The Effect of Intellectual Capital on Financial Performance with Corporate Social Responsibility as Moderating Variable: Studies on Islamic Commercial Banks

Renanta Ivana Nanda Rusmawan¹⁺, Iwan Setiawan², Ruhadi²

¹Master of Applied Islamic Finance and Banking, Politeknik Negeri Bandung, Bandung, Indonesia
²Department of Accounting, Politeknik Negeri Bandung, Bandung, Indonesia

Research article
Received 5 March 2023; Accepted 27 March 2023


*Corresponding author: renantaivana20@gmail.com

Abstract: This study aims to determine the influence of Intellectual Capital and the moderating of Corporate Social Responsibility to financial performance of Islamic banks. The data in this study used secondary data using the IB reports for the years 2010-2021. The independent variable used is IC as measured by Human Capital Efficiency, Structural Capital Efficiency, and Capital Employed Efficiency, and Corporate Social Responsibility as moderating variable. While the dependent variable used is ROA and ROE as the measure of financial performance. This study uses multiple linear regression analysis with data panel models. The results showed that IC as measured by HCE has positive and no significant effect, SCE has positive and significant effect, and CEE has negative and significant effect on financial performance. and as a moderating variable, CSR negatively weakens the relationship between HCE and financial performance, while CSR positively strengthens the relationship between CEE and financial performance.

Keywords: intellectual capital; human capital efficiency; structural capital efficiency; capital employed efficiency; corporate social responsibility; financial performance.

1. Introduction

Islamic banking has experienced rapid development in Indonesia. Since the development of the Islamic banking system in Indonesia, in two decades the development of the national Islamic banking industry has progressed. This progress includes institutional aspects, market share, regulatory instruments, monitoring systems and public literacy of Islamic financial services (Cahyani, 2016). The development of Islamic banks can be measured by looking at the bank's financial performance, one of the ratios that can be used to measure financial performance is by looking at the profitability ratio. Profitability ratios in banking can be measured using Return On Assets (ROA) and Return On Equity (ROE).

When viewed based on the Islamic Finance Development Indicator (IFDI) that there are several components for measuring the ranking of Islamic Commercial Banks in the world including Quantitative Development, Knowledge, Governance, CSR, and Awareness. The higher the rating of the bank, of course, indicates the better financial performance as well. If you look at some of these components the highest ranking in the rating of Islamic commercial banks in Indonesia includes knowledge, based on this it is suspected that knowledge is a
variable that can positively affect financial performance. Meanwhile, if you look at the component that has the lowest rating, CSR, the implementation of CSR that has not been implemented optimally can be a moderating variable for several other components in influencing the financial performance of Islamic commercial banks. Business competition in the banking sector triggers the management of Islamic banks to focus more on the strategies implemented to gain competitive advantage. Since the 1990s, attention to the practice of managing intangible assets has increased dramatically (Harrison & Sullivan, 2000). One of the approaches used in the assessment and measurement of intangible assets is Intellectual Capital (IC).

![Figure 1. Country Ranking on the Islamic Finance Development Indicator (IFDI)](image)

The success of a business depends on the ability to use knowledge. Knowledge as a form of intangible asset becomes a new source of financial performance of a company (Puliic, 2004). The shift from physically based economics to knowledge-based economics has challenged many researchers to find new ways of measuring intangible assets, including intellectual capital. Intellectual Capital does not only act as a driving force and key resource in value creation and sustainable corporate balancing but also as a source of innovation and a key in profit growth (Chowdhury, 2018).

The balance of knowledge-based economics encourages companies to change their strategic strategies to emerge and survive in the intense global market competition. This economic revolution balances awareness of the importance of Intellectual Capital (IC) as the core asset of a company that must be managed better (Seirrat, 2011). Bearing in mind the intangible nature of intellectual capital, the determination along with the measurement of intellectual capital is seen from the three important components, namely human capital efficiency, structural capital efficiency, and capital employee efficiency (Soeiwarno & Bambang Tjahjadii, 20 20). The importance of Intellectual Capital in the performance and competitiveness of companies raises the need for effective management. Therefore, the
business strategy adopted by the company will become the basis for management to improve performance and achieve company goals.

