

INVENTORY, ASSET ADMINISTRATION, AND HUMAN RESOURCE COMPETENCE IN OPTIMIZING REGIONAL FIXED ASSET MANAGEMENT

Andi Wahyuni Maftuha Burhanuddin¹, Abd. Azis Muthalib², Indira Yuana³,
Muh. Nur⁴, Asraf Yunus⁵

^{1, 2, 3, 4, 5}Sekolah Tinggi Ilmu Ekonomi Enam Enam Kendari, Jl. Bunga Kamboja, Sulawesi Tenggara, Indonesia
Email: wahyunimaftuha.wm@gmail.com

Article History

Received: 28-07-2026

Revision: 23-08-2026

Accepted: 28-08-2026

Published: 31-08-2026

Abstract. Optimizing fixed asset management is a crucial aspect of regional financial governance, as it requires accurate asset data, orderly administration, and competent personnel. This study aims to analyze the impact of inventorying, administration, and human resource competence on the optimization of fixed asset management within the Southeast Sulawesi Provincial Government. A quantitative approach was employed, utilizing a survey of 41 regional government agencies involved in asset management. Data were analyzed using multiple linear regression with SPSS software to examine the variables' effects both individually and simultaneously. The results indicate that inventorying, administration, and human resource competence have a simultaneous, positive, and significant impact on the optimization of fixed asset management ($F = 87.302$; $p < 0.001$), with the model explaining 87.6% of the variation in optimization ($R^2 = 0.876$). Individually, inventorying exerted the strongest influence ($\beta = 0.602$; $p < 0.001$), followed by human resource competence ($\beta = 0.267$; $p = 0.007$) and administration ($\beta = 0.166$; $p = 0.037$). These findings suggest that strengthening inventorying practices should be a priority for optimizing fixed asset management, supported by orderly administration and enhanced personnel competence.

Keywords: Asset Inventory, Asset Administration, Fixed Asset Management, Human Resource Competence, Local Government.

Abstrak. Optimalisasi pengelolaan aset tetap merupakan bagian penting dari tata kelola keuangan daerah karena memerlukan data aset yang akurat, penatausahaan yang tertib, dan aparatur yang kompeten. Penelitian ini bertujuan menganalisis pengaruh inventarisasi, penatausahaan, dan kompetensi sumber daya manusia terhadap optimalisasi pengelolaan aset tetap pada Pemerintah Provinsi Sulawesi Tenggara. Penelitian menggunakan pendekatan kuantitatif dengan survei terhadap 41 organisasi perangkat daerah yang terlibat dalam pengelolaan aset. Data dianalisis menggunakan regresi linear berganda dengan bantuan SPSS untuk menguji pengaruh variabel secara parsial dan simultan. Hasil penelitian menunjukkan bahwa inventarisasi, penatausahaan, dan kompetensi sumber daya manusia secara simultan berpengaruh positif dan signifikan terhadap optimalisasi pengelolaan aset tetap ($F = 87,302$; $p < 0,001$), dengan model menjelaskan 87,6% variasi optimalisasi pengelolaan aset tetap ($R^2 = 0,876$). Secara parsial, inventarisasi memiliki pengaruh paling kuat ($\beta = 0,602$; $p < 0,001$), diikuti kompetensi sumber daya manusia ($\beta = 0,267$; $p = 0,007$) dan penatausahaan ($\beta = 0,166$; $p = 0,037$). Temuan ini menunjukkan bahwa penguatan inventarisasi perlu menjadi prioritas dalam optimalisasi pengelolaan aset tetap, dengan dukungan penatausahaan yang tertib dan peningkatan kompetensi aparatur.

