Examining the effect of diversification, corporate governance and intellectual capital on sustainability performance

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ABSTRACT

This study aims to examine and analyze the effect of diversification, corporate governance and intellectual capital on sustainability performance, either directly or indirectly, by involving financial performance as a mediating variable. This study uses secondary data on Islamic Commercial Banks in Indonesia which are registered with the Financial Services Authority from 2011 - 2018, with a sample size of 10 Islamic banks that meet the criteria using the purposive sampling method so that 80 observations are obtained. Data is obtained from annual reports, sustainability reports and reports on the implementation of good corporate governance. The data analysis technique used SEM-PLS with the help of WarpPLS 7.0 software. The results of the study provide empirical evidence that both the quality and quantity of corporate governance, intellectual capital, and financial performance have a positive effect on sustainability performance.

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Introduction

Along with the development of the Indonesian economy and the improvement of the quality of society in the aspects of education and religiosity, it raises the desire to run a business in accordance with sharia principles. In 2008, Law Number 21 of 2008 concerning Sharia Banking was issued which defines a Sharia Bank as a Bank that carries out its business activities to provide services in payment traffic based on sharia principles. The effort to raise funds carried out by banks from the community is an effort made to empower community resources which ultimately results in personal and community welfare. This activity is carried out through savings, time deposits and current accounts and other products that use the same concept. The funds raised are then allocated to the public in the form of credit or financing which aims to improve the welfare of individuals and society as well as the country's economy through various types of products such as consumer, productive and investment financing. In addition, banks also have business activities in smoothing payment traffic such as clearing services, transfers, and others based on modern technology to provide maximum convenience and services to the public, so that efforts to improve the country's economy can be accelerated and its benefits can be felt by all people.

In line with the objectives of the Islamic economy, an Islamic bank is not only focus on commercial objectives that are reflected in achieving maximum profit, but also considers its role in providing welfare to the community. These are the roles of an Islamic bank in implementing its social functions in the framework of the sustainability performance of Islamic bank. Sustainability performance aims to address social, environmental and economic aspects as a performance of corporate management in general, and in particular corporate sustainability management (Schaltegger and Wagner, 2006). In accordance with POJK Number 51 / POJK.03 / 2017 Sustainability performance is a commitment of the bank in building a culture of sustainability and conducting outreach to all stakeholders in an effort to achieve sustainability performance by conveying in detail the company's performance in economic, social and environmental aspects integrated into the product portfolio or banking services.

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Public companies in Indonesia have practiced a lot of corporate social responsibility disclosure. In general, these practices are mostly carried out by manufacture and mine companies, but along with the global trend of corporate social responsibility practices, the banking industry has also attached social responsibility aspects in its annual reports although in standard format (Anggraeni et al., 2019). Islamic banks should be able to provide optimal benefits for the entire community. The roles and responsibilities of Islamic banks as Islamic financial institutions are not limited to the financial needs of various parties only, most importantly the certainty of all activities carried out by Islamic banks should be in accordance with sharia principles (Hameed et al., 2004).

In this study, financial performance is a mediating variable that links corporate governance, diversification, and intellectual capital to sustainability performance. Mediation variables are used in the study because of the diversity of previous research results. Researchers need these variables so that the research results are in accordance with the theory. Previous research conducted by Siswanti et al. (2017) gave empirically significant results by examining financial performance as a mediating variable among corporate governance, intellectual capital and business sustainability.

This study addresses seven important questions:

i. Does diversification affect sustainability performance?
ii. Does diversification have an effect on sustainability performance through financial performance as a mediating variable?
iii. Does corporate governance affect sustainability performance?
iv. Does corporate governance affect sustainability performance through financial performance as a mediating variable?
v. Does intellectual capital affect sustainability performance?
vi. Does intellectual capital affect sustainability performance through financial performance as a mediating variable?
vii. Does financial performance affect sustainability performance?