Intellectual Capital is an intangible asset that can be used as a strategy for Islamic banks in achieving competitive advantage in the Islamic banking industry. However, the influence of intellectual capital on financial performance can be stronger if it is moderated by Corporate Social Responsibility (CSR) as demonstrated in the last few decades CSR has also become a strategy by banking management in meeting the demands of stakeholders and for this increase the value of corporations (Robinson, 2011). From an Islamic perspective, CSR represents accountability to God (Allah) and then accountability to society/stakeholders (Eil-Halaby & Hussaineiy, 2015). Therefore, Islamic banks can be seen as institutions that promote social justice and social responsibility. In the context of Islam, social responsibility represents the concept of brotherhood "ukhuwah" to one another. Thus, social management is very important for Islamic banks and can be described as a bank that has social responsibility ((Haniiffa & Hudaiib, 2007); (Al-Mubarak & Osmanii, 2010); (Hasan, 2011)). Consequently, as a sharia bank operating according to sharia principles, they must be more active in promoting CSR and be accountable to stakeholders and society in general. Based on the principle of accountability, Islamic banks are required to disclose all information that reflects their identity (Bayoud, 2012). Islamic banks are expected to disclose CSR information in a concise, honest and easy-to-understand way to meet the needs of their stakeholders. The case study conducted by Turcsanyii & Siisayei (2013) highlighted integrated sustainability and CSR in corporate strategic planning indirectly increasing financial performance in the long term.

Based on the presentation that has been submitted indicating that the financial performance of Islamic Commercial Banks in Indonesia has not yet been stable, it will decrease if compared to other countries, a strategy is needed so that Islamic Commercial Banks can be more stable and able to compete with Islamic Commercial Banks in other countries, one of the strategy what can be done is by increasing intellectual capital. However, based on several previous studies showing that the relationship between Intellectual Capital and financial performance is not always consistent, some studies indicate that Intellectual Capital shows a positive effect on financial performance, while some studies show an insignificant impact it's ok. Therefore, in this study, using the Corporate Social Responsibility variable as a moderation variable is expected to strengthen the relationship between Intellectual Capital and the financial performance of Islamic banks.

2. Literature Review and Hypothesis Development

2.1. Stakeholder’s Theory

Stakeholders have an important meaning in a company. According to Ulum (2009) explains that when managers can manage the organization optimally, especially to create value for the company, it means that managers have fulfilled the ethical aspects of stakeholder theory. Value creation is by utilizing all the potential of the company, both human capital, physical capital, and structural capital. Good management of all this potential will create added value for the company which can then drive the company's financial performance for the benefit of stakeholders.

2.2. Legitimacy Theory

Organizational legitimacy can be seen as something given by society to companies and something that companies want or seek from society that will provide benefits or become potential resources for companies to survive (Donovan, 2002). However, what society expects
is not always the same as what a company wants. The difference between company value and community value is often interpreted as a "legitimacy gap" which will affect the company's ability to continue its business activities. If the company's operations (corporate activities) are in accordance with society's expectations, there will be conformity including conformity to social values and norms and. According to Donovan (2002) the legitimacy gap can be reduced by increasing conformity to company operations and community expectations, one of which is by increasing social responsibility.

2.3. Financial Performance

Bank performance is an illustration of the achievements of the bank in its operations, both in terms of marketing, finance, fundraising and distribution, as well as technology and human resources. A bank's financial performance is a picture of a bank's financial condition in a certain period, both in terms of aspects of raising funds and channeling funds, which are usually measured by indicators of capital adequacy, liquidity, and bank profitability (Jumingan, 2006). Several ratios are used to determine the effect on the performance of Islamic banking is profitability. In this case the performance of Islamic banking using profitability can be seen from the Return on Assets (ROA) and Return On Equity (ROE).