Kata Kunci: Inventarisasi Aset, Penatausahaan Aset, Pengelolaan Aset Tetap, Kompetensi SDM, Pemerintah Daerah

How to Cite: Burhanuddin, A. W. M., Muthalib, A. A., Yuana, I., Nur, M. & Yunus, A. (2026). Inventory, Asset Administration, and Human Resource Competence in Optimizing Regional Fixed Asset Management. *HORIZON: Indonesian Journal of Multidisciplinary*, 4 (4), 6016-6027. <http://doi.org/10.54373/hijm.v4i4.7441>

INTRODUCTION

Fixed asset management is a core component of public financial governance because government assets represent public wealth, service capacity, and long-term fiscal responsibility. In local governments, fixed assets such as land, buildings, equipment, infrastructure networks, and construction in progress are not merely accounting objects; they are resources that support the delivery of public services and the achievement of development objectives. Consequently, effective asset management requires more than accurate recording. It involves the integration of inventory, administrative control, documentation, utilization, monitoring, and institutional capacity throughout the asset lifecycle. Contemporary public asset management research has therefore shifted from a predominantly compliance-oriented approach toward a broader perspective that emphasizes asset information quality, lifecycle management, utilization, digital systems, internal control, and organizational capability as determinants of public value (Hanis et al., 2011; Kaganova & McKellar, 2006; Too & Too, 2010; Zailani et al., 2024).

This development indicates that inventory, administration, and human resource competence should not be viewed as isolated elements of asset management. Asset inventory provides the factual basis for knowing what assets exist, where they are located, and what condition they are in; asset administration transforms this information into legally and financially accountable records; while human resource competence determines whether these processes can be performed accurately, consistently, and in accordance with applicable regulations. Earlier studies primarily emphasized administrative completeness and stewardship responsibility, whereas more recent research has increasingly connected asset information with integrated information systems, internal control, risk management, maintenance, sustainability, and evidence-based decision-making (Amadi-Echendu et al., 2010; El-Akruti et al., 2013; Love et al., 2016; Schillemans et al., 2021; Sumaryana & Komara, 2024). Thus, the state of the art suggests that optimization of public fixed assets is increasingly understood as an organizational process in which reliable asset data, sound administrative practices, and capable personnel interact to support effective asset utilization and accountability.

This integrated perspective is particularly relevant in Indonesia. Regional governments manage substantial public assets under regulatory requirements that demand accurate inventory, legal ownership, administrative documentation, reporting, and utilization. However, empirical studies continue to identify problems involving fragmented asset data, incomplete ownership

documentation, weak coordination, inadequate information systems, and limitations in human resource competence (Hanis et al., 2011; Masdjojo & Dewi, 2018; Tirayoh et al., 2021). These problems indicate that weaknesses in one component can affect the functioning of other components. Inaccurate inventory data, for example, can complicate administrative reconciliation, while weak administrative capacity can prevent existing asset information from being transformed into reliable reports and management decisions. Similarly, even well-designed procedures may not produce optimal outcomes when officers lack the technical and managerial competence required to implement them.

The Government of Southeast Sulawesi Province provides an important empirical context for examining this issue. The provincial government manages fixed assets distributed across 17 districts and cities, including land, equipment and machinery, buildings, roads, irrigation networks, other fixed assets, and construction in progress. The 2024 regional asset report recorded 3,006,215 asset units with a total value of IDR 17,484,487,523,983.00. Despite the substantial scale of these public resources, asset-governance problems remain, including uncertified land, assets controlled by unauthorized parties, missing assets, and assets being utilized without sufficient supporting documentation. These conditions suggest that the challenge is not simply the size of the provincial asset portfolio but the capacity of the asset-management system to produce accurate information, maintain adequate administrative control, and ensure that responsible officers possess the competencies required for effective management.

