"Optimizing the utilization of government-owned tangible assets through managing institutional factors in Indonesia"

AUTHORS	Faridah 🝺 Abdul Rahman Lubis 🍺 Yossi Diantimala 🝺 Ridwan		
ARTICLE INFO	Faridah, Abdul Rahman Lubis, Yossi Dia the utilization of government-owned tangi institutional factors in Indonesia. <i>Public a</i> doi:10.21511/pmf.12(2).2023.05	ble assets through managing	
DOI	http://dx.doi.org/10.21511/pmf.12(2).2023	.05	
RELEASED ON	Friday, 13 October 2023		
RECEIVED ON	Tuesday, 05 September 2023		
ACCEPTED ON	Friday, 06 October 2023		
LICENSE	Construction Constant	ommons Attribution 4.0 International	
JOURNAL	"Public and Municipal Finance"		
ISSN PRINT	2222-1867		
ISSN ONLINE	2222-1875		
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"		
FOUNDER	LLC "Consulting Publishing Company "B	usiness Perspectives"	
0 <sup>0</sup>	B		
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES	
51	1	6	

© The author(s) 2023. This publication is an open access article.





#### **BUSINESS PERSPECTIVES**

0

LLC "CPC "Business Perspectives" Hryhorii Skovoroda lane, 10, Sumy, 40022, Ukraine www.businessperspectives.org

Received on: 5<sup>th</sup> of September, 2023 Accepted on: 6<sup>th</sup> of October, 2023 Published on: 13<sup>th</sup> of October, 2023

© Faridah, Abdul Rahman Lubis, Yossi Diantimala, Ridwan, 2023

Faridah, Doctoral Student, Management Department, Faculty of Economics and Business, Universitas Syiah Kuala [Syiah Kuala University], Indonesia.

Abdul Rahman Lubis, Professor, Management Department, Faculty of Economics and Business, Universitas Syiah Kuala [Syiah Kuala University], Indonesia.

Yossi Diantimala, Professor, Accounting Department, Faculty of Economics and Business, Universitas Syiah Kuala [Syiah Kuala University], Indonesia. (Corresponding author)

Ridwan, Lecturer, Management Department, Faculty of Economics and Business, Universitas Syiah Kuala [Syiah Kuala University], Indonesia.

© •

This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 International license, which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Conflict of interest statement:** Author(s) reported no conflict of interest Faridah (Indonesia), Abdul Rahman Lubis (Indonesia), Yossi Diantimala (Indonesia), Ridwan (Indonesia)

# OPTIMIZING THE UTILIZATION OF GOVERNMENT-OWNED TANGIBLE ASSETS THROUGH MANAGING INSTITUTIONAL FACTORS IN INDONESIA

#### Abstract

This study aims to examine whether the institutional factors - governance, asset knowledge, internal control system, and competencies - optimize the utilization of provincial, regency, and municipal governments' tangible assets in supporting public services. In contrast to previous research, which employed Sharia ethics as exogenous variables, this study includes Sharia ethics as a moderating variable in the model. Sharia ethics is one specific factor in implementing Sharia principles by the government that applies Islamic law in Indonesia. The province of Aceh, with all its regencies and municipals, is the only province that applies Islamic principles in running its government. Primary data were collected using a questionnaire sent to 285 provincial and district government asset managers using a Google form; 229 questionnaires were returned. Structural equation modelling (SEM) was employed to analyze the complex relationships and the hypotheses. The results reveal that institutional factors are not strong enough to optimize the utilization of tangible assets without having deep Sharia ethics. It meant that Sharia ethics is necessary for strengthening the relationship between the institutional factors and the optimization of government asset management in provincial, regency, and municipal governments. The results provide recommendations for provincial, regency, and municipal governments to develop appropriate and reasonable regulations and standards for optimizing asset management within the Aceh government.

#### **Keywords**

utilization of government's tangible assets, governance, asset knowledge, internal control systems, competence, Sharia ethics

JEL Classification

H82, H83, M41, M48

# INTRODUCTION

Managing tangible assets (i.e., property, plant, equipment, infrastructure) properly and optimally is crucial to supporting the government's services (McDonough & Yan, 2023) in the era of new public management in Indonesia (Ratmono & Darsono, 2022). Utilization and management of tangible assets appropriately and adequately increase the effectiveness and efficiency of the quality of government services to the public (Dharma et al., 2023; Gonzalez-Caceres et al., 2019). The existing regulations regarding the proper and transparent use of assets should serve as guidelines and directions for provincial, regency, and municipal governments in managing assets so that these assets can be used optimally to provide public services. However, based on the audit report by the Audit Board of the Republic of Indonesia in 2017–2020, provincial, regency, and municipal governments encountered many problems in managing government-owned tangible assets. Unfortunately, the various subsisting legal instruments are inadequate to solve these problems, reflecting poor tangible asset management.

For study cases in one province in Indonesia, Aceh Province in 2017, from 23 regencies/municipals and 1 provincial government, there were 19 districts/cities with indications of various problems in managing their intangible assets, and only 4 districts/cities and 1 province governments whose management was better. Therefore, this study is crucial to investigate whether the institutional factors – governance, asset knowledge, internal control system, and competencies – optimize the utilization of provincial, regency, and municipal governments' tangible assets in supporting public services.