2.4. Intellectual Capital

According to Widyaningrum (2007), intellectual capital is a resource in the form of knowledge that is shared by the company which will ultimately generate profits in the future for the company. An employee who has expertise and is committed to achieving organizational goals is the greatest asset of the company. The expertise and commitment attached to employees can be seen from the way they think and work, and how the organization creates policies and systems for work (Ulrich, 1998). Intellectual capital consists of human capital and structural capital, and to achieve value creation requires employed capital (Pulic, 1999). Intellectual Capital, which is an intellectual asset, is something that is not easy to measure, because of that then the concept of Value-Added Intellectual Capital (VAIC) emerged which became a solution to measure and report intellectual capital with reference to the company's financial information. The VAIC method is designed to present information about the value creation efficiency of tangible assets and intangible assets owned by companies. VAIC is an instrument for measuring the performance of a company's intellectual capital. Following this are three benchmarks, namely Human Capital Efficiency, Structural Capital Efficiency, and Capital Employed Efficiency.

2.5. Corporate Social Responsibility

CSR is "an association in which the company wants to integrate social awareness in the company's business operations and in the company's interaction with stakeholders based on voluntary and partnership principles". Furthermore, Untung (2008) defines CSR as "the company's commitment to participate in contributing to sustainable economic balance by paying attention to corporate social responsibility and focusing on the balance between economic, social and environmental aspects".

Chahal and Sharma (2006) stated that CSR programs related to social aspects are the most recent aspects of the other aspects and are a major concern for several companies today. The social aspect means being responsible for the social impact caused by the company, either directly or indirectly. The essence of the social aspect is respect for people or respect for others. The research conducted by Yenti (2013) shows that social aspects have an impact on the
company's image, this shows that with the existence of revolving financial assistance from the company to the community around the company's environment, it can help the surrounding community in increasing welfare. The research carried out by Wijaya and Husni (2015) shows similar results, namely social aspects have an impact on corporate image, this shows that the active support given by companies in social activities has a positive influence on the environmental community around the company. entrepreneurship, because of that the community owns it positive opinion on the company's image.

The next aspect of the CSR program is the economic aspect, Chahal and Sharma (2006) the economic aspect of CSR includes the economic impact of the operational activities carried out by the company. This aspect is often misinterpreted as a company's financial problem, so this aspect is assumed to be easier to implement than the other two aspects, namely social and environmental aspects. The economic aspect does not merely report the company's financial/balance sheet, but also includes the economic impact, both directly and indirectly, on the company's operations in the local community and on parties that have an impact on other companies. The key to success from an economic aspect is the company's economic performance/financial performance. Hadi (2011) stated that the existence of companies aimed at increasing value for shareholders, such as increasing profits, share prices, dividend payments, and so on.

Mardikanto (2014) defines environmental aspects as a company's responsibility towards the environmental impacts resulting from operations and products, eliminating emissions and waste, achieving maximum efficiency efficiency and productivity depending on available resources, and reducing practices that can have a negative impact on the state and resource equit. Companies must be aware of all direct and indirect environmental aspects related to their business performance, service delivery, and product manufacturing. The environmental aspect or environmental dimension reflects where the company has the responsibility for the resulting impact on the environment of the company's operations (Mardikanto, 2014). Creating a healthy and safe environment, managing waste properly and creating environmentally friendly products are obligations that must be carried out by companies (Ulum, 2014).

The three aspects (social, economic, and environmental) in the CSR program can form opinions, opinions, evaluations, and public responses to companies that carry out the said CSR program in the environment around where the company is founded. Opinions, opinions, values, and responses formed by the public can influence the company's image.

2.6. Hypothesis

The amount of Value Added (VA) generated is the difference between the input and output received by the company. The relationship between VA and HC shows the ability of HC to create value in the company. According to Pulic (1998), salary expense is a measure of a company's human resources because the market determines salaries based on employee performance. The relationship between added value and human capital shows the ability of HC to create value for the company. Human Capital Efficiency is a measurement of a company's value added as measured by the amount of profit received compared to human capital which is measured by the amount of salary issued. If the value is positive, it means that Human Capital has greater value added, which means it will affect the company's financial performance.

Meanwhile, structural capital includes the company's ability to reach markets or hardware, software, and others that support the company. SCE can also be measured by value added and by looking at the company's long-term liabilities, in other words if the SCE value
is positive, it will increase the company's value added and can affect the company's financial performance.