Previous empirical studies provide useful but fragmented explanations of these problems. Some studies have found that asset inventory contributes significantly to the optimization of fixed asset management because accurate identification, classification, and recording provide a reliable basis for control and utilization. Other studies emphasize the importance of asset administration, particularly documentation, bookkeeping, reporting, and reconciliation, in strengthening accountability and improving asset management. Meanwhile, studies focusing on human resources indicate that officer competence influences the quality of inventory, recording, reporting, and utilization processes. However, these findings do not always lead to consistent conclusions. The influence of inventory and administration may depend on data quality, regulatory implementation, information technology, organizational coordination, and the competence of personnel responsible for asset management (Kusumastuti et al., 2023; Naomi & Hadiprajitno, 2023; Wicaksana et al., 2021; Yulianti et al., 2024).

The research gap therefore extends beyond the limited number of studies examining these variables together. What remains insufficiently explained is how inventory, administration, and human resource competence collectively contribute to fixed asset management optimization within a complex provincial-government environment. Studies that examine these factors separately provide evidence about individual determinants but offer less insight into whether accurate inventory and sound administration are sufficient when the personnel responsible for implementing them have different levels of competence. Conversely, competence may not produce better asset management when inventory systems and administrative procedures remain weak. The unresolved issue is consequently the extent to which these three dimensions operate as complementary organizational capacities rather than as independent administrative requirements.

A further empirical gap concerns the geographical context of public asset management research in Indonesia. Existing studies have been concentrated largely in Java, Sumatra, and selected national or local government institutions, while empirical evidence from provincial governments in Eastern Indonesia remains comparatively limited. This geographical gap matters because asset management in Eastern Indonesia may involve different administrative and geographic challenges, including assets dispersed across large areas, variations in institutional capacity, coordination difficulties, and differences in infrastructure and information-system availability. Southeast Sulawesi is therefore not merely an additional research location but a context in which the relationship between asset-management practices and organizational capacity can be examined under conditions that are less represented in the existing literature.

The novelty of this study lies in integrating asset inventory, asset administration, and human resource competence within a single explanatory framework for fixed asset management optimization at the provincial-government level, while extending empirical evidence to Southeast Sulawesi as an underrepresented Eastern Indonesian context. Rather than treating inventory, administration, and competence as separate technical requirements, this study conceptualizes them as interconnected organizational capacities. Inventory determines the availability and accuracy of asset information, administration establishes the legal, financial, and reporting basis for control, and human resource competence enables these processes to be implemented effectively. Examining their influence simultaneously allows the study to identify whether asset-management optimization is primarily associated with individual administrative practices or with the combined capacity of the asset-management system.

Accordingly, this study aims to analyze the influence of asset inventory, asset administration, and human resource competence on fixed asset management optimization in the Government of Southeast Sulawesi Province, both partially and simultaneously. By examining these relationships within one analytical framework, the study seeks to provide empirical evidence on the organizational factors that support effective public asset management and to contribute to the development of more integrated asset-governance practices in regional government.

METHOD

This study used a quantitative explanatory design to test the effect of asset inventory, asset administration, and human resource competence on fixed asset management optimization. The research was conducted in the Government of Southeast Sulawesi Province, with the unit of analysis consisting of regional apparatus organizations responsible for managing and reporting fixed assets. The population comprised 41 regional apparatus organizations, and all units were included as respondents using a census approach.

