Intellectual Capitals and Performances of Malaysian Islamic Banks

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Abstract. The study aimed to examines Islamic banks' performances in Malaysia consider the effect of Intellectual Capitals (IC) component's (human capital, structural capital, and physical capital). This study employed a longitudinal samples of Islamic's bank in Malaysia which is a leading Islamic banking industries in the south-east Asia region, with a samples of 16 banks during the periods 2006-2020. Panel datas regressions models analysis was applied to test the study research hypotheses. The findings revealed that the component of intellectual capitals (human capital, structural capital, and physical capital) has a positive impacts on the performances of Islamic banks, demonstrating that greater utilization of intellectual capital leads to improved performance of Islamic banks. Overall, this research contributes to a better understanding of the impact of IC components in improving Islamic banks' performance. This study implies that Islamic banks should be more aware of their intellectual capital resources so that the Islamic banks can maximize their performance.

Keywords: Intellectual Capitals (IC), human_capital, structural_capital, and physical_capital, Performance, Islamic Bankss

1 INTRODUCTION

Islamic banking is now expanding quickly in Malaysia. One of the factors that has contributed to the growth of the Islamic banking industry is the availability of an interest-free system. Furthermore, the government's has created new opportunities for Islamic bankings through its. However, numerous hurdles remain for the Islamic banking industry to overcome in order to realize this. Some of these problems relate to the performance of Islamic banks in comparison to mainstream banks. The significance of firm performance is to assess the efficient management of the company resources in order to create earnings and money that can be utilized to manage its operational operations.

As the need for knowledge-based resources grows in importance for wealth determination and organizational sustainability, the advent of the knowledge-based economy has resulted in a significant shift in the present market. The economy is transitioning to the industry 4.0 [1], [2], once more with goods, supply networks, and business models becoming more digitalized and networked. The digital revolution is predicted to drastically change the sector, necessitating major investment. Currently, the new economy has enormous potentials and abilities in terms of providing significant chances for enhancing foreign competitiveness and maintaining a quick rate of economic expansion. The value of intellectual capital has expanded as a result of new economic growth [3]. IC is a wide concept that considers intelligence and learning capacities to be important components of economic advancement and as substitutes for physical and other resources [4].

In current economy, intellectual capital is critical for firms' competitiveness, independent of benefit or profit. Ignorance in managing intellectual capital growth may lead to issues such as employee ineptitude, poor service quality, inefficient work procedures, and poor external connections. Because intellectual capital comprises of intangibles such as information that institutions utilize to achieve their goals and increase the effectiveness and efficiency of their organizations, the presence of intellectual capital is critical for and financial institutions' and Islamic banks'.

In the economy knowledge-based, intellectual capital may be described as the primary driving factor for value production. In other words, the presence of an IC can result in wellbeing [5], [6]. According to RBT (Resource-based theory), IC is an organization's fundamental value development and strategic advantage [7]. The firm would be able to generate success and improve performance thanks to IC's ongoing competitive advantage [8], [9]. The three elements of the IC are human capital (HC), relational capital (RC), and structural capital (SC). Human capital is a critical component that may improve a company's performance by fostering strategic competitive advantage [10]. Companies with excellent educational and training standards should encourage Islamic Theory practice in IBs in order to successfully contribute to and eventually improve IBs' social performance. Therefore, the objective of the study is to examine the relationship of intellectual capital and Islamic banks' social performance.

Based on the foregoing, it is critical to undertake study on the performance of the Islamic banks while taking intellectual capital components into account, because performance is anticipated to boost depositors', shareholders', and other stakeholders' trust and devotion to Islamic banks.

This study was undertaken on sharia banking enterprises in Malaysia between 2005 and 2020. The study used a data panel regression model, which includes fixed and random effect regression. This study adds to the firm by concentrating on the impact of intellectual components in improving IB's performance.

2. LITERATUURE REVIEW AND HYPOTHESIS DEVELOPMENT

Resources Based Theory

RBTs gives an important framework for forecasting and describing what drives a company's competitive advantages and success [11]. According to RBT, the ability of a firm to keep important, limited, and indespensable resources assets and efficiently distribute and disseminates such resources' is critical to the formation of sustained competitive advantages [7].

The core logic of this theory is founded on two essential assumptions about the firm's resources' that explains how those resources' provide a sustained competitive advantage and why some organizations can constantly perform better than any other company [12]. First, although operating in the same business, the company has a diverse range of resources [13]. According to assumptions' about this heterogeneity's of resources, certain organizations have more skill in performing specific operations since they have uniques resources [13]. Second, resource disparities will continue to remain due to the difficulty of transferring resources across enterprises (resource immobility assumption), causing the advantage of the presence of this resource heterogeneity to arise from time to time.