The next component of measuring Intellectual Capital is Capital Employed Efficiency, which is the level of efficiency created by physical and financial capital. This shows that the higher the capital employed value of a company, the more efficient the management of intellectual capital in the form of buildings, land, equipment, or technology that is easily bought and sold in the market for the company concerned, so Capital Employed Efficiency is also one of the components that can affect the financial performance of Islamic banks.

Furthermore, in this study CSR is used as a moderating variable which is thought to strengthen the relationship between Intellectual Capital as measured by Human Capital Efficiency, Structural Capital Efficiency, and Capital Employed Efficiency on the financial performance of Islamic banks, because whether the implementation of CSR will affect the added value of the company, which value-added influences decreasing or increasing intellectual capital.

Based on the explanation above, the following hypothesis is obtained:

H1. Human Capital Efficiency (HCE) has a positive effect on the financial performance of Islamic commercial banks for the 2010-2021 period.
H2. Structural Capital Efficiency (SCE) has a positive effect on the financial performance of Islamic commercial banks for the 2010-2021 period.
H3. Capital Employed Efficiency (CCE) has a positive effect on the financial performance of Islamic commercial banks for the 2010-2021 period.
H4. Corporate Social Responsibility (CSR) positively moderates the influence of Human Capital Efficiency (HCE) on the financial performance of Islamic commercial banks for the 2010-2021 period.
H5. Corporate Social Responsibility (CSR) positively moderates the effect of Structural Capital Efficiency (SCE) on the financial performance of Islamic commercial banks for the 2010-2021 period.
H6. Corporate Social Responsibility (CSR) positively moderates the influence of Capital Employed Efficiency (CEE) on the financial performance of Islamic commercial banks for the 2010-2021 period.

3. Research Methods

This study uses a regression design with a moderating variable, namely examining the impact of several independent variables which are a measure of intellectual capital on two financial performance variables moderated by the CSR variable. This research is quantitative in nature by using data from secondary sources, namely the Annual Report of Islamic Commercial Banks published on the official website of each Islamic commercial bank for the 2010-2021 period. This research uses the panel data regression analysis method.

This study uses the population, namely all Islamic commercial banks in Indonesia during the 2010-2021 period. The sample in this study was determined using the saturated sampling method with the following criteria, namely Islamic Commercial Banks which publish an Annual Report which includes a complete financial report and social responsibility report and allows obtaining all the variables analyzed between the 2010-2021 period. Table 1 is a list of Islamic Commercial Banks that meet the sampling criteria.

<table>
<thead>
<tr>
<th>No.</th>
<th>Islamic Commercial Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>PT. Bank Aceh Syariah</td>
</tr>
<tr>
<td>2.</td>
<td>PT. BPD Nusa Tenggara Barat Syariah</td>
</tr>
<tr>
<td>3.</td>
<td>PT. Bank Muamalat Indonesia Tbk.</td>
</tr>
<tr>
<td>4.</td>
<td>PT. Bank Victoria Syariah</td>
</tr>
</tbody>
</table>
The data analysis technique that will be used in this study is panel data regression analysis. Panel data is a combination of time series and cross section data into one observation. The panel data regression test in this study uses the Eviews tool.

Furthermore, to provide a clearer picture of the independent variables and moderating variables are explained in the following table.

**Table 2. Variable Operationalization**

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Operationalization</th>
<th>Code</th>
<th>Variable Definition</th>
<th>Formula</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human Capital Efficiency</td>
<td>HCE</td>
<td>HCE is an intangible asset owned by the company in the form of intellectual abilities, creativity and innovations owned by its employees.</td>
<td>HCE = value added / human capital</td>
<td>Soewarno (2020); Widyaningrum, (2004)</td>
</tr>
<tr>
<td>2.</td>
<td>Structural Capital Efficiency</td>
<td>SCE</td>
<td>SCE includes the company's ability to reach markets or hardware, software, and others that support the company. In other words, it is a means of supporting employee performance.</td>
<td>SCE = structural capital (balance between equities and long-term liabilities) / value added</td>
<td>Erhan Akkas (2022); Widyaningrum (2004)</td>
</tr>
<tr>
<td>3.</td>
<td>Capital Employed Efficiency</td>
<td>CEE</td>
<td>CEE is an indicator of the value added that is created on the capital cultivated in the company efficiently</td>
<td>CEE = value added / capital employed</td>
<td>Soewarno (2020); Firer &amp; William (2003)</td>
</tr>
<tr>
<td>4.</td>
<td>Corporate Social Responsibility</td>
<td>CSR</td>
<td>CSR is a commitment from a business or company to be able to behave ethically and be able to contribute to sustainable economic development</td>
<td>CSR = 𝐶𝑆𝑅 = [ \sum_{i,j} x_{ij} ] / [ n_j ]</td>
<td>Harun (2020); Mohammad Hamim (2020)</td>
</tr>
</tbody>
</table>
4. Results and Discussion

