

Determinants of Asset Utilization of Yogyakarta Special Region Government

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Abstract

Regional assets are an essential resource for local governments as the primary support for local revenue. Therefore, local governments must be able to manage assets adequately. The variables that affect the probability of using local government assets in the Special Region of Yogyakarta are population density and health facilities. Variables of land area, GRDP, and educational facilities have not increased the probability of asset utilization in the Special Region of Yogyakarta. The various problems and challenges faced in asset management must be addressed immediately by carrying out reforms in regional government asset management.

Keywords: asset utilization, regional assets, logistical models

JEL classification: C35, H41, H70, R53

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1. Introduction

One of the sectors expected to be a potential resource to support regional development and be useful as a strategic channel in improving the quality of public services is the sector real-estate (land and buildings). Land and building assets, as the main components of local government assets (Summerell, 2005), must be able to be used as productive and useful assets so that they have a positive impact on local economic development and community welfare (Batara, Sadik, & Ahmad, 2015). The existence of widespread decentralization has often shifted large property portfolios from central to local governments. However, at the same time, city or local governments are usually not ready to face various problems related to the role of property owners and managers (Hanis, Trigunarsyah, & Susilawati, 2010a), so that many issues arise regarding the management of regional assets

(Kompasiana, 2016; Romlah, 2018; Suparman & Sangadji, 2018; Irawan, 2018). This requires a paradigm shift in the approach to public land and building assets. Such a portfolio should be considered a strategic asset, rather than viewing most public property as a cost, which can facilitate the vision and goals of local government authorities (Galamba & Nielsen, 2016).

Regional assets are an essential resource for local governments as the primary support for local revenue. Therefore, it is important for local governments to be able to manage assets adequately (Hanis, Trigunarsyah, & Susilawati, 2010b; Hanis et al., 2010a; Showers, 2013; Tukunang, 2016). In asset management, local governments must take into account the aspects of planning needs and budgeting, procurement, receipt, storage and distribution, use, administration, utilization or use, security and maintenance, appraisal, elimination, transfer,

guidance, supervision and control, financing and demand. The compensation so that regional assets are able to provide optimal contributions to the local government concerned (Hasfi, 2013; Pratama & Pangayow, 2016).

The main problem in regional assets or the management of restricted public goods is the poor management of data on regional public goods such as manual data collection and poor application of local asset data. As a result, it is difficult for local governments to know with certainty that assets are controlled or managed, so that investments managed by the government regions tend not to be used optimally (Pekei & Hadiwidjojo, 2014). Asset management as a type of business process is highly dependent on a large amount of data from which relevant information can be generated and used for decision making during the asset life cycle (Brous, Janssen, & Herder, 2019; Assey & Chachage, 2016). Various technologies have produced various models of value creation in the public sector (Criado & Gilgarcia, 2019). The scarcity of resources also opens opportunities for various forms of partnership with the private sector (Alexander, 2003; Moiola, Boniotti, Konsta, & Pili, 2018; Wojewnik & Rymarzak, 2013). Asset optimization is a work process in asset management that aims to optimize the physical potential, location, value, volume, law, and economy of assets (Simanjuntak & Munizar, 2017). As part of this activity, there is a need to describe the state of the property, integrate various data (records, legal, technical, and economic-financial), not only for accounting purposes but also to apply them in the process of managing these assets (Trojanek, 2015).

Asset facilities of Yogyakarta Special Region Government, especially inadequate building assets and unprofessional management, untreated buildings, while land assets are not maintained and are allowed to overgrown with weeds or bushes. There are several assets whose ownership is not clear. Asset valuation is less professional and is not supported by adequate human resource capabilities. The socialization of asset utilization through Public-Private Partnerships has not been carried out optimally. Reductions in public agency budgets imply that it

is becoming increasingly difficult to finance public works, and this applies to property as well. Two strategies are in progress: to reinforce the (public) spending of money reasons; and to devise new strategies to make processes more efficient, such as information systems. However, it seems that this kind of approach is inadequate due to a lack of resources, both economic and human (such as the number of skilled public officials, etc.). Therefore, the scarcity of resources creates opportunities to open various forms of partnerships with private players: sponsors, entrepreneurs, and tenants (Moioli et al., 2018; Wojewnik & Rymarzak, 2013). Public-Private Partnerships are about negotiating a deal that is good for both parties. The private sector wants to get a return on its ability to invest and perform. The public sector wants contracts where there is an incentive for private sector suppliers to provide services on time and to a specified standard (Alexander, 2003).