The four characteristics of Valuable, Rare, Imperfectly Imitable Organization (VRIO) demonstrate how much potential a resource has to provide long-term competitive advantage [12]. VRIO's four qualities are as follows:

a. Valuable
   Enterprise resources' are important when they enable organizations to design and implement strategies' that reduce companys expenses and/or raise company's income more than when such resources' are not available.
b. Rare
   Scarce resources' are those that are only owned by a few competing firms. If the resources is valuables but not rare, exporting it will result in competitives equality since others enterprises with the resources' will also be able to use it.
c. Imperfectly imitable
   Imperfectly imitable's resources' cannot be gained by duplicate or direct substitutions by enterprises who lack them.
d. Organization
   The company's resources' should be arranged in order to maximize competitive potentials. The organization's works as a customizer factors, allowing or preventing the corporation from fully realizing the benefits' inherent in those important, limited, and expensive resources to replicate.

Based on the description above, RBT believes that IC has a high potential to meet the VRIO requirements outlined above, hence providing the firm with a competitive edge. Companies may utilize a competitive edge to compete in competitive marketplaces and achieve optimal performance.

Intellectual Capital

Intellectual capital is a collection of intangible assets or intangible resources that a firm owns and uses to produce value and a competitive edge [14]. Meanwhile, intellectual capital consists of the following components [15], [16]:

a. Human capital
   Human capital in a corporation is the total of individuals' competence, knowledge, expertise, innovative capacity, attitude, dedication, wisdom, and experience. This capital reflects the knowledge capital of individuals inside an organization in order to attain certain goals.
b. Structural capital
   Intangible assets that stay in the company and enable employees to fulfill normal corporate operations and structures that support employees' efforts to create optimal intellectual performance and overall business performance are referred to as structural capital.
c. physical capital
   Physical capital, as an economic resource possessed by the corporation, is defined as the company's ability to generate products and services. Physical capital is made up of current assets and fixed assets, with current assets being regular and permanent assets used to carry out the company's operational activities and fixed assets being crucial for production activities.

Intellectual Capital and Performance of Islamic Banks

IC is critical to the development of value and the long-term prosperity of a firms. It's consistent with resource-based theory (RBT), which states that ICs is at the heart of values generation and the company's competitive advantages [7]. According to RBT, the formation of a sustainables competitives advantages is intimately related to the company's capacity to keep important, uncommon, and necessary resources assets and efficiently allocates and distributes such resources [7]. The firm that owns' it will be ables to wins the market competition with a continuous competitive edge, allowing it to subsequently develop value and achieve optimal company performance.

Previous study employing VAIC proxies to examines the links between ICs and firm performances found a relationship between ICs and company's performances. It was discovered that ICs-owned enterprises had a favorable influences on the company's market value and financial performance, and that this might be a predictor of the future financial performance[8]. Meanwhile, it demonstrate a clear relationship between the IC and the performance of firms listed on the Australian Securities Exchange[17]. Several additional studies have found evidence that IC has a good link with the performance of the organization [2], [17], [18]. Based on the explanation above, the hypothesis presented in this study as follows:

H1: Human Capital positively affects Islamic bank's performance
H2: Structural Capital positively affects Islamic bank's performance
H3: Financial Capital positively affects Islamic bank's performance

3. RESEARCH METHODS

Sample Selection and Data Sources

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. The sample of the study was Islamic banks in Malaysia with a sample of 16 full-fledged Islamic banks during the period 2005-2020.

Operational Definition and Variable Measurement

Islamic Bank's Performance, as a dependent variable. The company's financial performances is assessed using ROA (return on assets), which is computed using the following formulas [19].

$$\textbf{ROA} = \textit{Profit before tax / Average total assets}.$$

Intellectual Capital

In this study, the independent variable was intellectual capital. Pulic's VAIC iB-VAIC was developed by Ulum and is based on Pulic's VAIC [20]. [15], [16]. The advantages of this VAIC method [21], providing VAIC with an uniform and standardized measurement base, based on the audited data contained in the financial statements, will make computations more objective and enable effective analytical comparison between enterprises and nations. However, Pulic's VAIC was created to assess business performance using typical industrial company transaction patterns. Islamic banking, in contrast, has its own unique sorts of transactions that are significantly distinct from those used in conventional/general banking.. Ulum [20] established thus an Islamic Banking (iB-VAIC) performance assessment methodology, that is utilized to monitor IC in Islamic banking organizations. Using financial reporting data, reporting standards, and pertinent Islamic banking regulations, an iB-VAIC model was developed to identify the accounts in the financial statements of the Islamic banks. The iB-VAIC model has also demonstrated its suitability for use as a tool for IC measurement in Islamic banks because it has been employed in a number of earlier studies.[22], [23]. The following is an iB-VAIC calculation [20]:

$$\text{iB-VAIC} = \text{iB-VACA} + \text{iB-VAHU} + \text{iB-STVA}$$

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)

a. Human Capital Efficiency (iB-VAHU), as an independent variable. iB-VAHU is one component of iB-VAIC which represents the efficiency of human resources or their ability to apply their skills and expertise efficiently.
b. Structural Capital Efficiency (iB-STVA), as an independent variable. iB-STVA is one component of iB-VAIC which represents the efficiency of structural resources and relational resources.
c. Capital Employed Efficiency (iB-VACA), as an independent variable. iB-VACA is one component of iB-VAIC which represents the efficient use of physical and financial resources.