Based on the questions above, this study applies explanatory research with the partial regression analysis method using Partial Least Square (PLS). The samples in this study are Indonesian Islamic banks which are registered with the financial services authority that publish financial reports, sustainability reports, and reports on the implementation of good corporate governance. Researchers use stakeholder theory.

**Literature Review**

Stakeholder theory explains that all stakeholders have the right to be treated fairly and managers should manage the organization for the benefit of all stakeholders (Deegan, 2004). For the sake of being a company, a company depends on the support of its stakeholders. Companies should provide benefits to stakeholders to get this support (Pramitasari and Wahidahwati, 2016). According to Maulida and Adam (2012) the emergence of stakeholder theory as a dominant paradigm to further strengthen the concept that companies are responsible not only to shareholders but also to stakeholders.

According to Kotler (2005) diversification is a subjective and producer understanding of something that is offered as an effort to achieve organizational goals through meeting customer needs and desires, according to organizational competencies and capacities as well as market purchasing power. Sudarsono (2001) defines diversification as an effort to diversify the nature and physical, goods or services produced by companies for use by consumers in satisfying their needs. So the diversification can be concluded that is expected to be a functional progress in developing the company’s products more advanced than competitors. According to the Forum for Corporate Governance in Indonesia (FCGI, 2004), Corporate Governance is a set of regulations that apply the relationship between shareholders, management, creditors, government, employees and other internal and external stakeholders with respect to their rights and obligations. or in other words the system that directs and controls the company. In the regulatory framework, the governance system for Islamic banks is generally stated in Law Number 21 of 2008 concerning Islamic banking, particularly in Chapter V of the Sharia Supervisory Board (DPS) section. As already stated, DPS carries out supervision and advice on compliance with sharia principles in all activities of sharia bank. Bontis, et al (2000) define intellectual capital as knowledge of both individuals and organizations that take part in creating a company’s sustainable competitive advantage. The assessment model for Islamic banking is known as the iB-VAIC (Islamic Banking-Value Added Intellectual Coefficient) which is modified from the VAIC model. Islamic banking intellectual capital is measured using a model that is not much different from the main model developed by Pulic. The difference in the iB-VAIC model developed by Ulum (2013) from Pulic lies in the accounts used to calculate value added (VA) by calculating the income obtained from all sharia activities.

According to Hameed et al. (2004) the development of the current index to measure the performance of Islamic financial institutions is considered important because there is a growing awareness among the Muslim community to assess how far the institutions have succeeded in achieving their goals. So far it is known that most Muslims are now aware not only about how much return they can get, but more importantly where their money is invested which is beneficial for returns and social responsibility. Hameed et al. (2004) explained that as an Islamic business institution, Islamic banks are not only required to report information on economic performance but also information about bank achievements in terms of the feasibility of financial reporting on sharia compliance and social and environmental issues as a whole for stakeholder needs.
Sustainability performance aims to address social, environmental and economic aspects as a performance of corporate management in general, and in particular corporate sustainability management (Schaltegger and Wagner, 2006). Sustainability performance is developed and disseminated through sustainability reports based on Global Reporting Initiative (GRI) guidelines that apply globally from guidelines that establish economic, social and environmental indicators of company activities and the economic impact of company activities (Staniskis and Arbaciauskas, 2009).

Research conducted by Kang (2012) found that diversification has a positive effect on corporate social performance. These results support that diversification strengthens the continuity of company activities, encourages sustainable growth, reduces business risk and strengthens the company's market share (Mendonça & Luzzi, 2013). Companies that diversify have more flexible capital formations because these companies have more internal access to various resources including external sources of funds. Companies could also use a number of mechanisms to create and expand the advantages of their market forces. In addition, company’s diversification has other advantages in the form of the ability to expand the company's excess assets and share resources, managerial capabilities, consumer loyalty and technological innovation (George & Kabir, 2005). Several studies have concluded that diversification is more beneficial for companies that are in developing economies (Kock & Guillen, 2001).