The idea of creating public value in digital governance is very important and has received increasing attention in recent years. Various technologies have produced various models of value creation in the public sector (Criado & Gilgarcia, 2019). Asset management as a type of business process is highly dependent on a large amount of data from which relevant information can be generated and used for decision making during the asset life cycle. Therefore, it is important to understand how the adoption of the Internet of Things (IoT) affects decision making in the asset management business process in order to achieve the expected benefits and mitigate known and unknown risks (Brous et al., 2019; Assey & Chachage, 2016).

Asset optimization is a work process in asset management that aims to optimize the physical potential, location, value, volume, law, and economy of assets (Simanjuntak & Munizar, 2017). In both the (former) private sector and the public sector, the approach to real estate as an asset has been redefined. Property is increasingly perceived as a strategic stock, indispensable to achieve organizational goals. Real estate classification requires knowledge of stock size and structure, giving rise to the need for inventory and

recording changes. As part of this activity, there is a need to describe the state of the property, integrate various data (records, legal, technical and economic-financial), not only for accounting purposes but also to apply them in the process of managing these assets (Trojanek, 2015).

Dent (1997) research has highlighted issues relating to the recording, valuation and reporting of local authority assets in the UK. Various efforts have been made to help overcome these problems, but it is still necessary to develop a more authentic valuation model for certain assets. Research is continuing in an effort to develop a more appropriate methodology. Further research on the management of state assets conducted by Lu (2011) in the United States shows that legal and regulatory factors, organizational structure, asset management processes, human resource strategy, information and technology, monitoring, integrity and transparency are mutually exclusive factors. They were relating to the implementation of public asset management.

Abdullah, Razak, Hanafi, & Salleh (2011) found that there are five main problems related to the management of assets belonging to the Malaysian government, namely the lack of a proper property management unit, lack of expertise, inappropriate strategies, lack of proper management procedures, and lack of use of information technology. This study supports Grubišić (2009) study in Croatia, where a lack of reliable information on existing public assets hinders the determination of asset value. As a result, assets are managed on an ad-hoc basis and are often reactive in nature.

Hanis, Trigunaryah & Susilawati (2011) aims to identify the main challenges faced by local governments in Indonesia when adopting a public asset management framework. His findings indicate that there are significant challenges that local governments must manage in adopting a public asset management framework. The absence of an institutional and legal framework to support asset management applications, the non-profit principle of public assets, multiple jurisdictions in the asset management process, the complexity of local government objectives, unavailability of data for managing public assets,

and limited human resources.

Research related to the management of local government assets has been carried out, but only uses qualitative descriptive analysis tools such as those conducted by Setyawan & Herijanto (2012); Hasfi (2013); Afandi & Khairani (2013); Mukaddas (2013); Nancy (2015); Suryani, Erviantono & Winaya (2015); and Tukunang (2016). This research was conducted to correct the shortcomings of previous research and aims to analyze the determinants of asset utilization of Yogyakarta Special Region Government with the quantitative model.

2. RESEARCH METHOD

This study uses the Logit Model analysis tool. The model, according to Gujarati (2012) is a non-linear regression model that produces an equation in which the dependent variable is categorical. The most basic category of the equation is *binary values* such as the numbers 0 and 1. These numbers represent a certain category that results from calculating the probability of the category occurring.

The logit model regression equation is obtained from the derivation of the probability equation from the categories to be estimated. The probability equation is:

$$P_i = E(Y = 1)|X_i = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}} \quad (1)$$

The equation can be simplified by assuming $(\beta_1 + \beta_2 X_i)$ is Z_i resulting in the following equation:

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{e^{Z_i}}{1 + e^{Z_i}} \quad (2)$$

Equation (1) is a non-linear equation, so it needs to be linearized by applying natural logarithms to category 0 as in the following equation:

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \quad (3)$$

Equation (3) can be substituted by equation (2) becomes:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{Z_i}}{1 + e^{-Z_i}} \quad (4)$$

The equation $\frac{P_i}{1-P_i}$ is called the likelihood ratio (*odds-ratio*), the category with a value of 1, in this study, the use of regional assets. If $P_i = 0.9$, then the tendency to do the greater utilization of regional assets.

Furthermore, by applying the natural logarithm of the *ratios*, odds would result in the following equation:

$$L_i = \ln \left(\frac{P_i}{1-P_i} \right) = Z_i = \beta_1 + \beta_2 X_1 + u_i \quad (5)$$

In the equation, is the log of the *odds ratio*, which is not only linear with respect to X but also linear with respect to the parameter β . The value of is a constant indicating that the probability of utilizing regional assets is when the other variables are zero.