### **1. LITERATURE REVIEW**

There are some factors causing problems in tangible assets management in provincial, regency, and municipal governments. First, there is poor compliance by local government employees to the existing regulations and poor governance (Hia et al., 2020; Almansour et al., 2016; Hanis et al., 2011). This occurs due to the lack of proper management of provincial, regency, and municipal governments' finances, such as accrual-based financial reports that have not been implemented. There are still disciplinary actions by state staff under applicable laws and the inability of the internal control system in various government agencies. Second is a poor understanding of the asset managers' responsibilities, limited knowledge and resources to manage assets, and a lack of monitoring and supervision. Third, there is inadequate knowledge regarding regional assets with high variation and complexity (Wang, 2017; Abdelhamid et al., 2015; Zuashkiani et al., 2011). According to Lonnqvist et al. (2014), knowledge is essential to optimize asset management. This knowledge refers to the ability of provincial regency and municipal officials to use a structured system in assets management (Laihonen & Mäntylä, 2018). For the future economy, provincial, regency, and municipal governments depend highly on the capacity to attract, produce, develop, and foster creativity, knowledge, and innovation. Whereas competence has positive implications and can help the local government manage assets better (Laihonen & Mäntylä, 2018).

Optimizing asset management is challenging because of misusing assets. Misappropriation of assets is a fraud (Le & Tran, 2018; Abiola & Oyewhole, 2013). Moreover, fraud often occurs in non-profit organizations and the government sector because of weak oversight, low trust, difficulties in verifying certain income, and unclear policies in the procedures for procuring public goods and services (Yusrianti et al., 2020; Majid et al., 2014). This shows that internal audit has benefits in adding value to the organization (Le & Tran, 2018; Coram et al., 2008). Therefore, it is necessary to have a good internal control system with sustainable performance in the optimal management of local government assets.

Good governance is crucial in ensuring regional welfare by increasing full accountability, consistency, and preparing strategic decisions well at the government and corporate level at the private level as well as other public organizations (Hia et al., 2020). Biondi and Lapsley (2014) reveal that an institution with good public governance has a good role in accounting that can encourage or enhance transparency. This implies that accounting plays a central role in managing regional financial reporting, especially regional assets, so it is more optimal (Arnaboldi & Lapsley, 2010).

A comprehensive asset management system is essential for optimizing public sector assets. This system includes asset planning, acquisition, maintenance, and management (Pocock et al., 2014). According to Hia et al. (2020), based on a positive relationship between governance and optimization of regional asset management by applying collaborative techniques involving various public officials, effective synergy will be achieved in achieving the same goals, including government agencies, private sector partners, and civil society organizations.

Asset knowledge is essential to identify government staff knowledge in each region regarding asset management to explain that each region has unique knowledge that acts as the basis for value creation (Lonnqvist et al., 2014). Lonnqvist et al. (2014) and Schiuma and Lerro (2011) examined asset knowledge as the basis for value creation, but how to apply specific knowledge related to asset management has not been formulated and practiced optimally so that asset management can be further optimized. Furthermore, the concept of asset knowledge becomes an essential requirement as a basic concept in the implementation of asset management activities. It becomes an indicator in measuring the performance of government officials in all fields of work, especially in the area of complex and complete assets (Laihonen & Mäntylä, 2018). However, the concept of asset knowledge is general, and no specifications can be applied to managing public assets effectively and efficiently to optimize regional assets.

Hanis et al. (2011) show that in the context of asset management, there is a link between asset knowledge and the way to highlight the problems of implementing legal and institutional regulations that are difficult to enforce, the large size of the public asset portfolio, and political interests. However, previous studies emphasize two important things related to public asset management. First, the need for reactive management is related to the government's lack of understanding of the role of assets in the property sector and the minimal contribution of knowledge to organizations. The second is related to biased data issues regarding public assets and human resources (Abdelhamid et al., 2015; Bond & Dent, 1998).

Asset management is the task of accounting technicians. It is also one of the parts of the competence contained in the Indonesian National Work Competency Standards. The competency elements start from the stages and procedures for managing assets, from inventory to the stage of destroying assets (PP No. 27 of 2014). Several studies have shown that human resources competence is related to optimal asset management's success. Noble et al. (2017) emphasize the importance of competency collaboration to drive the national innovation agenda through research collaboration between universities and industry to increase public value. The same thing is supported by the findings of Maletič et al. (2021) that the framework of asset management competency impacts the structure and governance of asset management. The capabilities needed at the organizational and individual levels applied within the asset management framework include organizational strategy, organizational culture, leadership and people, knowledge management, strategic asset management and planning, and decision-making.

Giglio et al. (2018) explain that the management of regional property is influenced by the capabilities and skills of human resources in terms of competence. Arnaboldi and Lapsley (2010) explicitly state that asset management must involve a central accounting role. However, this finding is disputed by Molland and Clift (2008), where the role of human resources competencies in the accounting division in asset management in Australia is smaller than that of engineers directly involved in regional asset management.

Greenlee et al. (2007) find a fact about the importance of internal control and annual financial report audits in public sector organizations. This is intended as one of the efforts and actions to prevent cheating and fraud. The facts show that fraud often occurs in non-profit organizations and the government sector due to weak supervision, low trust, difficulties in verifying certain income, and unclear policies in the procedures for procuring public goods and services (Majid et al., 2014). This reinforces the assumption that weak oversight indicates that the internal control system is still experiencing difficulties in implementing it, so it does not conform to the expected provisions. Thus, it is necessary to have a good and sustainable internal control system because internal control is integral to the internal control system.