**H1:** Diversification has a positive effect on sustainability performance.

**Diversification and sustainability performance through financial performance**

In this study, stakeholder theory plays a role in understanding the concept of a company's diversification strategy, this theory explains that the company will run its business responsibly to stakeholders and its sustainability. By diversifying, the company is believed to be able to improve its financial performance, and it is hoped that it will be better able to carry out corporate sustainability programs and disclose it.

This action certainly has a very good impact on the sustainability of the company. The company diversifies which improve financial performance will expand the company's social activities because the extent of CSR disclosure is seen from the company's performance and its concern for other stakeholders who are not directly related to the company. From a business point of view, the results of the evaluation of the CSR program can be used as an objective presentation of the company's social performance, which then becomes very useful for the company's sustainability.

**H2:** Diversification has an effect on sustainability performance through financial performance.

**Corporate Governance and Sustainability Performance**

Corporate governance is a series of processes, habits, policies, rules and institutions that affect the direction, management and control of a company. Corporate governance also includes the relationship between the stakeholders involved in the management objectives of the company. Stakeholder theory is one of the basic concepts of corporate governance as explained by the relationship or interaction between the company's internal and external stakeholders in fulfilling the interests of each party. The effectiveness of these interactions can create relationships that can influence the increase in company value by considering the interests of other stakeholders. Therefore, a good corporate governance can improve company performance through monitoring management performance and management accountability to shareholders and stakeholders.

Rama and Novela (2016) state that a corporate governance system in Islamic banks is needed to increase public confidence in Islamic banks, especially compliance with Islamic principles in all their activities. Thus corporate governance ensures an effective organizational structure that can ensure the operation of the supervisory process before and after transactions at Islamic banks and other activities that support the sustainability performance of Islamic banking.

**H3:** Corporate governance has a positive effect on financial performance.

**Corporate Governance and Sustainability performance through financial performance**

The implementation of corporate governance in accordance with the regulations will make investors respond positively to company performance and the company's market value. Measuring the performance of Islamic financial institutions is certainly different from conventional companies, especially in terms of orientation. As an institution that operates based on sharia principles, of course, Islamic banks have their own characteristics, because the performance of Islamic bank has roles and responsibilities not only limited to financial needs but the most important thing is how they run their business and the actions used to ensure that the activities are carried out in accordance with sharia (Meilani, 2015).

**H4:** Corporate governance has an effect on sustainability performance through financial performance.

**Intellectual Capital and Sustainability Performance**

Companies that manage intellectual capital well will have competitive advantage and can provide information about the company’s ability to carry out its activities properly. In order to recognize management's efforts in developing the condition of knowledge that the company has, Stakeholders theory consider more powerful stakeholders and this group is a consideration for companies in disclosing information in financial statements (Ulum et al., 2008; Widarjo 2011). According to Sirojudin and Nazaruddin (2014), in
this context, stakeholders have the authority to influence management in the process of utilizing all the potential of the organization. With good management of all the potential contained in the organization, it will encourage the company's sustainability performance.

**H5:** Intellectual Capital has a positive effect on Sustainability Performance.

**InteAcapital and Sustainability performance through financial performance**

According to Deegan (2004) stakeholder theory emphasizes accountability beyond simple financial or economic performance. When managers are able to manage the organization optimally, in an effort to create value for the company, it can be interpreted that the manager has fulfilled the ethical aspects of the theory. In this context, the creation of value for the company by utilizing all the potential that exists in the company which includes human capital, physical capital, and structured capital. This potential management will create added value for the company which encourages the company's financial performance for the benefit of stakeholders. Companies have a challenge in maintaining the company's image in society which is the reason bank in Indonesia should carry out social reporting. According to Meutia (2010) Islamic banks should have a more spiritual dimension, not only wanting a non-usury business, but also providing welfare for the community, especially for the economically weak community.