Value is a measure of the contribution of each independent variable. If is positive, an increase in the variable by one unit will increase the probability of utilizing regional assets by . Conversely, if is negative, then an increase in the variable by one unit will reduce the probability of utilizing regional assets by .

The logistic regression model used in this study is:

$$L_i = \ln \left(\frac{P_i}{1-P_i} \right) = \beta_1 + \beta_2 X_{1t} + \dots + \beta_i X_{it} + u_i \quad (6)$$

equal to 1 if there is a regional asset utilization and 0 if there is no local asset utilization. Variable X_i shows the independent variables, namely the area of land assets (AREA), Gross Regional Domestic Product (GRDP), population density (POP), health facilities (HEALTH), educational facilities (SCHOOL), trade facilities (MARKET) and financial facilities (BANK).

3. Results and Discussion

3.1 Results

The utilization of assets depends on many factors, such as economic growth, population density, and supporting facilities. Some assets cannot be utilized efficiently and productively due to unorganized administration and the legality of

asset, apart from physical condition of assets. Safeguarding and managing regional assets is the need for orderly administration, law and physics. The starting point for asset management is the archive documentation. Is the asset recorded correctly because this asset is the basic capital for the revenue of DIY's regional government. For example, a building can be rented or borrowed. This asset is important to be in the inventory for the benefit of the people as well as to increase the local revenue. It is necessary to have an orderly administration so that the data is easily accessible to the public so as to create efficiency in the management of regional assets. The DIY regional government plans to establish a special regional company to manage assets owned by the DIY regional government. In order to avoid depreciation of regional income from asset management. So far, asset management in DIY is still not optimal. There are still many assets owned by the DIY government that are not well maintained. So that this has an effect on regional income specifically in the field of assets. In the future, the management of these regional companies will be protected by law through regional regulations on local corporate governance in the asset sector. Later, all DIY government assets will be managed by the regional company, especially assets that can be used to increase regional income.

The logistic regression results in Table 1 show that the variables that affect the probability of using local government assets in the Special Region of Yogyakarta (DIY) are population density and health facilities. The higher the population density in an area, the higher the possibility of using local government assets, because it increases the economic potential of the assets. Other variables, namely land area, GRDP, and educational facilities, have not been able to increase the probability of asset utilization. The population density have the bigger odd ratio. Its mean that the propensity to utilize the asset much bigger as the increase of population density compared with health facilities.

Table 1. Logistic Regression Model 1

Variable	coefficient	Prob.	Odd Ratio
AREA	3.27E-05	0.3111	1.000032721
GRDP	-2.815694	0.3578	0.059756747
POP	4.428118	0.0598*	84.00833672
HEALTH	-12.53160	0.0247*	3.58225E-06
SCHOOL	7.490163	0.2021	1798.837472

Note: significant at 5% significance level

If the model developed uses only independent variables related to infrastructure, namely health facilities, school facilities, trade facilities, and financial facilities, the regression results can be seen in table 2. The results show a difference with the first alternative model, where all facilities other than health facilities have an effect on the probability of utilizing local government assets in the Special Region of Yogyakarta.

Table 2. Logistic Regression Model 2

Variable	coefficient	Prob.	Odd Ratio
HEALTH	-0.887883	0.7527	0.411295216
SCHOOL	-14.32360	0.0132*	5.96223E-07
MARKET	7.020996	0.0013*	1124.880885
BANK	5.037253	0.0120*	154.5373695

Note: significant at 5% significance level

According to Simanjuntak & Munizar (2017), infrastructure asset management can improve sustainable development. The facilities of trade and financial as the most dominant factor in influencing the propensity of asset utilization of Yogyakarta Special Region Government. The existence of facilities for economic activity can improve asset utilization due to an increase in business prospects. Assets can be used for productive activities, thereby increasing regional revenue (Constantin, Mitrut, Grosu, Profiroiu, & Iosif, 2018).

3.2 Discussion

Asset facilities, especially inadequate building assets and unprofessional management, untreated buildings, while land assets are not maintained and are allowed to over grow with weeds or bushes. There are several assets whose ownership is not clear. Asset valuation is less professional and is not supported by adequate

human resource capabilities. The socialization of asset utilization through Public-Private Partnerships has not been carried out optimally. Reductions in public agency budgets imply that it is becoming increasingly difficult to finance public works, and this applies to property as well. Two strategies are in progress: to reinforce the (public) spending of money rationale; and to devise new strategies to make processes more efficient, such as information systems. However, it seems that this kind of approach is inadequate due to a lack of resources, both economic and human (such as the number of skilled public officials, etc.). Therefore, the scarcity of resources creates opportunities to open various forms of partnerships with private players: sponsors, entrepreneurs, and tenants (Moioli et al., 2018; Wojewnik & Rymarzak, 2013). Public-Private Partnerships are about negotiating a deal that is good for both parties. The private sector wants to get a return on its ability to invest and perform. The public sector wants contracts where there is an incentive for private sector suppliers to provide services on time and to a specified standard (Alexander, 2003).