The role of the internal control system greatly determines the optimal quality of regional asset management. Le and Tran (2018) find evidence that the internal control system impacts the management of assets owned by local governments. On the same note, Le and Tran (2018) detail the linkages of the high importance of internal audits in every private and public sector organization to prevent and reduce the tendency for fraud to occur. This supports prior studies that stated the government must carry out good supervision on managing regional property assets through various existing approaches to optimize regional assets.

Furthermore, it is challenging to prevent asset fraud in the government sector due to the lack of evidence (Yusrianti et al., 2020; Norziaton et al., 2018). Local governments try to maintain their good image; therefore, the existence of a strong ethical environment contributes to reducing corrupt behavior in the government sector, and near-

ly 96% of survey results suggest that fraud is a significant problem for local orders (Yusrianti et al., 2020; Norziaton et al., 2018). Sharia ethics is a good and commendable behavior based on Islamic law. Besides, ethics and moral values such as justice, kindness, empathy, patience, compassion, tolerance, and honesty are key components of Islamic leadership to prevent corrupt behavior (El Kaleh & Samier, 2013). Thus, a proper and correct understanding of Islamic sharia by government stakeholders prevents corrupt behavior in asset management. Understanding Islamic law is a strengthening factor for individuals and institutions in optimizing the use of tangible assets belonging to local governments. Haque and Ahmad (2016), Salem and Agil (2012), El Kaleh and Samier (2013), and Awan and Akram (2012) show a direct effect of Sharia ethics on optimizing regional assets.

Based on these reasons, this study examines the role of Sharia ethics on the effect of institutional factors in optimizing provincial regency and municipal governments' asset management. The underlying reasons why Sharia ethics can moderate the relationship are that good regulations, good governance, high knowledge and competence, and appropriate internal control systems will not have a positive impact in optimizing local government asset management if the apparatus that has the authority to manage assets have bad attitudes, behave in an untrustworthy manner, and do not follow Islamic norms.

Sharia ethics is vital in optimizing asset management, especially in countries with a majority Muslim population (Sandwick et al., 2021). Sharia ethics involve moral principles and Islamic values that emphasize fairness, openness, and transparency in all aspects of life (Bedoui, 2012; Haque & Ahmad, 2016). Applying good governance practices and Sharia values can significantly increase the effectiveness and efficiency of regional wealth management, which in turn can positively impact regional economic and social development (Yunanda et al., 2016). Haque and Ahmad (2016) state that optimizing public assets is an essential aspect of Islamic principles and practices. Responsible governance and ethical behavior required by Islamic principles can help ensure that public assets are managed sustainably and equitably for the benefit of society as a whole. Thus, if sustainable governance can be carried out with the existence of applied Sharia ethics, this can increase asset management optimization. The application of Sharia ethics in optimizing assets reinforces the relationship with governance and strengthens the implementation of asset knowledge in optimizing these assets. Kılınç and Warner (2015) explained that good knowledge assisted by religiosity can increase one's view of public assets. Thus, the application of Sharia ethics in the implementation of knowledge assets can increase the optimization of assets owned by the region.

Internal control in optimizing Sharia-based assets is critical to ensuring optimal and responsible management of regional-owned assets relevant to Islamic principles and values. This includes behavior in the actions of agencies and individuals in protecting assets, promoting ethical behavior, and managing risk in an accountable and transparent manner (Bekri et al., 2014; Hanefah et al., 2020; Muñoz-Villamizar et al., 2022). An important principle of internal control in optimizing Sharia assets is risk management. Hanefah et al. (2020) also explain that managing assets with Sharia principles recognizes the inherent risks involved in business activities and emphasizes the need to manage these risks effectively. An effective internal control system must identify potential risks and develop strategies to mitigate and manage them. Therefore, with Sharia ethics in optimizing asset management, it is believed that it will strengthen the influence of the internal control system (SPI) on optimizing asset management.

Furthermore, competence includes characteristics in work related to the ability to acquire knowledge and skills in management, as well as aspects of the right attitude in carrying out their duties and being responsible for their job and position. In its application in Aceh, optimizing asset management refers to Qanun regulations governing the management of Aceh property Number 14 of 2017. It gives a special notation in Article 17 (3) that explains that the delegation of power over the use rights of own assets requires management based on competence over the power of the user of the goods. This shows that management requires appropriate competence to optimize these assets' use.

### 2. AIMS AND HYPOTHESES

This study aims to examine whether institutional factors – governance, asset knowledge, internal control system, and competencies – optimize the utilization of provincial, regency, and municipal governments' tangible assets in supporting public services. In addition, this study investigates the role of Sharia ethics in strengthening these factors in optimizing asset usefulness in provincial, regency, and municipal governments in Indonesia.

Based on the literature review, this study proposed these hypotheses:

- H1: Governance positively affects the optimization of the utilization of provincial regency and municipal governments' tangible assets.
- H2: Asset knowledge positively affects the optimization of the utilization of provincial regencies and municipal governments' tangible assets.
- H3: Competence positively affects the optimization of the utilization of provincial regency and municipal governments' tangible assets.
- H4: Internal control system positively affects the optimization of the utilization of provincial regency and municipal governments' tangible assets.
- H5: Sharia ethics strengthens the influence of governance on optimizing the utilization of provincial regency and municipal governments' tangible assets.
- H6: Sharia ethics strengthens the influence of asset knowledge on optimizing the utilization of provincial regency and municipal governments' tangible assets.
- H7: Sharia ethics strengthens the influence of competence on optimizing the utilization of provincial regency and municipal governments' tangible assets.
- H8: Sharia ethics strengthens the influence of the internal control system on optimizing the utilization of provincial regency and municipal governments' tangible assets.

