Adams & Ferreira, 2009; Gul et al., 2011). The subject of gender diversity, on the other hand, was widely argued in the Board of Directors, but it has yet to be addressed by the Sharia Board. Grassa (2016) recently examined the effects of women's presence on the Sharia Board and the credit ratings of Islamic banks, but found no relation between them. In the setting of SSBs, the women board members could be relied upon the sharia operation carried out by the banks and the conformance

of banks with the Sharia concept to provide a better social performance for the Islamic Bank. Based on the description above, the hypothesis proposed in this study is as follows:

H3: Sharia Supervisory Boards Gender Diversity has a positive effect on Social Performance of Islamic banks

One of the variables used to explain the diversity in annual report reporting is the firm size (Syahierah & Larasati, 2019). The larger the firm size, the bigger the availability of the company to investors in decision-making in the company (Siregar & Utama, 2006). The number of shareholders determines if the firm is required to provide more information as a result of shareholder requests because they feel corporations have the capacity to serve the broader community, environment, and mankind (Stoll, 2008).

The firm with a significant size indicates that it is already at the top or has attained "maturity." It signifies that the firm has a positive cash flow and is thought to have a solid long-term potential. Furthermore, the firm functions in a more steady and lucrative manner as compared to organizations with a little total asset since it is able to nurture asset effectively and efficiently (Rifan et al., 2015). The larger a corporation, the more prominent it will be in the eyes of stakeholders. In such circumstances, the corporation must make a stronger effort to obtain the legitimacy of stakeholders in order to promote social values alignment of actions with existing societal standards of behavior. As a result, the larger the corporation, the more concerned it will be to give more detailed information (Fitriati et al., 2020), especially about social performance. Based on the description above, the hypothesis proposed in this study is as follows:

H4: The control variable of Islamic bank size has a positive effect on Social Performance of Islamic banks

3. Methodology

3.1 Data and Sample

This research relies on secondary data. The data for this study was taken straight from each Islamic bank's annual report, which was collected from their websites. The data gathering approach employed in this study was documented using a pooled unbalanced panel, which means that all available samples were utilized, or the census method. However, the number of years is not balanced for all companies. The years of observation in this study started from 2005 to 2020. The companies studied in this study were part of the sharia banking industry in Southeast Asia. The full-fledged Islamic banks will be employed in this research. There are 32 Islamic banks that are available as samples.

3.2 Variables

3.2.1 Independent Variables

Intellectual Capital

Ulum (2013) created iB-VAIC, which is based on Pulic's VAIC (2000, 2004). The advantages of this VAIC method, according to Firer & Williams (2003), include providing VAIC with a consistent and standardized measurement base to enable efficient analytical comparison between companies and countries, based on the audited data contained in the financial statements, making calculations more objective. However, Pulic's VAIC was developed to measure companies' IC performance with common types of transactions in industrial companies. Meanwhile, Islamic banking has its own types of transactions that are relatively different from general/conventional banking. Ulum (2013) established thus an Islamic Banking (iB-VAIC) performance assessment

methodology, that is utilized to monitor IC in Islamic banking organizations. The accounts in the financial statements of the Islamic banks have been identified using financial reporting data, reporting standards and relevant rules relating to Islamic banking to create an iB-VAIC model. iB-VAIC model is also proven to be able to use as the measurement of IC in Islamic banks as it is have already used in several previous research (e.g. Nurhidayat & Syarief, 2020; Pratiwi & Kadry, 2015a; Rizkyanti et al., 2020; Syah & Fauzan, 2020). The following is an iB-VAIC calculation (Ulum, 2013):

$$iB-VAIC = iB-VACA + iB-VAHU + iB-STVA$$

Where:

iB-VAIC = Value added intellectual coefficient
iB-VACA = VA / CE; human capital efficiency

coefficient
iB-VAHU = VA / HC; structural capital efficiency
coefficient

iB-STVA = SC / VA; the capital efficiency
coefficient is used

VA = OUT – IN. VA can also be calculated by the formulation: OP + EC + D + A; VA is the calculation of output (OUT) which is calculated from the total income minus the input (IN) which is calculated from operating expenses and non-operating expenses, except for personnel/employee expenses. While, OP is operating profit; EC is the cost of employees; D is Depreciation, and A is Amortization.