Analysis techniques

This study's applies panels data regressions model analysis, namely fixed effects or random effects regressions. The Hausman tests is used in this study to determine which panels data regressions models is better suited between fixed effects and random effects regressions.

One equations model was used in this research to test the hypothesis. The influence of intellectual capital on performance is examined using Model (1) and its components as proxies (human capital, structural capital, and physical capital). The testing in this study was carried out using the following model.:

Model 1. Effect of IC on Performance

$$ROA = \beta_0 + \beta_1 iBVAHU + \beta_2 iBSTVA + \beta_3 iBVACA + \varepsilon_t$$

4. RESULT AND DISCUSSION

Descriptive Statistics

To understand the principal value distribution of the data, descriptive statistics can be used (mean). Data dispersion can be calculated using the standard deviation value. The lower the standard deviation number, the closer the data is to the average data value. The descriptive statistics for the variables utilized in this research are shown in Table 1.

The mean value of the ROA variable is 0.0151323. Meanwhile, the VAHU, or human capital variable, has a mean value of 1205.701. STVA, or structural capital, has a mean value of 0.467275. Meanwhile, the VACA, or physical capital variable, has a mean value of 2.439527. On the other hand, the mean value of the control variable firmsize is 23.56373. Table 1 shows the descriptive statistics for each variable.

Table 1. Descriptive Statistics Results

Variable	Mean	Std. Dev.	Min	Max
ROA	0.0151323	0.0324315	-0.2577872	0.1946318
VAHU	1205.701	16621.04	-26.17195	248727.7
STVA	0.467275	4.347099	-64.0767	2.295219
VACA	2.439527	30.60678	-0.4019362	458.2112
FIRMSIZE	23.56373	1.218627	19.49013	26.26543

Hypothesis Test Results

Table 2. Hypothesis Test Results

	Dependent Variable
Independent Variable	ROA
Const	-0.0754338
	(-0.39)
VAHU	3.70e-07
	(10.68)***
STVA	0.0001371
	(3.04)***
VACA	0.0000141
	(2.32)***
FIRMSIZE	0.0037833

	(0.47)
R² Within	0.0682
Wald chi²	903.01
Prob > chi²	0.0000***

Note: *** significant at 1%; ** significant at 5%

The Result of Hypothesis 1 Test

The purpose of Hypothesis 1 testing is to determine whether human capital has a beneficial influence on Malaysia Islamic Bank's performance. Table 2 displayed the findings of this study's overall hypothesis testing. Human capital has a positive influence on performance, according to hypothesis 1 testing, with a coefficient of 3.70e-07 at a 1% significance level. This implies that the more the utilization of human capital efficiency, the better the performance. As a result, hypothesis 1 (that there is a positive influence of human capital on performance) is supported with a confidence level of 99 percent.

The results of Hypothesis 1 testing show that the influence of human capital leads to improved performance for Islamic banks. Human capital may be increased if the organization can effectively use and grow its employees' knowledge, competence, and abilities. Having skilled and competent people may boost a company's success [24].

The Result of Hypothesis 2 Test

The second hypothesis is to see if structural capital has a favorable influence on Malaysia Islamic Bank's performance. Hypothesis 2 testing revealed that structural capital had a positive influence on performance, with a coefficient of 0.0001371 at a 1% significance level. This suggests that the greater the structural capital efficiency, the better the performance. As a result, hypothesis 2 (that structural capital has a positive influence on performance) is supported with a confidence level of 99 percent.

The results of Hypothesis 2 testing show that the influence of structural capital leads to improved performance for Islamic banks. Structural capital is a firm's capacity to achieve optimal performance through routines, infrastructure, information systems, processes, and corporate organizational culture [24]. If the company's management is capable of managing structural capital effectively, the company's performance will increase [25].

The Result of Hypothesis 3 Test

The third hypothesis is being tested to see if physical capital has a favorable influence on Malaysia Islamic Bank's performance. Physical capital has a positive influence on performance, according to hypothesis 3 testing, with a coefficient of 0.0000141 at a 1% significance level. This suggests that the greater the physical capital efficiency, the better the performance. As a result, hypothesis 3 (that structural capital has a positive influence on performance) is supported with a confidence level of 99 percent.

The results of Hypothesis 3 testing show that the influence of physical capital leads to improved performance for Islamic banks. Physical capital refers to a company's capacity to manage resources in the form of capital assets, which, when effectively managed, increase the company's financial performance. The better a corporation controls its intellectual capital's three components, the better it manages its assets [25].

5. CONCLUSIONS

This study investigates the favorable benefits of human capital on the performance's of Islamic banks in Malaysia. This studys also found that structural and physical capital had a good impacts on the performance of Islamic banks. Overall, this study adds to a better understandings of the roles of IC components in enhancing the performance of Islamic banks. According to the findings of this study, Islamic banks should be more conscious of their intellectual capitals components, which include human capitals, structural capitals, and physical capitals, in order to enhance their performance.

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