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perceived as a strategic stock, indispensable for achieving organizational goals. Real estate classification requires knowledge of stock size and structure, giving rise to the need for inventory and recording changes. As part of this activity, there is a need to describe the state of the property, integrate various data (records, legal, technical and economic-financial), not only for accounting purposes but also to apply them in the process of managing these assets (Trojanek, 2015).

4. Conclusions

Variables that affect the probability of utilization of local government assets in Yogyakarta Special Region are variables population density, social facilities (health and education), and economic facilities (market and bank). Variables of land area and GRDP have not been able to increase the probability of asset utilization in the Special Region of Yogyakarta. Infrastructure development is a determining factor in the utilization of local government assets. Local governments must be able to provide adequate infrastructure so that local government assets can attract private parties to take advantage of these assets.

The various problems and challenges faced in asset management must be resolved immediately by carrying out reforms in the area of regional government asset management. Recommendations that can be put forward to optimize assets that have not been optimally utilized are as follows:

- a. Review of lease rates for land and buildings using *asset valuation/asset appraisal considerations* of the building land assets as outlined in a Regional Government Regulation.
- b. The form of optimizing the use of each asset needs further study, for example, by conducting a *Highest and Best Use* (HBU) study and paying attention to applicable laws in the DIY Regional Government.
- c. To avoid irresponsible parties, it is better if land and building assets that are still idle are given a sign that states that the land and building assets belong to the DIY government.

- d. The DIY government needs to disseminate the use of local government assets through the *Public Private Partnership* mechanism to local government officials who manage local government assets.

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6. References

- Abdullah, S., Razak, A. A., Hanafi, M. H., & Salleh, M. N. (2011). Managing Government Property Assets : The Main Issues From The Malaysian Perspective. *Journal of Techno-Social*, 3(1), 35–52.
- Afandi, M., & Khairani. (2013). Analysis of Fixed Asset Management at the Office of Revenue, Financial Management and Regional Assets in Tanjung Balai City. *Journal of Administrative Sciences*, 10(3), 390–413.
- Alexander, K. (2003). The United Kingdom : Local Authority FM in the UK. *Nordic Journal of Surveying and Real Estate Research - Special Series*, 1, 69–88.
- Assey, T., & Chachage, B. (2016). Improving accountability for public fixed assets using enhanced management system: Technical and procedural requirements , a case study of Tanzania. *American Journal of Research Communication*, 4(11), 103–117.
- Batara, A. M., Sadik, M. N., & Ahmad, B. (2015). Management Of Assets In New Public Management Perspective (Case Study : Optimization Of Lands And Buildings Asset At Local Government Of Makassar City). *Quest Journals Journal of Research in Humanities and Social Science*, 3(8), 32–41.
- Brous, P., Janssen, M., & Herder, P. (2019). Internet of Things adoption for reconfiguring decision-making processes in asset management. *Business Process Management Journal*, 25(3), 495–511. <https://doi.org/10.1108/BPMJ-11-2017-0328>
- Constantin, D., Mitrut, C., Grosu, R. M., Profiroiu,