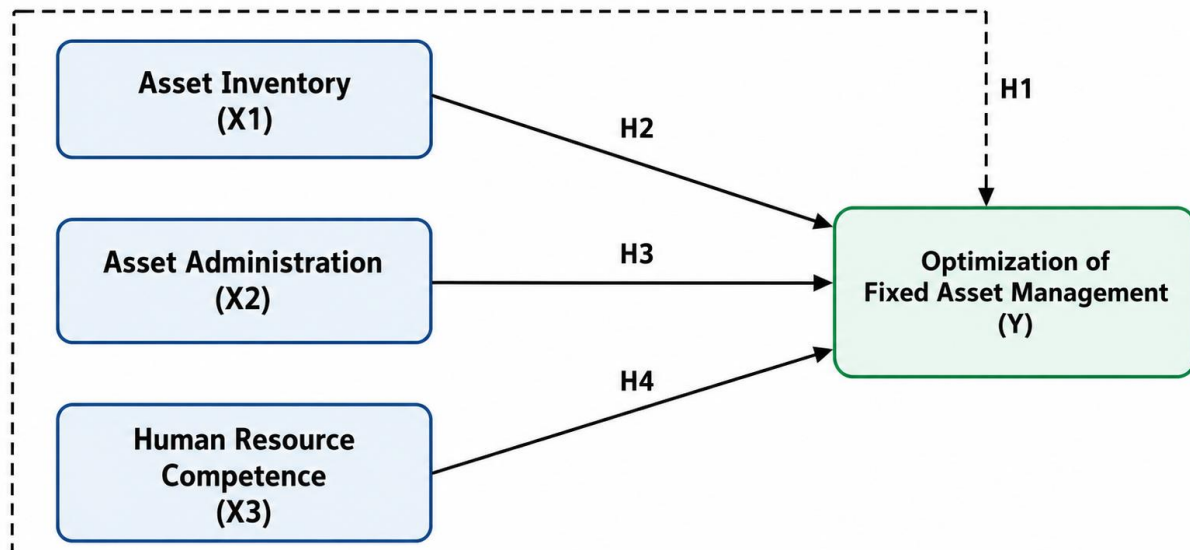


Figure 1. Conceptual framework of the study

The research variables consisted of asset inventory (X1), asset administration (X2), human resource competence (X3), and fixed asset management optimization (Y). Asset inventory was operationalized through organizational responsibility, understanding of inventory management, tracking and control, and physical/information system management. Asset administration was measured through bookkeeping and reporting discipline. Human resource competence was

reflected in knowledge, skills, attitudes, and experience. Fixed asset management optimization was measured through administrative order, efficiency and effectiveness of asset use, asset utilization, and availability of accurate information. Data were collected using a structured questionnaire based on a five-point Likert scale. The collected data were analyzed using SPSS version 25. The analysis included descriptive statistics, normality testing using the Kolmogorov-Smirnov test, multicollinearity testing using tolerance and variance inflation factor values, heteroscedasticity testing through residual scatterplot inspection, and multiple linear regression. Hypothesis testing was performed using the F-test for simultaneous effects and t-tests for partial effects at a 5% significance level.

RESULTS

The regression assumptions were examined before hypothesis testing to ensure that the data met the requirements for multiple linear regression. The decision criteria were established prior to interpretation. For the Kolmogorov-Smirnov normality test, the residuals were considered normally distributed when the significance value was greater than 0.05. For multicollinearity, the model was considered free from multicollinearity when the tolerance value was greater than 0.10 and the Variance Inflation Factor (VIF) was below 10. Heteroscedasticity was assessed through the standardized residual scatterplot, with the absence of a systematic pattern or funnel-shaped distribution indicating that the assumption was satisfied.

The Kolmogorov-Smirnov test produced a significance value of $p = .067$, which was greater than the 0.05 significance level. Therefore, the null hypothesis of normally distributed residuals was not rejected, indicating that the residuals did not show a significant deviation from normality. The multicollinearity test also met the predetermined criteria. The tolerance values for inventory, asset administration, and human resource competence were .275, .569, and .388, respectively, all exceeding .10. Their corresponding VIF values were 3.632, 1.758, and 2.577, respectively, all below 10. Thus, no problematic multicollinearity was identified among the independent variables. The standardized residual scatterplot showed a random distribution without a clear systematic or funnel-shaped pattern, indicating that the regression model did not exhibit an apparent heteroscedasticity problem. Based on these criteria, the regression model satisfied the main assumptions required for multiple linear regression analysis.