**H6:** Intellectual Capital affects sustainability performance through financial performance.

**Financial Performance and Sustainability Performance**

As an Islamic business institution, Shariah Bank is not only required to report information on economic performance but also information about bank achievements in terms of the feasibility of financial reporting on sharia compliance and social and environmental issues as a whole for the needs of stakeholders (Hameed et.al, 2004). Apart from this, financial performance is also important for Islamic banking. The bank's financial performance describes the bank's financial condition in a certain period both in terms of raising funds and channeling funds. According to Siswanti et.al, (2017) and Sumail and Mappamiring (2015), these showed that financial performance affect company's business sustainability.

From a theoretical point of view, the company's stakeholders are part of the elements of community and state life. It means the company enters the social system of society and cannot leave the reciprocal relationship that exists in the social life of the community which requires the company not only to meet its needs, but also to provide benefits other stakeholders.

**H7:** Financial Performance has a positive effect on Sustainability Performance.

**Research and Methodology**

The population in this research use Islamic Commercial Banks in Indonesia for the 2011–2018 that disclose sustainability report and reports on the implementation of good corporate governance. Based on the 2019 Islamic banking statistics at the OJK, there are 14 Islamic Commercial Banks in Indonesia. The sampling method used in this study was purposive sampling and so there are 80 observations.

**Data**

This research is classified as a quantitative study using secondary data as a source of data that researchers obtain from annual reports, sustainability reports, and implementation of good corporate governance of Islamic Commercial Bank which are registered with the Financial Services Authority from 2011 – 2018, data obtained from each published website of the Islamic bank.

**Data Analysis**

\[
FP = \beta_1 \text{DIV} + \beta_2 \text{CG} + \beta_3 \text{IC} + \varepsilon_1 \\
SP = \beta_1 \text{DIV} + \beta_2 \text{CG} + \beta_3 \text{IC} + \beta_4 \text{FP} + \varepsilon_2
\]

Description:

- **FP** = Financial Performance,
- **SP** = Sustainability Performance,
- \(\beta_1, \beta_4\) = Regression Coefficient,
- **DIV** = Diversification,
**Variables**

**Sustainability Performance**

Sustainability performance is interpreted as a result of sustainability management within the company as a process of improving the company's economic, environmental and social performance (Staniskis and Arbaciauskas, 2009). Measurements are carried out through categories based on Global Reporting Initiative standards.

**Diversification**

Diversification is as an effort to diversify the nature and physical, goods or services produced by the company to use by consumers in satisfying their needs (Sudarsono, 2001). Diversification is measured using the Hirchman Herfindalh Index (HHI) which is the indicator of market concentration that is valued between 0 - 1.

**Corporate governance**

The corporate governance used in this study is Islamic Corporate Governance (ICG), namely corporate governance based on Sharia principles. Islamic commercial banks are required to periodically carry out a comprehensive self-assessment on the implementation of corporate governance.

**Intellectual capital**

Intellectual capital is measured by using value added with three components, namely physical capital (VACA), human capital (VAHU), and structural capital (STVA). That was developed by Pulic (1998) and symbolized by the name VAIC (Value Added Intellectual Coefficient) from a combination of these three categories.

**Financial performance**

Financial Performance, is a performance appraisal based on a specific assessment reference. Measurement of financial performance using a proposal by Hameed (2004), namely the islamicity index. This measurement is able to show the financial performance of Islamic banks from the perspective of Islamic principles.

**Empirical Data and Analysis**

This research has the result of the hypothesis test shown in table 1 below.

| Direct Testing | Path Coefficient | P Value | Test | Result |
|----------------|------------------|---------|------|--------|
| DIV → FP       | 0.100            | 0.090   |      | Rejected |
| DIV → SP       | -0.063           | 0.142   |      | Hypothesis 1 | Rejected |
| CG → FP        | 0.476            | <0.001  |      | Accepted |
| CG → SP        | 0.348            | <0.001  |      | Hypothesis 3 | Accepted |
| IC → FP        | 0.360            | <0.001  |      | Accepted |
| IC → SP        | 0.206            | 0.013   |      | Hypothesis 5 | Accepted |
| FP → SP        | 0.494            | 0.001   |      | Hypothesis 7 | Accepted |

| Indirect Testing | Total effect | P Value | Test | Result |
|------------------|--------------|---------|------|--------|
| DIV → FP → SP    | 0.049        | 0.132   |      | Hypothesis 2 | Rejected |
| CG → FP → SP     | 0.235        | <0.001  |      | Hypothesis 4 | Accepted |
| IC → FP → SP     | 0.178        | 0.005   |      | Hypothesis 6 | Accepted |