Table 3. Regression Analysis Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.3642</td>
<td>4.8828</td>
<td>0.0745</td>
<td>0.9406</td>
</tr>
<tr>
<td>HCE</td>
<td>0.0009</td>
<td>0.0007</td>
<td>1.2737</td>
<td>0.2049</td>
</tr>
<tr>
<td>SCE</td>
<td>0.0144</td>
<td>0.0142</td>
<td>1.0154</td>
<td>0.3117</td>
</tr>
<tr>
<td>CEE</td>
<td>-380.2830</td>
<td>99.2623</td>
<td>-3.7303</td>
<td>0.0003</td>
</tr>
<tr>
<td>CSR</td>
<td>0.0987</td>
<td>0.1685</td>
<td>0.5860</td>
<td>0.5588</td>
</tr>
<tr>
<td>HCE_CSR</td>
<td>-4.00E</td>
<td>3.12E</td>
<td>-1.2842</td>
<td>0.2012</td>
</tr>
<tr>
<td>SCE_CSR</td>
<td>-0.0004</td>
<td>0.0005</td>
<td>-0.8622</td>
<td>0.3900</td>
</tr>
<tr>
<td>CEE_CSR</td>
<td>19.8294</td>
<td>3.9316</td>
<td>5.0435</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

4.1. The influence of Intellectual Capital on the financial performance of Islamic banks in Indonesia for the 2010-2021 period

4.1.1 Human Capital Efficiency

The research results show that Human Capital Efficiency has a positive but not significant impact on the financial performance of Islamic banks in Indonesia. This means that any increase in the Human Capital Efficiency variable will increase the financial performance variable, but the effect will not be significant. The results of this research differ from several previous studies carried out by Lubis & Ovami, 2020 where Human Capital Efficiency has a significant impact on the company's financial performance.

Based on the research results, it shows that the beautiful Human Capital Efficiency is due to the company's inability to generate income so that the burden on employees is very large. Meanwhile, high Human Capital Efficiency means that the income generated is classified as high when compared with the employee costs that must be paid. However, the high value of Human Capital Efficiency does not guarantee that the Bank will produce high profits so that Human Capital Efficiency can be said not to have a significant impact on the company's financial performance. In addition, the factors that can result in Human Capital Efficiency not being able to add value added to the company are due to a lack of utilization of the quality of human resources possessed, lack of salary and benefits provided by the company to employees, as well as a lack of motivating employees in increasing the income and profit of the entrepreneur an (Basyar, 2017).

The research results are in accordance with the research conducted by (Islamiyyah, 2015) in his research which states that Human Capital Efficiency does not have a significant effect on ROA and ROE of a company.

4.1.2 Structural Capital Efficiency

The research results show that Structural Capital Efficiency has a significant positive effect on the financial performance of Islamic banks in Indonesia. This means that any increase in the variable SCE will have a significant effect on the increase in financial performance. The results of this research differ from several previous studies conducted by Yana Eirmawati, 2018 where the research stated that Structural Capital Efficiency has no significant impact on the
company's financial performance.