HC = employee expenses

SC = iB-VA – HC; structural capital

CE = available employed funds (total equity)

Sharia Supervisory Boards Educational Background

According to the regulation of Bank Indonesia (2009), SSB members must have a competency that related to the knowledge and experience in the field of sharia muamalah and the field of banking and finance. Refers to the research from Nomran et al. (2018) and Nugraheni (2018), The SSB educational qualification is measured by the proportion of the SSB members with a PhD degree compared to total members

of SSB. The data that is required to measure SSB Educational Background is available at the annual report of each Islamic banks. The following is the formula to calculate SSB Educational Background:

$$\text{SSB Educational Background} = \frac{\text{SSB members with a Ph.D degree}}{\text{total members of SSB}}$$

Sharia Supervisory Boards Gender Diversity

Gender diversity is determined by dividing the number of female members of Sharia Supervisory Boards with the total number of Sharia advisors in SSB of each bank in each year (Ramly et al., 2017). The data that is required to measure SSB gender diversity is available at the annual report of each Islamic banks. The following is the formula to calculate SSB gender diversity:

$$\text{SSB Gender Diversity} = \frac{\text{female members of SSB}}{\text{total members of SSB}}$$

3.2.2 Dependent Variables

Social Performance

Social performance in IBs relates to the essential aspects of responsibility and social justice (Farook et al., 2011). The notion of complete evaluation of social performance in Islamic economics, known as maqasid sharia, seeks to produce good (benefit) for human beings in the world. This idea includes financial and social performance to maximize benefits and minimize harm to create public welfare (Al-Zuhaili, 1997).

Social performance is measured using the performance ratio of Maqasid Sharia established by Mohammed & Razak (2008) and Mohammed & Taib (2015). They were developing the performance ratio of Maqasid Sharia based on al-Maqasid theory of Abu Zahrah (1997) who is a renowned intellectual and expert on Islamic law from Egypt since it is wide-ranging and inclusive of sharia goals. The performance ratio of the Maqasid Sharia is a metric to determine how companies implement all the maqasid targets that make up Abu Zaharah's theory, namely Tahdhib al-Fard (Educating the individual), Iqamah al-'Adl (Establishing justice), and Jalb al-Maslahah (Promotion of public interest).

Objectives (Concepts)	Dimensions	Elements	Performance Ratios	Sources of Data
Individual Education	D1. Knowledge Advancement	E1. Grant for Education	R1. Scholarship or Grant for Education / Total Expense	Annual Report
		E2. Research	R2. Expense for Research / Total Expenses	Annual Report
	D2. Improving and instilling new skills	E3. Training Given	R3. Expense For Training / Total Expense	Annual Report
	D3. Raising Islamic banking awareness	E4. Publicity Exposure	R4. Expense For Publicity / Total expense	Annual Report
Establishing Justice	D4. Equitable or Fair returns	E5. Equitable or Fair Returns	R5. Profit Equalization Reserves (PER) /Net or Investment Incomes	Annual Report
	D5. cheap or low-cost goods and services	E6. Distribution of functions	R6. Mudarabah modes and Musharakah / Total Investments	Annual Report
	D6. Removal of undesirable characteristics that contribute to inequity	E7. Interest-free products	R7. Interest-free incomes /Total income	Annual Report
Maslahah	D7. Profitabilities of the bank	E8. Profits ratios	R8. Net income/Total asset	Annual Report
	D8. income and wealth Redistribution	E9. personal income	R9. Zakat paid/Net Assets	Annual Report
	D9. Investments in crucial real sectors	E10. Investments ratio in real sector	R10. Investments in real economic sector/Total Investments	Annual Report