### 3. METHODS

This analysis was conducted in 23 regencies/municipalities and 1 provincial government in Aceh Province, Indonesia. The unit of analysis is the management of tangible assets owned by 23 regencies/municipalities and 1 provincial government in Aceh. There are 285 local government-owned asset managers throughout Aceh. Data were collected using a closed-type questionnaire. Questionnaires were sent to local government asset managers in a Google form. From 285 managers, 229 questionnaires were returned.

The information obtained from the first part of the questionnaire consisted of the characteristics of the respondents (gender, age, marital status, religion, and level of education). The second part contains statements related to research variables, including asset governance, asset knowledge, competency, internal control systems, sharia ethics, and optimizing the utilization of local and provincial governments' tangible assets. This second part was measured using a five-point Likert scale ranging from strongly disagree to strongly agree.

In this study, the endogenous variable is optimizing the utilization of provincial, regency, and municipal governments' tangible assets. The institutional factors used as exogenous variables are governance, asset management, competency, asset knowledge, and internal control systems. Sharia ethics is a moderating variable. Each variable measurements are shown in Table 1.

To examine the hypotheses, the study employed structural equation modelling (SEM) analysis as one of the simultaneous tests by looking at complex relationships. Mathematically, the determinants of the exogenous and endogenous variables are:

### Optimizing the Utilization of Governments' Asset =

Variables	Variables Measurement	
The optimization of the utilization of provincial, regency, and municipal governments' tangible assets (OUA)	Maximize asset availability, maximize asset utilization, and minimize cost of ownership	Davis (2007), Lima and Costa (2019), Majid et al. (2014)
Governance (AG)	Transparency, responsibility, accountability, participation, responsiveness, legal certainty openness, trust, and local wisdom	Almansour et al. (2016), Biondi and Lapsley (2014)
Asset knowledge (AK)	Specific knowledge (conceptual framework, intellectual capital development, and reactive approach), accounting knowledge (accounting sector role), local wisdom approach (local, social, and cultural knowledge), and understanding of regulations	Kozak (2011), Lima and Costa (2019), Yigitcanlar and Lönnqvist (2013)
Competence (AC)	Knowledge, skill, expertise, interest, experience, understanding, and attitude	Maletič et al. (2021), Noble et al. (2017)
Internal control system (ICS)	Knowledge, risk assessment, control activities, information and communication, and monitoring	Schandi and Foster (2019), Abiola and Oyewhole (2013)
Sharia ethics (SE)	Honesty, trust, fairness, loyalty, openness, respect, integrity and good communication	Abdallah (2010), Haque and Ahmad (2016)

Table 1. Variables description and measurement

### 4. RESULTS AND DISCUSSION

To explain the inherent characteristics of the respondents, the paper analyzes respondents' gender, religion, educational background, age, and occupation, as shown in Table 2.

Respondent characteristics	Frequency	(%)	
Gender			
Male	140	61.1	
Female	89	38.9	
Religio	n		
Islam	210	91.7	
Catholic	10	4.4	
Protestant	9	3.9	
Age			
21-30 years	53	23.1	
31-40 years	81	35.4	
41-50 years	78	34.1	
Over 50 years	17	7.4	
Most recent ed	ducation		
Diploma	85	37.2	
Undergraduate	115	50.2	
Graduate (S2)	28	12.2	
Doctor (S3)	1	0.4	
Occupati	on		
Civil servant	205	89.5	
Contract employee	24	10.5	

Table 2. Respondent characteristics

Table 3 provides a descriptive analysis of respondent's perceptions of all statements outlined in the questionnaire. The average respondent's perception of all indicators related to all variables is 3.74-3.76, in the range of at least 1 to a maximum of 5. This value indicates the good category of all variables. Optimizing the provincial, regency, and municipal governments' asset management of the Aceh government will be good if improvements in governance, asset knowledge, internal control systems, competence, and Sharia ethics support it.

In testing the structural model, the goodness-offit index (GoFI) is shown in Table 4. Table 4 shows that the fit model parameters have met the moderate fit index criteria on the value of the Goodness of Fit Index according to the specified cut of value. The model can meet the goodness-of-fit criteria, so changes are made if necessary.

In the next stage, hypothesis testing is carried out. From the output of this calculation, an analysis of the structural model is formed in Table 5 and Figure 1.

The results of structural testing presented in Table 5 show that the effect of governance, asset knowledge, internal control system, and competencies on optimizing provincial regency and municipal governments' asset use is positively significant at a 1% level of significance. The value confirms the acceptance of all hypotheses (H1-H8). In the administration of good governance, the principles that must be upheld - transparency, participation, and accountability - are the main elements of governance that cannot be separated. Improving accountability, reliability, and appropriate policy-making is seen as an essential way to ensure regional prosperity. The Aceh financial management agency in the Aceh government environment, one of the technical institutions in managing provincial regency and municipal tangible assets, constantly

#### Table 3. Average respondents' perceptions of all variables

Variables	Average perception of respondents	Category	Mean difference
Asset Governance (AG)	3.76	Good	3.76***
Asset Knowledge (AK)	3.74	Good	3.74***
Internal Control System (ICS)	3.75	Good	3.75***
Competence (AC)	3.76	Good	3.76***
Sharia Ethic (SE)	3.75	Good	3.75***
Optimization of the Utilization of Local Government Tangible Assets (OUA)	3.76	Good	3.76***

*Note:* The interval of average respondents' answers 1.00-1.80 is awful; 1.81-2.60 is poor; 2.62-3.40 is fair; 3.41-4.20 is good; 4.21-5.00 is very good. \*\*\* means a significance level of 1%.