Structural Capital Efficiency is the ability of the organization or company to fulfill the company's routine processes and structures that support employee efforts to produce optimal intellectual performance as well as overall business performance. An individual can have a high level of intellectual intellectuality, but if a company has a bad system and procedures then intellectual capital cannot achieve optimal performance and the existing potential cannot be utilized to the maximum. According to Chein (2005), structural capital is company property which includes innovative capital, relational capital, infrastructure, and others. Bontiis (2000) further states that Structural Capital Efficiency includes all non-human storehouses of knowledge in the company. Included in this case are databases, organizational charts, process manuals, strategies, routines, and all things that make the company's value greater than its material value. Structural capital arises from the company's processes and values, reflects the company's internal and external focus, as well as updating and balancing values for the future. With that said, structural capital is the facilities and infrastructure that support employees to create optimal performance as well as being able to have a significant impact on the company's financial performance.

The research results are in accordance with the research conducted by Veirniita, 2020, in which the research stated that Structural Capital Efficiency has a significant effect on the ROA and ROE of a company.

4.1.2 Capital Employed Efficiency

The research results show that Capital Employed Efficiency has a significant negative effect on the financial performance of Islamic banks in Indonesia. This means that any increase in the Capital Employed Efficiency variable will have a significant effect on a decrease in financial performance. The results of this research differ from some of the previous research conducted by Rasyid, 2017 where in this research it is stated that Capital Employed Efficiency has a positive influence on the company's financial performance.

The results of the study indicate that the Capital Employed Efficiency variable has a negative effect on the company's financial performance, this result indicates that Islamic banking in Indonesia has not yet been able to make use of its physical capital in a good and efficient manner. Unless there is optimal relationalization and relationship between the customer and the company, which is the same thing, it is important to remember that it can affect the good name of the company itself. The research results are in accordance with the research conducted by Seityowati, 2021 where the research stated that Capital Employed Efficiency has a negative effect on the financial performance of a company.

4.2. Moderation of Corporate Social Responsibility on the influence of Intellectual Capital on the financial performance of Islamic commercial banks for the 2010-2021 period

The measurement of intellectual capital is based on three things, namely human capital efficiency, structural capital efficiency, and capital employed efficiency. The results of the study show that the moderation of Corporate Social Responsibility on the effect of Human Capital Efficiency and Structural Capital Efficiency on financial performance is not significant, meaning that CSR has a weaker relationship between HCE and SCE with financial performance, but not significant. While the moderation of CSR on the effect of Capital Employed Efficiency on Financial Performance has a positive and significant impact. This means that CSR is significant and strengthens the relationship between CEE to financial performance. Prior to this, there has been no research related to the moderation of Corporate
Social Responsibility on the effect of HCE on the financial performance of Islamic banks.

Corporate Social Responsibility can form opinions, opinions, judgments, and public responses to companies that carry out the said Corporate Social Responsibility program in the environment around which the company is located. Opinions, opinions, values, and responses formed by the community can influence the company’s image, and of course will have a good impact on the company’s performance. Disclosure of Corporate Social Responsibility that has not been maximized can be a cause why Corporate Social Responsibility does not have a significant effect on moderating Human Capital Efficiency and Structural Capital Efficiency on the financial performance of Islamic banks in Indonesia.

5. Conclusion

This research aims to find out the influence of intellectual capital as measured by Human Capital Efficiency, Structural Capital Efficiency, and Capital Employed Efficiency as measured by Return On Assets and Return on Equity Bank Syariah in Indonesia period 2010-2021. The results of the testing that has been carried out using an analysis tool in the form of eviws, can be concluded as follows:

1) Intellectual Capital has a not significant positive effect on the financial performance of Islamic banks in Indonesia in 2010-2021 if measured by the Human Capital Efficiency variable, while it has a significant positive impact on the islamic bank's financial performance in Indonesia period 2010-2021 if measured by Structural Capital Efficiency variable, and has a significant negative effect on the financial performance of Islamic banks in Indonesia in the 2010-2021 period when measured by the Capital Capital Efficiency variable.

2) The CSR (Corporate Social Responsibility) variable moderates negatively but is not significant in the effect of HCE on the financial performance of Islamic banks in Indonesia for the 2010-2021 period, while CSR is negatively and insignificantly moderating the influence of SCE on the financial performance of Islamic banks in Indonesia for the 2010-2021 period, and CSR significantly moderates the influence of CEE on the financial performance of Islamic banks in Indonesia for the 2010-2021 period.

References


Pulic. (1999). Basic Information on VAIC.