Table 1: Operationalization of Maqasid Sharia Objectives in Islamic Banking

GENERAL MANAGEMENT

Objectives	Average Weight (%)	Elements	Average Weight (%)
01. Education (Tahdhib al-Fard')	30	E1. Grant for Education	24
		E2. Research	27
		E3. Training Given	26
		E4. Publicity Exposure	23
		Total	100
02. Justice (Al-'Adl')	41	E5. Equitable or Fair Returns	30
		E6. Distribution of functions	32
		E7. Interest-free products	38
		Total	100
03. Public Interest (Al-Maslaha)	29	E8. Profits ratios	33
		E9. personal income	30
		E10. Investments ratio in real sector	37
		Total	100
Total	100		

Table 2: Average Weights for The Three Objectives and Ten Elements of Maqasid Sharia

3.2.3 Control Variables

Bank Size

Following Baklouti (2020), this study will be using control variable to take into account differences within the bank's specific characteristics, which is bank size. The control variable was chosen because the control variable also affects performance. Bank size can be reflected in the value of assets owned by the bank. The large amount of assets reflects that the bank's activities also increase, along with the increase in bank activity, the bank's performance will also increase. Thus, it can be concluded that company size has a positive effect on bank performance (Khrwish & Al-Sa'di, 2011). Bank size is measured using the bank's total assets at year t, then the natural logarithm is calculated.

3.3 Analysis techniques

This study employed the panel data regression model analysis. According to Gujarati & Porter (2009), research that uses panel data should be tested with panel data regression models. The panel data analysis consists of the pool ordinary least square model regression, fixed effects model, and random effects model. In this study, The Breusch and Pagan Lagrangian multiplier test was used to test the pool ordinary least square model regression model versus the random effect regression model. Meanwhile, The likelihood test was used to test the fixed effects model versus the pool ordinary least square model regression model and the Hausman test was used to find the panel data regression model that was the best appropriation between the fixed effect and the random effect regression.

In this study, one equation model was used to evaluate the assumptions. Model (1) is used to examine the IC effect towards social performance, and also examine the effect of Sharia Supervisory Boards Activities that is proxied by Shariah Supervisory Boards Educational Background and Shariah Supervisory Boards Gender Diversity towards social performance. The following is the model used to carry out testing in this study:

Model 1. The Effect of IC, SSB Educational Background, and

SSB Gender Diversity on Social Performance

$$SP = \alpha + \beta_1 iBVAIC + \beta_2 SSB Edu + \beta_3 SSB Gender + \beta_4 BankSize + \varepsilon_t \quad (1)$$

Where:

SP : Social Performance Variable

IC : iB-VAIC is Islamic Banking Value Added Intellectual Coefficient as the proxy for Intellectual Capital Variable

SSBEdu : Sharia Supervisory Boards Educational Background

SSBGender : Sharia Supervisory Boards Gender Diversity

BankSize : BankSize is the control variable in this study which measured by the natural logarithms of the banks' total assets

ε_{it} : error terms

4. Results And Discussion

4.1 Descriptive Statistics

Descriptive statistics may be used to obtain an overview of the main value distribution of the mean. The standard deviation value can be considered as an indicator of data dispersion. A smaller standard deviation suggests that the data are closer towards the mean value. The descriptive statistics of the variables employed in this research are shown in Table 3.

The SP (Social performance) variable has a mean value of 0.1443658. It means that the average ability of Islamic Banks in carrying out their social performance is 14.43% of the total social performance indicators. Meanwhile, the IC (Intellectual Capital) variable has a mean value of 12.52908. On the other side, the SSB educational background average value of 0.6024039 means that Islamic banks SSB educational background are mostly Ph.D. holders or above (professors) which amounted to 60.24% of the total SSB. The SSB gender diversity average value of 0.107065 means that Islamic banks SSB members who are woman are 10.70% in average of the SSB members. Meanwhile, bank size as the control variable has a mean value of 23.4568. Overall, the descriptive statistics of each variable can be seen in Table 3 below.