Model fit	Value	Cut of value	Conclusion	
Chi-Square (df = 289)	512.446	512.488	Fit	
CMIN/DF	1.109	≤ 2.00	Fit	
RMSEA	0.022	≤0.08 Fit		
GFI	0.900	≥ 0.90	Fit	
CFI	0.989	≥ 0.90	Fit	
TLI	0.987	≥ 0.90	Fit	
	Modification indice	s (Covariances)		
Indicator e	rror	M.I.	Par change	
e1⇔e38		4.141	0.013	

#### Table 5. Structural model test

Variables	Estimate	S.E.	C.R.	Р
Governance $\rightarrow$ OUA	.397	.043	9.189	***
Asset Knowledge $ ightarrow$ OUA	.113	.020	5.630	***
Internal Control System $\rightarrow$ OUA	.322	.041	7.787	***
Competences →OUA	.388	.046	8.403	***

*Note:* \*\*\* denotes a significance level of 1%. OUA is the optimization of the utilization of local and provincial government tangible assets.

strives to implement good governance in managing regional assets. To achieve this goal, asset managers must disclose asset data and other relevant information. For this reason, good governance is considered an essential element in achieving this goal. The active presence of various community elements is important in supporting government institutions to run the asset management system optimally within the Aceh government. To achieve this, it is necessary to have the importance and scientific basis related to provincial regency and municipal governments' asset management so that critical behavior can be created regarding policy-making in every section of society. The results support Ehalaiye et al. (2021), Biondi and Lapsley (2014), and Almansour et al. (2016).

The influence of asset knowledge on optimizing provincial regency and municipal governments' asset use shows that asset knowledge is significant for optimizing government asset management. The results support Laihonen and Mäntylä (2018), Fernandes et al. (2017), Wang (2017), Zeb (2017), Abdelhamid et al. (2015), and Lonnqvist et al. (2014). This theory states that regional asset management requires in-depth knowledge of complex and diverse regional assets. Knowing about specific assets can include specific personal skills, interactions between parties with related interests, and standard rules that apply in the government system needed to update the scientific fields needed to achieve optimal asset management.

Finally, the effect of competency on the optimizing provincial regency and municipal governments' tangible assets is positively significant at a 1% level of significance. The results are consistent with Lima and Costa (2019) and Noble et al. (2017). Therefore, the state civil apparatus must have specific competence regarding varied and complicat-

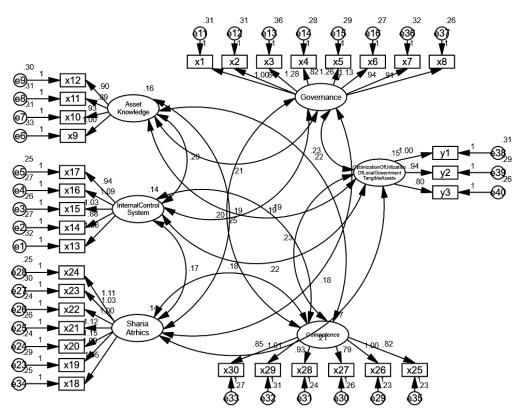


Figure 1. SEM analysis

ed provincial regency and municipal governments' tangible assets in managing asset management within the government environment. The competency of the state civil apparatus in the asset sector must be based on the skills that must be possessed by the state civil apparatus in the asset sector to be able to carry out asset management work optimally.

The internal control system positively and significantly optimizes provincial regency and municipal governments' asset use at a 1% level of significance. It indicates that the internal control system optimizes tangible assets in the provincial and district/city Aceh government. There is an essential function in the internal control system that can improve the optimization of regional asset management within the Aceh government at the provincial and district/city levels (Haque & Ahmad, 2016). With a legal stipulation through Government Regulation Number 60 of 2008 concerning the internal control system, the stages of managing assets with shared interests will lead to actions carried out continuously to safeguard regional assets. When viewed further, an internal control system is the basis for managerial activities in an asset. Thus, if the government of Aceh can apply positive behavior in its work environment, asset management toward optimization can be fulfilled.

Table 6 shows the results of the analysis to determine the magnitude of the influence of the moderating variable. Based on Table 6, Islamic ethics has a better role as a moderator between governance and optimizing provincial regency and municipal governments' asset use in the Aceh government (Haque & Ahmad, 2016; Awan & Akram, 2012; Biondi & Lapsley, 2014; Almansour et al., 2016). The results are consistent with Haque and Ahmad (2016), Almansour et al. (2016), Biondi and Lapsley (2014), and Awan and Akram (2012). The results of testing the model using SEM analysis in Table 6 show that Sharia ethics has a better role as a moderator between asset knowledge at a certain level, which influences optimizing regional asset management in the Aceh government at the provincial, regency, and municipal government levels. This finding indicates that Sharia ethics strengthen the relationship between asset knowledge and optimizing regional asset management in the provincial, regency, and municipal governments of Aceh. In supporting hypothesis 8, the results show that the role of the moderating variable of Sharia ethics is full moderation of the internal control system and optimization of regional asset management (Bowman & Knox, 2008). Therefore, Sharia ethics emphasizes the influence of system variables on internal control to increase the optimization of regional asset management.

**Table 6.** Estimation of moderation of Sharia ethics on the effect of governance on optimizing regional asset management.