**Source:** WarpPLS output

Hypothesis testing is used to test the effect of exogenous variables on endogenous by using testing criteria, namely if the probability value is smaller than the level of significance or α = 5%, then it is stated that there is a significant influence between endogenous variables on exogenous variables. Table 1 shows that hypothesis 1, which tests the relationship between diversification and sustainability performance, shows that the probability of 0.142> alpha (5%) is not significant. This means that diversification has no significant effect on sustainability performance, so H1 is rejected. Hypothesis 2 testing diversification of sustainability performance through financial performance obtained probability 0.132> alpha (5%) is not significant. Hypothesis 3 testing corporate governance on sustainability performance obtained probability 0.001 <alpha (5%) is significant positive. This means that the higher the corporate governance, the higher the sustainability performance.
Hypothesis 4 examining the relationship between corporate governance and sustainability performance through financial performance obtained a probability of 0.001 < alpha (5%), which means that there is a significant effect. Hypothesis 5, which tests intellectual capital and sustainability performance, obtained a probability of 0.013 < alpha (5%) significant. This means that the higher the intellectual capital, the higher the sustainability performance. Hypothesis 6 testing intellectual capital on sustainability performance through financial performance obtained a probability 0.005 < alpha (5%) is significant. Hypothesis 7 testing financial performance on sustainability performance obtained a probability of 0.001 < alpha (5%) which indicates that financial performance has a positive and significant effect on sustainability performance.

Mediation Effect Testing

| Perhitungan Variance Accounted For (VAF) |  |  |  |
| --- | --- | --- | --- |
| Indirect Effect | DIV → FP → SP | 0.10 | 0.49 | 0.049 |
|  | CG → FP → SP | 0.48 | 0.49 | 0.235 |
|  | IC → FP → SP | 0.36 | 0.49 | 0.176 |
| Total Indirect Effect |  |  | 0.46 |
| Direct Effect | DIV → SP | 0.060 |
|  | CG → SP | 0.350 |
|  | IC → SP | 0.210 |
| Total Direct Effect |  |  | 0.62 |
| Total Effect |  |  | 1.08 |
| VAF = Indirect Effect/ Total Effect |  |  | 0.43 |
| Percentage |  |  | 43% |

Description: Value VAF > 80%: Full Mediation, 20% < VAF 80%: Partial Mediation, VAF < 20%: There is no mediating effect.

Mediation effects test aims to determine whether the mediation construct in the study has a significant effect on endogenous and exogenous constructs. The total indirect effect is 0.46 and the total direct effect is 0.62. According to Solihin and Ratmono (2013) it is said to be a full mediator if (VAF value > 80%), partial mediator (20% value < VAF < 80%) and there is no mediator role at all (VAF value < 20%). Overall, the total effect obtained can be concluded that in this study financial performance is partially mediated (Table 6).

Findings

Diversification and Sustainability Performance

The first hypothesis reveals that diversification has no effect on sustainability performance. In other words, the results of this hypothesis testing are rejected. This means that the company's diversification strategy carried out by Islamic banks has not yet provided optimal results in achieving sustainability performance. This study is also not in line with previous research by Kang (2012) which states that diversification has an effect on corporate social performance. However, research conducted by Sumail and Mappamiring (2015) states that if the diversification strategy is not oriented towards tangible assets, it will reduce the company's performance.