Variable	Mean	Std. Dev.	Min	Max
SP	0.1443658	0.0930792	0.000277	0.500827
IC	12.52908	43.71408	0.025441	658.7612
SSBEdu	0.6024039	0.384459	0	1
SSBGender	0.107065	0.1825408	0	1
BankSize	23.4568	4.1379	13.34721	30.93512

Table 3: Descriptive Statistics Results

4.2 Likelihood Test and Hausman Test Results

Panel data analysis was used to verify the relationship between intellectual capital and sharia supervisory boards monitoring activity on social performance in South-east Asia Islamic Banks. The panel data analysis consists of time series and intercepts by means of the pool ordinary least square model, fixed effects model, and random effects model (Baltagi,

2011; Gujarati & Porter, 2009; Longhi & Nandi, 2015). The Breusch and Pagan Lagrangian multiplier test was used to test the pool ordinary least square regression model versus the random effect regression model. Meanwhile, The likelihood test was used to test the fixed effects model versus the pool ordinary least square model and the Hausman test was used to find the panel data regression model that was the best appropriation between the fixed effect and the random effect regression.

chibar2 (01)	290.90
Prob > chibar2	0.0000

Table 4: Breusch-Pagan test

Firstly, Breusch and Pagan Lagrangian multiplier test (table 4) was used to test the pool ordinary least square regression model versus the random effect regression model. The assumptions of the hypotheses are as follows:

Null hypothesis: Pool ordinary least square model is preferred

Alternative hypothesis: Random effects model is preferred ($p < 0.05$)

Based on Table43, the value of the Breusch and Pagan Lagrangian multiplier test is equal to 290.90 with the probability

value of 0.0000. This result indicates significance ($p < 0.05$). Consequently, the null hypothesis is rejected at the 5 percent significance level. The result shows that the pool ordinary least square model is not appropriate to evaluate the effect of main independent variables which are intellectual capital, sharia supervisory boards educational background, sharia supervisory boards gender diversity, and control variable of bank size on social performance of South-east Asian Islamic Banks. This result indicates that the random effects model is preferred.

F(31, 275)	14.13
Prob > F	0.0000

Table 5: Likelihood Test Result

Secondly, the likelihood test (table 5) was used to test the fixed effects model versus the pool ordinary least square model regression. The assumptions of the hypotheses are as follows:

Null hypothesis: All dummy parameters, except for the one that has been dropped ($\mu = 0$)

Alternative hypothesis: Fixed effects model is preferred ($p < 0.05$)

Based on Table 5, the value of the likelihood test in the chi-square statistics is equal to 14.13 with the probability value of 0.0000. This result indicates significance ($p < 0.05$).

Consequently, the null hypothesis is rejected at the 5 percent significance level. The result shows that the pool ordinary least square model is not appropriate to evaluate the effect of main independent variables which are intellectual capital, sharia supervisory boards educational background, sharia supervisory boards gender diversity, and control variable of bank size on social performance of South-east Asian Islamic Banks. This result indicates that the fixed effects model is preferred, and it can be used to measure suitable valuations of slope coefficients.

chi2	10.79
Prob > chi2	0.0290

Table 6: Hausman Test Result

Third, the Hausman test was conducted to check the appropriateness of the model selection to choose the best model between the fixed effects and the random effects models. The assumptions of the hypotheses are as follows:

Null hypothesis: Random effects model is appropriate ($p > 0.05$)

Alternative hypothesis: Fixed effects model is appropriate ($p < 0.05$)

Table 6 shows that the value of the Hausman test is equal to 10.79 and the probability value is 0.0290. This result indicates significance ($p < 0.05$). Therefore, the alternative hypothesis is accepted at the 5 percent significance level. The result reports that the model for fixed effects is more appropriate to use in this situation. Based on the three tests above, therefore, this study will use fixed effects model to test the relationship between variables.

4.3 Diagnostic Tests for Heteroscedasticity and Serial Correlation

According to Baltagi (2011) and Gujarati & Porter (2009), the

diagnostic test that need to be considered first in testing using the panel data regression model are the heteroscedasticity and serial correlation tests. Tests for heteroscedasticity and serial correlation need to be carried out so that in conducting tests using the STATA software, it can adjust the commands on the software so that the appropriate command to overcome the problem of heteroscedasticity or serial correlation, or both, so that the standard error of the model will be robust against interference from these problems and the regression coefficient is not disturbed (Hoechle, 2007; Sanchez, 2012; Torres-Reyna, 2007). In addition, because collinearity has been detected automatically and the STATA software will immediately omit the variables affected by collinearity, therefore collinearity testing is not necessary.