Variables	Prob. of the ariables moderating effect of Sharia ethics	
Governance	.011	.060
Asset Knowledge	.014	.047
Internal Control System	.013	.046
Competences	.015	.048

The results of testing the initial model of moderation of Sharia ethics on the effect of competence

on optimizing regional asset management, as shown in Table 6, explain that Sharia ethics has a better role as a moderator between competencies toward optimizing regional asset management in the Aceh government at the provincial, regency, and municipal government levels. This shows that Sharia ethics strengthen the influence of competency variables on optimizing provincial regency and municipal governments' asset use. Furthermore, based on the results, Sharia ethics has a better role as a moderator between the internal control system in optimizing regional asset management in the Aceh government at the provincial, regency, and municipal government levels. It can be stated that Sharia ethics strengthens the influence of the internal control system on optimizing the utilization of provincial regency and municipal governments' tangible assets. Thus, Sharia ethics refer to a value system that can determine right or wrong in optimizing asset management within the Aceh government (Haque & Ahmad, 2016; Awan & Akram, 2012).

# CONCLUSION

The study sought to investigate how provincial, regency, and municipal governments, especially the government of Aceh in Indonesia, optimize their state civil apparatus in managing tangible assets in supporting public services. Based on the results, institutional factors – governance, asset knowledge, internal control systems, and competence – positively and significantly influence optimizing governments' asset management. These results show that optimizing the management of provincial and regional government tangible assets is accomplished by increasing asset managers' knowledge about how to use government tangible assets appropriately, increasing the competency of asset managers, improving internal control systems, and implementing good governance. Furthermore, Sharia ethics significantly affects the relationship between institutional factors and optimizing asset management. These results show that Sharia ethics strengthens the relationship between institutional factors and optimizes regional asset management. The results of this study confirm the acceptance of all hypotheses (*H1-H8*).

# **AUTHOR CONTRIBUTIONS**

Conceptualization: Faridah, Abdul Rahman Lubis, Yossi Diantimala, Ridwan. Data curation: Faridah. Formal analysis: Faridah, Abdul Rahman Lubis, Yossi Diantimala. Funding acquisition: Faridah. Investigation: Faridah. Methodology: Faridah, Abdul Rahman Lubis, Yossi Diantimala, Ridwan. Project administration: Faridah. Resources: Faridah. Software: Faridah. Supervision: Abdul Rahman Lubis, Yossi Diantimala, Ridwan. Validation: Abdul Rahman Lubis, Yossi Diantimala, Ridwan.

#### Visualization: Yossi Diantimala, Ridwan.

Writing - original draft: Faridah, Yossi Diantimala.

Writing - review & editing: Faridah, Abdul Rahman Lubis, Yossi Diantimala, Ridwan.

### REFERENCES

- Abdallah, S. (2010). Islamic ethics: An exposition for Resolving ICT Ethical Dilemmas. Journal of Information, Communication and Ethics in Society, 8(3), 289-301. https://doi. org/10.1108/14779961011071088
- Abdelhamid, M. S., Beshara, I., & Ghoneim, M. (2015). Strategic asset management: Assessment tool for educational building in Egypt. *HBRC Journal*, 11(1), 98-106. https://doi.org/10.1016/j. hbrcj.2014.01.004
- Abiola, I., & Oyewhole, A. (2013). The internal control system on fraud detection: Nigeria experience. *Journal of Accounting and Finance*, *13*(5), 141-152. Retrieved from http://www.www. na-businesspress.com/JAF/AbiolaI\_Web13\_5\_.pdf
- Almansour, A. Z. A., Asad, M., & Shahzad, I. (2016). Analysis of corporate governance compliance and its impact over return on assets of listed companies of Malaysia. *Science International*, 28(3), 2935-2938. Retrieved from http://www.sci-int.com/ pdf/636303801194357970.pdf
- Alsayyed, N. (2009). Shari'ah board, the task of Fatwa, and Ijtihad in Islamic economics, and finance (MPRA Paper No. 20204). INCEIF, the Global University in Islamic Finance, International Islamic University Malaysia. Retrieved from https://mpra. ub.uni-muenchen.de/20204/
- Arnaboldi, M., & Lapsley, I. (2010). Asset management in cities: Polyphony in action? Accounting, Auditing and Accountability Journal, 23(3), 392-419. https://doi. org/10.1108/09513571011034352
- Awan, K. Z., & Akram, M. (2012). The relationship between Islamic work ethics and innovation capability and knowledge sharing plays

moderation role. *International Journal of Economics and Management Sciences*, 1(8), 34-48. Retrieved from https://www. hilarispublisher.com/abstract/ the-relationship-between-islamicwork-ethics-and-innovation-capability-and-knowledge-sharingplays-moderation-role-19447.html

- Bedoui, M. H. (2012). Shariabased ethical performance measurement framework. University Paris, Panthéon-Sorbonne in collaboration with King Abdulaziz University. Retrieved from https://iei.kau.edu. sa/Files/121/Files/159007\_EHBN-07.pdf#page=65
- Bekri, M., Kim, Y. S. (A.), & Rachev, S. (2014). Tempered stable models for Islamic finance asset management. *International Journal of Islamic* and Middle Eastern Finance and Management, 7(1), 37-60. https://doi.org/10.1108/IME-FM-10-2012-0096
- Biondi, L., & Lapsley, I. (2014). Accounting, transparency and governance: The heritage assets problem. *Qualitative Research in* Accounting & Management, 11(2), 146-164. https://doi.org/10.1108/ QRAM-04-2014-0035
- Bond, S., & Dent, P. (1998). Efficient management of public sector assets: The call for correct evaluation criteria and techniques. *Journal of Property Valuation and Investment*, 16(4), 369-385. https://doi. org/10.1108/14635789810228169
- Bowman, J. S., & Knox, C. C. (2008). Ethics in government: No matter how long and dark the night. *Public Administration Review*, 68(4), 627-639. https:// doi.org/10.1111/j.1540-6210.2008.00903.x
- 13. Coram, P., Ferguson, C., & Moroney, R. (2008). Internal

audit, alternative internal audit structures and the level of misappropriation of assets fraud. *Accounting and Finance, 48*(4), 543-559. https://doi.org/10.1111/ j.1467-629X.2007.00247.x