Table 1. Regression assumption tests

Test	Indicator	Result	Decision
Normality	Kolmogorov-Smirnov p-value	.067	Residuals normally distributed
Multicollinearity	Tolerance / VIF	X1 = .275 / 3.632; X2 = .569 / 1.758; X3 = .388 / 2.577	No multicollinearity
Heteroscedasticity	Residual scatterplot	Random residual distribution	No heteroscedasticity pattern

Table 2 presents the multiple regression results. Inventory had the strongest standardized coefficient ($\beta = .602$, $t = 5.464$, $p < .001$), followed by human resource competence ($\beta = .267$, $t = 2.873$, $p = .007$) and asset administration ($\beta = .166$, $t = 2.162$, $p = .037$). Because all three p-values were below the 0.05 significance level, inventory, asset administration, and human resource competence each had a statistically significant positive effect on fixed asset management optimization.

Table 2. Multiple regression results

Predictor	B	Std. Error	β	t	p
Constant	.089	.263	-	.339	.736
Inventory (X1)	.611	.112	.602	5.464	< .001
Asset Administration (X2)	.168	.078	.166	2.162	.037
Human Resource Competence (X3)	.189	.066	.267	2.873	.007

The simultaneous test confirmed that inventory, asset administration, and human resource competence jointly contributed to fixed asset management optimization. The F-statistic was 87.302 with $p < .001$, which was below the 0.05 significance level. Therefore, the regression model was statistically significant. The coefficient of determination ($R^2 = .876$) indicates that 87.6% of the variance in fixed asset management optimization was explained jointly by the three independent variables, while the remaining 12.4% was associated with other factors outside the model.

Table 3. Model summary and simultaneous test

R	R ²	Adjusted R ²	Std. Error	F	p
.936	.876	.866	.310	87.302	< .001

DISCUSSION

The simultaneous role of inventory, administration, and human resource competence

The findings demonstrate that asset inventory, asset administration, and human resource competence jointly form an integrated mechanism for optimizing fixed asset management. This result aligns with the state-of-the-art view that public asset management is not only a technical recording activity but also a governance system requiring reliable data, disciplined administrative processes, and competent personnel. In the context of Southeast Sulawesi Province, the high explanatory power of the model suggests that fixed asset problems cannot be solved through inventory updates alone; they require simultaneous improvement in administration and the human capacity of asset officers.

This evidence supports public asset management frameworks that emphasize the interaction between asset information, organizational processes, and institutional capability (Hanis et al., 2011; Kaganova & McKellar, 2006; Too & Too, 2010). It also extends empirical research in Indonesian local governments by showing that the combination of inventory, administration, and competence explains a large proportion of fixed asset management optimization. The result is particularly meaningful because the province faces complex asset issues, including uncertified land and incomplete documentation. These issues require coordinated improvements rather than fragmented technical corrections.

Inventory as the dominant predictor of fixed asset optimization

Inventory was the strongest predictor of fixed asset management optimization. This finding confirms that reliable asset data are the foundation for asset utilization, maintenance planning, reporting, and accountability. When asset inventory is accurate, updated, and supported by physical verification and information systems, government agencies are better able to identify asset location, condition, ownership status, utilization potential, and administrative risk. Conversely, weak inventory increases the likelihood of idle assets, missing assets, legal disputes, and inaccurate balance sheet reporting. The dominance of inventory is consistent with studies showing that public sector asset management depends heavily on asset identification and accurate asset registers (Amadi-Echendu et al., 2010; Hanis et al., 2011; Naomi & Hadiprajitno, 2023). In practical terms, this result indicates that the Government of Southeast Sulawesi Province should prioritize periodic asset census, physical verification, geotagging, ownership document validation, and integration

between asset records and accounting systems. These efforts can reduce information asymmetry and support more strategic decisions about asset utilization or disposal.