- M., & Iosif, A. E. (2018). Municipal real properties and the challenges of new public management: a spotlight on Romania. *International Review of Administrative Sciences*, 84(1), 122–143. <https://doi.org/10.1177/0020852315596212>
- Criado, J. I., & Gil-garcia, J. R. (2019). Creating public value through smart technologies and strategies and beyond. *International Journal of Public Sector Management*, 32(5), 438–450. <https://doi.org/10.1108/IJPSM-07-2019-0178>
- Dent, P. (1997). Managing public sector property assets: the valuation issues. *Property Management*, 15(4), 226–233.
- Galamba, K. R., & Nielsen, S. B. (2016). Towards sustainable public FM: collective building of capabilities. *Facilities*, 34(3), 177–195. <https://doi.org/10.1108/F-05-2013-0039>
- Grubišić, M. (2009). Towards efficient public sector asset management. *Financial Theory and Practice*, 33(3), 329–362.
- Gujarati, D. (2012). *Econometrics by Example*. Palgrave Macmillan.
- Hanis, M. H., Trigunarsyah, B., & Susilawati, C. (2010a). Elements of Public Asset Management Framework for Local Governments in Developing Countries. *Proceedings of the 8th International Conference on Construction and Real Estate Management (ICCREM 2010)*, (1-3 December 2010, Royal on the Park Hotel, Brisbane). <https://doi.org/10.13140/2.1.1056.3840>
- Hanis, M. H., Trigunarsyah, B., & Susilawati, C. (2010b). Public asset management framework for local governments: Opportunities and challenges for public asset managers. *Proceedings of 2nd International Postgraduate Conference on Infrastructure and Environment*, (1-2 June, The Hong Kong Polytechnic University, Hong Kong).
- Hanis, M., 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.
- Hasfi, N. et al. (2013). Regional Property Management A Study at the Sintang District Revenue, Financial, and Asset Management Service. *Thesis Journal, PMIS-UNTAN-PSIAN*, 1–17.
- Irawan, T. (2018). The Implementation of Asset Management at Local Government of Kubu Raya, Indonesia. *International Journal of Economics, Commerce and Management*, VI(3), 311–325.
- Kompasiana. (2016). Optimizing State Assets by Seeing Opportunities. *Https://Www.Kompasiana.Com*, (3 November 2016), 1–14.
- Lu, Y. (2011). Public Asset Management: Empirical Evidence from the State Governments in the United States. *Dissertation. Faculty of the College for Design and Social Inquiry, Florida Atlantic University, Boca Raton, Florida*, (May).
- Moioli, R., Boniotti, C., Konsta, A., & Pili, A. (2018). Complex properties management. *Journal of Cultural Heritage Management and Sustainable Development*, 8(2), 130–144. <https://doi.org/10.1108/JCHMSD-06-2017-0035>
- Mukaddas, A. (2013). Studies on Regional Financial Management Perspective Permendagri No. 13 of 2006 in the Provincial Government of East Kalimantan. *Journal of Economics-Business*, 4(2), 131–150.
- Nancy. (2015). Implementation of Regional Property Management Policy at the Office of Education, Youth and Sports of Sigi Regency. *Cataloging Journal*, 3(2), 160–172.
- Pekei, B., & Hadiwidjojo, D. (2014). The Effectiveness of Local Asset Management (A Study on The Government of Jayapura). *International Journal of Business and Management Invention*, 3(3), 16–26.

- Pratama, M. R., & Pangayow, B. (2016). The Effect of Asset Management on Optimization of Regional Asset Management Case Study at Jayapura City Government. *Journal of Regional Accounting & Finance*, 11(2), 33–51.
- Romlah, S. (2018). Regional Asset Management on Land Owned by the Regional Government of Pelalawan Regency 2015-2016. *JOM FISIP*, 5(1), 1–13.
- Setyawan, S., & Herijanto, W. (2012). Heavy Equipment Asset Management Strategy at the Kapuas District Public Works Office. *National Seminar VIII, Civil Engineering ITS Surabaya: Sustainable Development of Transportation and Infrastructure*, 75–84.
- Showers, M. (2013). Use of Statistical Samples in Physical Inventories. *Journal of Property and Asset Management*, 3(1), 1–9.
- Simanjuntak, M. R. A., & Munizar, R. (2017). Preliminary Study of Optimization Model of Local Government Infrastructure Asset Management to Improving the Sustainable Development Performance. *International Journal of Scientific and Research Publications*, 7(12), 588–597.
- Summerell, R. (2005). Implications of Real-Property Asset Management : Certified Public Accountant. *The CPA Journal*, 75(10).
- Suparman, N., & Sangadji, A. D. (2018). Regional Asset Management in Achieving Orderly Administration in the DPPKAD of West Seram Regency, Maluku Province. *KELOLA Journal: Journal of Social Sciences*, 1(2), 74–97.
- Suryani, P. M. E., Erviantono, T., & Winaya, I. K. (2015). Regional Asset Management (Analysis of the Transition of Building Functions in the Badung Regency Government Environment). *UNUD Journal*.
- Trojanek, M. (2015). Strategic municipal real estate management. *Journal of International Studies*, 8(2), 9–17. <https://doi.org/10.14254/2071-8330.2015/8-2/1>
- Tukunang, S. C. F. (2016). Regional Asset Management at the Regional Financial and Asset Management Revenue Service, Siau Islands Regency, Tagulandang, Biaro. *EMBA Journal*, 4(2), 236–253.
- Wojewnik, A. F., & Rymarzak, M. (2013). Decision-making in corporate and municipal asset management: a literature review. *International Journal of Real Estate Studies*, 8(1), 16–29.