- Davis, J. (2007). What is asset management and where do you start? *Journal American Water Works Association*, 99(10), 26-34. https://doi. org/10.1002/j.1551-8833.2007. tb08042.x
- Dharma, F., Metalia, M., & Sembiring, O. I. S. (2023). Factors affecting quality of accounting information and its impact on local government fixed assets management's effectiveness: A study on local government of Indonesia. *The Indonesian Journal* of Accounting Research, 26(1), 49-84. https://doi.org/10.33312/ ijar.636
- Ehalaiye, D., Redmayne, N. B., & Laswad, F. (2021). Does accounting information contribute to a better understanding of public assets management? The case of local government infrastructural assets. *Public Money & Management,* 41(2), 88-98. https://doi.org/10.10 80/09540962.2020.1719669
- El Kaleh, E., & Samier, E. A. (2013). The ethics of Islamic leadership: A crosscultural approach for public administration. *Halduskultuur*, *14*(2), 188-211. Retrieved from http://halduskultuur.eu/journal/ index.php/HKAC/article/view/96
- Fernandes, C. C., Oliveira, M. de M., Sbragia, R., & Borini, F. M. (2017). Strategic assets in technology-based incubators in Brazil. *European Journal of Innovation Management*, 20(1), 153-170. https://doi.org/10.1108/ EJIM-04-2016-0043
- 19. Giglio, J. M., Friar, J. H., & Crittenden, W. F. (2018).

Integrating lifecycle asset management in the public sector. *Business Horizons*, 61(4), 511-519. https://doi.org/10.1016/j.bushor.2018.03.005

- Gonzalez-Caceres, A., Bobadilla, A., & Karlshøj, J. (2019). Implementing post-occupancy evaluation in social housing complemented with BIM: A case study in Chile. *Building and Environment, 158,* 260-280. https://doi.org/10.1016/j.buildenv.2019.05.019
- Greenlee, J., Fischer, M., Gordon, T., & Keating, E. (2007). An Investigation of Fraud in Nonprofit Organizations: Occurrences and Deterrents. *Nonprofit and Voluntary Sector Quarterly*, 36(4), 676-694. https://doi. org/10.1177/0899764007300407
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modelling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106-121. https://doi. org/10.1108/EBR-10-2013-0128
- Hanefah, M. M., Kamaruddin, M. I. H., Salleh, S., Shafii, Z., & Zakaria, N. (2020). Internal control, risk and Shari'ah noncompliant income in Islamic financial institutions. *ISRA International Journal of Islamic Finance, 12*(3), 401-417. https:// doi.org/10.1108/IJIF-02-2019-0025
- Hanis, M. H., Trigunarsyah, B., & Susilawati, C. (2011). The application of public asset management in Indonesian local government: A case study in South Sulawesi Province. *Journal of Corporate Real Estate*, 13(1), 36-47. https://doi. org/10.1108/14630011111120332
- Haque, S. M., & Ahmad, J. (2016). Islamic Ethics in public relations. *Journal of Education* and Social Sciences, 4, 189-193 Retrieved from http://eprints.usm. my/48822/1/KC4\_101.pdf
- Hia, J. I., Erlina, & Sirojuzilam. (2020). Analysis of the effect of the government internal control

system (GICS), implementation of government accounting standards (GAS), compliance with legislation and regional asset management on the quality of West Nias Regency Government financial reports. *International Journal of Research and Review*, 7(11), 31-37. Retrieved from https://www.ijrrjournal.com/ IJRR\_Vol.7\_Issue.11\_Nov2020/ IJRR006.pdf

- Kılınç, R., & Warner, C. M. (2015). Micro-foundations of religion and public goods provision: Belief, belonging, and giving in Catholicism and Islam. *Politics and Religion*, 8(4), 718-744. https://doi.org/10.1017/ S1755048315000747
- Kozak, M. (2011). Strategic approach to intellectual capital development in regions. *International Journal of Learning and Intellectual Capital*, 8(1), 76-93. https://doi.org/10.1504/ IJLIC.2011.037360
- Laihonen, H., & Mäntylä, S. (2018). Strategic knowledge management and evolving local government. *Journal of Knowledge Management*, 22(1), 219-234. https://doi.org/10.1108/JKM-06-2017-0232
- Le, T. T. H., & Tran, M. D. T. (2018). The effect of internal control on asset misappropriation: The case of Vietnam. *Business and Economic Horizons (BEH)*, 14(4), 941-953. http://dx.doi. org/10.22004/ag.econ.287239
- Lima, E. S., & Costa, A. P. C. S. (2019). Improving asset management under a regulatory view. *Reliability Engineering &* System Safety, 190, 106523. https:// doi.org/10.1016/j.ress.2019.106523
- Lonnqvist, A., Kapyla, J., Salonius, H., & Yigitcanlar, T. (2014). Knowledge that matters: Identifying regional knowledge assets of Tampere Region. *European Planning Studies*, 22(10), 2011-2029. https://doi.org/10.1080 /09654313.2013.814621
- Majid, R. A., Mohamed, N., Haron, R., Omar, N. B., & Jomitin, B. (2014). Misappropriation of Assets in Local Authorities: A Challenge

to Good Governance. *Procedia* -*Social and Behavioral Sciences*, 164, 345-350. https://doi.org/10.1016/j. sbspro.2014.11.086