Diversification and Sustainability Performance through Financial Performance

The results of testing the second hypothesis state that financial performance is not able to be a mediator of the effect of diversification and sustainability performance so that the hypothesis is rejected. This means that the diversification carried out does not improve the financial performance of Islamic banks but creates new costs because the company will expand its marketing area which requires extra supervision. It can be concluded that diversification has no relationship with the sustainability performance of Islamic banking. This research is also not in line with research conducted by Sumail and Mappamiring (2015) which states that financial performance can mediate between diversification and sustainability performance. Likewise, it is contrary to Higgins and Schall (1975) who stated that diversification can improve the possibility of bankruptcy and improve the development and sustainability of the company.

Corporate Governance and Sustainability Performance

The third hypothesis states that corporate governance has a positive effect on sustainability performance. The test results reveal that corporate governance is one of the factors affecting the sustainability performance of Islamic banks. The test results support the stakeholder theory as it is revealed that corporate governance regulates the relationship between stakeholders and internal and external companies in fulfilling the interests of each party which can create an increase in sustainability performance in Islamic banks. The
results of this test are also in line with research conducted by Garas and El Massah (2016), Sumail and Mappamiring (2015), and Rama and Novela (2016).

**Corporate Governance and Sustainability Performance through Financial Performance**

Based on hypothesis four, it states that the effect of corporate governance on sustainability performance is mediated by financial performance. Based on the financial performance test, it is able to become a mediator, so the hypothesis is accepted. The results of this test show that corporate governance implemented by Islamic banks can improve financial performance so that it is directly correlated with its sustainability performance. The results of this study are in line with Sumail and Mappamiring (2015) and Adam et al (2012).

**Intellectual Capital and Sustainability Performance**

The results of testing the fifth hypothesis state that intellectual capital has a positive effect on sustainability performance. The higher the Islamic bank's intellectual capital, the better its sustainability performance so that Islamic banks have a competitive advantage and carry out their activities well. The results of testing this hypothesis are in line with the stakeholder theory which states that organizational management is expected to be able to carry out company activities that are considered important by stakeholders and to report back these activities to stakeholders. The results of this test are in line with several previous studies by Siswanti et al (2017).

**Financial Performance and Sustainability Performance**

Based on the results of hypothesis testing, the seven financial performance has a positive effect on sustainability performance. The more the company develops, the better its financial performance will be, besides that the company should improve its sustainability performance by paying attention to social and environmental responsibilities around the company, so that the company will gain the trust of market players and society as a company with a good image. The test results support stakeholder theory, the results of this study are in line with the research of Siswanti et al (2017).

**Theoretical, Practical and Policy Implication**

The findings in this study can contribute in the theoretical, and policy implications. First, this research can contribute in stakeholder’s theory, as a form of corporate action that aims to address social, environmental, and economic aspects as a general management performance, thus companies, especially Islamic banks in this study are not only oriented towards achieving profit. The results of this study also provide empirical evidence that the sustainability performance of Islamic banks is influenced by corporate governance and intellectual capital in its application and supports the improvement of financial performance provided that sharia values are applied without reducing conventional regulations. The results of this study can be used as a consideration that can be useful for the Public Accountants Standard Board of the Indonesian Public Accountants Association to consider the measurement of sharia-based sustainability performance in accordance with Islamic principles that can be applied to Islamic banking in Indonesia.

**Conclusions**

Based on the results of analysis and research discussion, the factors used to improve the sustainability performance of Islamic banks are intellectual capital and corporate governance. This shows that Islamic banks have quality intangible assets and good corporate governance which is supported by the financial performance of Islamic banks to support operations that prioritize sustainability. Sustainable performance is an initial step for proactive innovation for Islamic banking to improve its position in the increasingly competitive banking industry. The results of this study also find that diversification does not show an effect on sustainability performance directly or mediated by financial performance. This is presumably because diversification does not play a role as an effort to improve the sustainability performance of Islamic banks.

This study fails to prove that diversification has a direct effect or through financial performance as a mediator on sustainability performance. So that based on these limitations, it is hoped that for further research to use different measurements that can better explain the effect of diversification strategies on sustainability performance, in addition to considering the influence of the type of diversification carried out by Islamic banks and whether or not there is a diversification relationship the company has with its core business, the environment, institutions, economic stability so that reliable results can be obtained.