Testing heteroscedasticity in the fixed effect model can be done using the Modified Wald Test (Baum, 2001; Torres-Reyna, 2007). Meanwhile, in the random effect model, it is using the Likelihood-ratio test (Sanchez, 2012). The model can be said to have heteroscedasticity problems if the p-value (Prob > X2) is below 0.05. For serial correlation testing, it can be done with the Wooldridge test (Drukker, 2003). The model can be said to be

contained by serial correlation if the p-value (Prob > F) is below 0.05.

After testing heteroscedasticity and serial correlation, the STATA command can then be selected which can adjust to the heteroscedasticity or serial correlation problems that occur. Hoehle (2007) and Torres-Reyna (2007) explain that if there is a heteroscedasticity problem in the fixed effect or random effect model, White's standard error can be used to make the model's standard error more resistant to heteroscedasticity. Meanwhile, in models that are affected by heteroscedasticity and serial correlation simultaneously, for the fixed effects model, Driscoll-standard Kraay's error may be overcome the problems, making the model's standard error robust to heteroscedasticity and

serial correlation disorders. Meanwhile, when the random effect model is encompassed with both of these issues, the Clustered Sandwich standard error is utilized such that the model's standard error is resistant to heteroscedasticity and serial correlation.

Table 7 shows the results of the heteroscedasticity and serial correlation tests for model (1). The findings of the heteroscedasticity and serial correlation tests were used to make the decision to use fixed effect model with Driscoll-Kraay's standard error so that the standard error of the model can be robust against heteroscedasticity and serial correlation when performing regression testing on the model equation (1).

	Model 1
Full sample	
Heteroscedasticity	
chi2	1.7e+06
Prob > chi2	0.0000
Serial correlation	
F	33.533
Prob > F	0.0000

Table 7: Heteroscedasticity and Serial Correlation Test Result

4.4 Hypothesis Test Results

Independent Variable	Dependent Variable SP			
	Coeff.	Std. Err.	t	P> t
Const	0.0832452	0.056388	1.48	0.161
IC	0.0001078	0.0000317	3.40	0.004***
SSBEdu	-0.0617255	0.0227541	-2.71	0.016**
SSBGender	0.0396416	0.0216036	1.83	0.086*
BankSize	0.0039524	0.0025746	1.54	0.146
R-squared within	0.0848			
F	52.26			
Prob > F	0.0000			
No. observation	311			

*** significant at 1%, ** significant at 5%, and * significant at 10%

Table 6: Hypothesis Test Results

The Hypothesis 1 Test's Findings

The first hypothesis is to examine whether intellectual capital (IC) has a positive impact on the social performance of Islamic banks in Southeast Asia. Table 2 summarized the findings of this study's overall hypothesis testing. Hypothesis 1 testing revealed that intellectual capital had a positive influence on social performance, with a coefficient of 0.0832452 at a 1% significance level. This indicates that the utilization of intellectual capital will lead to social performance improvement. Therefore, hypothesis 1 which stated that there is a positive effect of intellectual capital towards social performance, supported by a level of $\alpha = 1\%$.

The result of hypothesis 1 testing is consistent with the literatures. Based on RBT, in creating value and sustainably growing companies, IC plays a key role. IC is the primary core of the development of value and a competitive advantage of a firm. IC is (Barney, 1991). Some previous studies have also found that the company's competitive advantage can be related to corporate social performance (Greening & Turban, 2000; Gregory et al., 2016). From the perspective of Islamic banking, previous research (Nawaz & Haniiffa, 2017; Ousama & Fatima,

2015; Setianto & Sukmana, 2016) has found that IC has a favorable impact on Islamic banking performance.