Asset Administration and the Discipline of Public Accountability

Asset administration had a positive and significant effect on fixed asset optimization, although its coefficient was lower than inventory and competence. This finding indicates that bookkeeping and reporting remain important but may depend on the quality of inventory data and the competence of the officers who prepare reports. Asset administration strengthens accountability by ensuring that assets are recorded according to classification codes, reported periodically, and incorporated into regional financial statements. This result is consistent with public financial management literature, which argues that administrative discipline is crucial for reliable financial reporting and public accountability (Brusca et al., 2016; Christiaens et al., 2015; Tran & Noguchi, 2020). In Southeast Sulawesi, better administration can improve transparency in fixed asset reporting and reduce risks of misstatement, misuse, or unsupported asset claims. However, the relatively smaller coefficient suggests that administration should not be treated as a mere compliance routine; it must be linked to data verification, internal control, and strategic asset utilization.

Human Resource Competence as an Enabling Capability

Human resource competence also significantly improved fixed asset management optimization. This supports the argument that asset management performance depends on the knowledge, skills, attitudes, and experience of asset officers. Competent officers are better able to understand regulations, classify assets, operate asset information systems, prepare reports, coordinate with other units, and identify risks in asset use. In contrast, limited competence may lead to inaccurate records, delayed reporting, incomplete documentation, and weak follow-up on asset problems. The finding is consistent with resource-based and capability perspectives, which view employee competence as a strategic organizational resource (Barney, 1991; Kuntz et al., 2013; Wright & McMahan, 2011). It also corresponds with Indonesian evidence that technical competence, internal control, and information systems are important determinants of regional asset management quality (Masdjojo & Dewi, 2018; Yulianti et al., 2024). Therefore, asset management reform in Southeast Sulawesi should include competency mapping, certification, continuous

technical training, and communities of practice for asset officers across regional apparatus organizations.

CONCLUSION

This study concludes that inventory, asset administration, and human resource competence have a positive and significant simultaneous effect on fixed asset management optimization in the Government of Southeast Sulawesi Province. Partially, inventory has the strongest effect, followed by human resource competence and asset administration. These findings indicate that fixed asset optimization requires accurate asset data, disciplined bookkeeping and reporting, and competent asset officers capable of translating regulations into effective practice. Theoretically, this study contributes to public asset management literature by integrating three important determinants inventory, administration, and competence—within a provincial government context in Eastern Indonesia. Practically, the results suggest that government asset reforms should prioritize periodic inventory updates, integrated asset information systems, stronger administrative control, and continuous capacity development for asset managers.

RECOMMENDATIONS

Based on the findings, the following recommendations are proposed.

- Asset inventory should be prioritized. The provincial government should conduct regular physical verification, validate ownership documents, maintain updated digital registers, and reconcile inventory data with financial records. Particular attention should be given to assets with incomplete documentation or discrepancies between physical and administrative records.
- Human resource competence should be strengthened. Asset officers should receive regular training, technical assistance, and competency evaluations covering asset identification, classification, recording, reporting, information-system use, and regulatory compliance.
- Asset administration should be standardized. The government should improve bookkeeping, reporting timeliness, document completeness, internal review, and reconciliation between asset-management and financial-reporting units.
- These measures should be implemented in an integrated manner. Coordination among asset officers, financial units, and relevant organizational units is necessary to ensure consistency from asset identification through recording, reporting, and utilization.

- Future research could examine other factors, such as internal control, information technology, leadership commitment, regulatory support, organizational culture, and asset utilization. Comparative studies across regions or government levels may also provide broader insights.