- 34. Maletič, D., Pačaiová, H., Nagyová, A., Gomišček, B., & Maletič, M. (2021). Framework development of an asset manager selection based on risk management and performance improvement competencies. *Safety*, 7(1), 10. https://doi.org/10.3390/safety7010010
- McDonough, P. R., & Yan, J. C. (2023). Accounting policies in the public sector: Characteristics and consequences of accounting for capital assets. *Journal of Accounting and Public Policy*, 42(1), 107033. https://doi.org/10.1016/j. jaccpubpol.2022.107033
- 36. Molland, A., & Clift, R.
  (2008). Has the management of infrastructure assets
  (IAs) improved with the use of the accrual method in local government? *Asian Review of Accounting*, 16(2), 97-108. https://doi. org/10.1108/13217340810889915
- Muñoz-Villamizar, A., Rafavy, C. Y., & Casey, J. (2022). Machine learning and optimization-based modelling for asset management: A case study. *International Journal* of Productivity and Performance Management, 71(4), 1149-1163. https://doi.org/10.1108/ IJPPM-05-2020-0206
- Noble, D., Charles, M. B., & Keast, R. (2017). New development: Towards a collaborative competency framework to enhance public value in universityindustry collaboration. *Public Money & Management*, 37(5), 373-378. https://doi.org/10.1080/09540 962.2017.1328799
- Norziaton, I. K., Ridhuan, M. M. D., & Adura, N. A. N. (2018). Assets misappropriation in the Malaysian public and private sectors. *International Journal of Engineering & Technology*, 7(4.38), 773-777. https://doi.org/10.14419/ ijet.v7i4.38.27543
- Pocock, D., Shetty, N., Hayes, A., & Watts, J. (2014). Leveraging the relationship between BIM and

asset management. *Infrastructure Asset Management*, 1(1), 5-7. https://doi.org/10.1680/iasma.13.00013

- Ratmono, D., & Darsono, D. (2022). New public management and corruption: Empirical evidence of local governments in Indonesia. *Public and Municipal Finance*, 11(1), 54-62. https://doi. org/10.21511/pmf.11(1).2022.05
- Salem, Z. O., & Agil, S. O. S. (2012). The effects of Islamic management ethics on organizational commitment of employees in libyan public banks. *Australian Journal of Basic and Applied Sciences*, 6(7), 260-270. Retrieved from https://www. ajbasweb.com/old/ajbas/2012/ July/260-270.pdf
- Sandwick, J. A., Hassan, M. K., & Collazzo, P. (2021). Introduction to a guide to Islamic asset management. In J. A. Sandwick, M. K. Hassan, & P. Collazzo (Eds.), A Guide to Islamic Asset Management (pp. 14-18). Edward Elgar Publishing. Retrieved from https://www.academia. edu/76147978/Introduction\_to\_A\_Guide\_to\_Islamic\_Asset\_Management

- 44. Schandi, A., & Foster, P. L. (2019). *Coso Internal Control Integrated Framework: An Implementation Guide for the Healthcare Provider Industry.* COSO – Committee of Sponsoring Organizations of the Treadway Commission. Retrieved from https://pdf4pro.com/view/ coso-internal-control-integratedframework-5b7b57.html
- Schiuma, G., & Lerro, A. (2011). Managing knowledge assets in a complex business landscape: The relevance of emotive knowledge. *Knowledge Management Research* & Practice, 9(4), 279-285. https:// doi.org/10.1057/kmrp.2011.32
- Wang, D. (2017). Local governance and local knowledge. Open Journal of Business and Management, 5(3), 415-419. https://doi.org/10.4236/ ojbm.2017.53035
- Yigitcanlar, T., & Lönnqvist, A. (2013). Benchmarking knowledgebased urban development performance: Results from the international comparison of Helsinki. *Cities*, *31*, 357-369. https://doi.org/10.1016/j.cities.2012.11.005
- Yunanda, R. A., Shafii, Z., & Tareq, M. A. (2016). Accountability of

Islamic based non-profit sector: The case of WAQF organizations. *Jurnal Ekonomi Dan Bisnis Islam*, 2(2), 105-124. Retrieved from https://e-journal.unair.ac.id/ JEBIS/article/view/1965/pdf

- Yusrianti, H., Ghozali, I., & Yuyetta, N. E. (2020). Asset misappropriation tendency: Rationalization, financial pressure, and the role of opportunity (Study in Indonesian Government sector). *Humanities & Social Sciences Reviews*, 8(1), 373-382. https://doi.org/10.18510/ hssr.2020.8148
- 50. Zeb, J. (2017). An Eco Asset Ontology Towards Effective Eco Asset Management. Built Environment Project and Asset Management, 7(4), 388-399. https://doi.org/10.1108/BE-PAM-11-2016-0061
- 51. Zuashkiani, A., Rahmandad, H., & Jardine, A. K. S. (2011). Mapping the Dynamics of Overall Equipment Effectiveness to Enhance Asset Management Practices. *Journal of Quality in Maintenance Engineering*, *17*(1), 74-92. https://doi. org/10.1108/13552511111116268