The Hypothesis 2 Test's Findings

The second hypothesis is to examine whether Sharia Supervisory Board's educational background has a positive impact on the social performance of Islamic banks in Southeast Asia. Hypothesis 2 testing revealed that Sharia Supervisory Boards' educational background had a negative influence on social performance, with a coefficient of -0.0617255 at a 5% significance level. This means that the higher the number of Ph.D. qualified Sharia Supervisory Board members, the lower the bank's social performance will be. Therefore, hypothesis 2 which stated that there is a positive effect of Sharia Supervisory Boards educational background towards social performance of South-east Asian Islamic Bank, is not supported.

The result of hypothesis 2 testing is failed to prove the positive effect of Sharia Supervisory Boards educational background towards social performance. Contrary to popular belief, PhD-qualified team members with research and analysis abilities appear to bring no value to a company's success.

Perhaps what is required are particular expertise such as accounting and finance, as discovered by Yermack (2006), rather than just a greater degree of academic qualifications.

The Hypothesis 3 Test's Findings

The third hypothesis is to examine whether Sharia Supervisory Board's Gender Diversity has a positive impact on the social performance of Islamic banks in Southeast Asia. Hypothesis 3 testing revealed that Sharia Supervisory Boards' gender diversity had a positive influence on social performance, with a coefficient of 0.0396416 at a 10% significance level. This suggests that the greater gender diversity among sharia supervisory board members, the SSB's decision-making perspectives will be broader and better, leading to improved social performance. Therefore, hypothesis 3 which stated that there is a positive effect of Sharia Supervisory Boards gender diversity towards social performance of South-east Asian Islamic Bank, supported by a level of $\alpha = 10\%$.

The result of hypothesis 3 testing is consistent with the literatures. In empirical research, gender diversity as one aspect of board diversity has gotten a lot of attention. Female directors have a different attitude, communication style, academic background, professional experience, and competency than male directors (Liao et al., 2015). The board of directors' diversity may contribute to a broader perspective in decision-making. As a result, a board with a more varied membership will make more decisions on how Islamic banks operate and contribute to societal performance based on maqashid sharia principles.

Control Variable Test's Findings

The fourth hypothesis is to examine whether the control variable of bank size has a positive impact on the social performance of Islamic banks in Southeast Asia. Hypothesis 4 testing revealed that bank size has no effect on social performance. This suggests that the small or large size of banks did not affect to encourage or discourage the social performance of Islamic banks. Therefore, hypothesis 4 which stated that there is a positive effect of the control variable of bank size towards social performance of South-east Asian Islamic Bank, is not supported.

5. Conclusion

The effect of IC on the social performance of Islamic banks in Southeast Asia was investigated in this study. The empirical findings demonstrated that intellectual capital has a favorable impact on the social performance of Islamic banks. This indicates that intellectual capital will lead to achievement of higher social performance of banks. This imply that Islamic banks should utilize more of its IC in order to achieve more social performance and contribute more to society based on maqashid sharia principles.

This study also examined the positive effect of Sharia Supervisory Boards educational background on the Islamic banks' social performance. Meanwhile, contrary to conventional wisdom, the empirical results found Sharia Supervisory Boards educational background has a negative effect on social performance. PhD-qualified members with research and analysis abilities appear to contribute no value to social performance.

This study also examined the positive impact Sharia Supervisory Boards gender diversity on the Islamic banks' social performance. The empirical results proved that Sharia Supervisory Boards gender diversity has a positive effect on social performance. The result proved that by the presence of

woman members on the sharia supervisory boards will help giving other perspectives, skills, and expertise in helping the role of SSB to ensure the activity of IBs conforms with the values of Sharia law to perform social performance in terms of maqashid sharia principles. Sharia principles encourage the company to conduct just, fair and promote the ethical norms for all parties engaged in business transactions. In addition, this study found that the control variable of bank size did not affect banks' social performance.

For the improvement of future research, the future research could add more aspect of the sharia supervisory boards. Since the research could not prove the positive effect of educational board on the social performance of Islamic banks, maybe other aspect of sharia supervisory board will give better dimension of governance mechanism to help Islamic banks in achieving better social performance. Future research could also test the moderating effect of Sharia Supervisory Boards aspects to strengthen the effect of IC on the Islamic banks' social performance. We expect that by the presence of monitoring function from the SSB, the IC will be more utilized in contributing to social performance based on maqashid sharia principle.

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