REFERENCES

- Amadi-Echendu, J. E., Willett, R., Brown, K., Hope, T., Lee, J., Mathew, J., Vyas, N., & Yang, B. S. (2010). What is engineering asset management? In J. E. Amadi-Echendu et al. (Eds.), *Definitions, concepts and scope of engineering asset management* (pp. 3-16). Springer.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Brusca, I., Caperchione, E., Cohen, S., & Manes Rossi, F. (2016). *Public sector accounting and auditing in Europe: The challenge of harmonization*. Palgrave Macmillan.
- Christiaens, J., Vanhee, C., Manes Rossi, F., Aversano, N., & Van Cauwenberge, P. (2015). The effect of IPSAS on reforming governmental financial reporting: An international comparison. *International Review of Administrative Sciences*, 81(1), 158-177. <https://doi.org/10.1177/0020852314546580>
- Cohen, S., & Karatzimas, S. (2017). Accounting information quality and decision-usefulness of governmental financial reporting. *Meditari Accountancy Research*, 25(1), 95-113.
- El-Akruti, K., Dwight, R., & Zhang, T. (2013). The strategic role of engineering asset management. *International Journal of Production Economics*, 146(1), 227-239. <https://doi.org/10.1016/j.ijpe.2013.07.002>
- 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.
- Hood, C. (1995). The new public management in the 1980s: Variations on a theme. *Accounting, Organizations and Society*, 20(2-3), 93-109. [https://doi.org/10.1016/0361-3682\(93\)E0001-W](https://doi.org/10.1016/0361-3682(93)E0001-W)
- Kaganova, O., & McKellar, J. (Eds.). (2006). *Managing government property assets: International experiences*. Urban Institute Press.
- Kusumastuti, R., Ghozali, I., & Fuad, F. (2023). Asset inventory and local government asset performance: Evidence from Indonesia. *Public and Municipal Finance*, 12(1), 59-72.
- Love, P. E. D., Zhou, J., Matthews, J., Lavender, M., & Morse, T. (2016). Managing rail infrastructure for a digital future: Future-proofing of asset information. *Transportation Research Part A: Policy and Practice*, 110, 161-176.
- Masdjojo, G. N., & Dewi, R. S. K. (2018). Local government asset management: Affecting factors and policy implications. *Economics World*, 6(4), 314-324. <https://doi.org/10.17265/2328-7144/2018.04.007>
- Naomi, N., & Hadiprajitno, P. B. (2023). The effect of asset procurement planning, regulation, asset inventory, information systems and human resources competence on fixed assets optimization. *Journal of Business and Technology*, 4(2), 153-165.
- Schillemans, T., Overman, S., Flinders, M., Laegreid, P., Maggetti, M., Papadopoulos, Y., & Wood, M. (2021). Understanding felt accountability: The institutional antecedents of the felt accountability of agency-CEO's to central government. *Governance*, 34(3), 893-916.

- Sumaryana, A., & Komara, E. (2024). Rethinking local government asset management in Indonesia: Governance, planning, and policy evaluation. *Journal of Contemporary Governance and Public Policy*, 5(2), 98-116.
- Tirayoh, V. Z., Karamoy, H., & Rondonuwu, S. (2021). Public sector asset management in the government of Indonesia: A case study. *Jurnal Bina Praja*, 13(2), 241-253.
- Too, E. G., & Too, L. (2010). Strategic infrastructure asset management: A conceptual framework to identify capabilities. *Journal of Corporate Real Estate*, 12(3), 196-208.
- Tran, Y. T., & Noguchi, M. (2020). Public sector accounting reforms in Vietnam and their implications for accountability. *Public Money & Management*, 40(8), 583-593.
- Wicaksana, A., Putra, I. B., & Rahmawati, E. (2021). Asset inventory and fixed asset management optimization in local government. *Journal of Accounting and Public Finance*, 9(3), 179-190.
- Wright, P. M., & McMahan, G. C. (2011). Exploring human capital: Putting human back into strategic human resource management. *Human Resource Management Journal*, 21(2), 93-104.
- Yulianti, L., Rahayu, S., & Pramono, B. (2024). Determinants of heavily damaged fixed assets management in government organizations. *Jurnal Apresiasi Ekonomi*, 12(1), 125-139.
- Zailani, S., Iranmanesh, M., Aziz, A. A., & Kanapathy, K. (2024). Digital transformation and sustainability in public sector asset management. *Sustainable Futures*, 7, 100158.