# Optimizing Public Assets Utilization: Empirical Evidence from Yogyakarta Local Government in Indonesia

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*Abstract:*
Property assets such as land and buildings are the key resources for all organizations, including the public sector. This research explores the optimizing of public property assets owned, controlled and used by local governments in Yogyakarta Indonesia.This study analyzes the problem of optimizing of local government assets utilization based on the analysis of primary data on local government assets and logistic regression analysis.Problems arise regarding the optimization of assets utilization. It is found that the probability of using local government assets increases with the increase in the land area of local government assets. Variable legality and location of local government assets are not able to increase the probability of using regional government assets in DIY. This can increase risk due to a lack of legal certainty in the use of assets. Public asset management is a critical component of the financial integrity of government. However, in practice, problems exist in the field of public asset management at the local government.

*Keywords:Optimisation, utilisation, indonesia*

## I. INTRODUCTION

Regional autonomy has the consequence that the role of the central government will be smaller, on the contrary, the role of the local government will be even greater in regional development. Local governments are required to have independence in financing most of the development budget. Therefore, local governments must be able to optimize their regional revenue sources (Minurila, 2015) and concern with the issue of efficient use of public sectorresources with requirements of the new public management regarding efficiency, effectiveness and quality of public services (Dainiela et al., 2018). One of the sectors is expected to be potential resources to sustain the regional development, as well as effective as strategic roads in the improvement of the quality public servant, is through real-estate sector (land

and building). Land and building assets as the main components of assets, the local government should be able to be used as productive assets and useful so that positive impact in local economic development and the community welfare (Batara, et.al. (2015).The need for better manage to the local government owned property is the result of widespread decentralisation initiatives that often have devolved huge property portfolios from central to local governments instantly. At the same time municipal or regional governments were and continue to be unprepared to deal with multiple issues related to the role as property owners and managers (Hanis et al., 2010b). It was believed that a paradigm shift in the approach to public real estate was necessary: rather than viewing public property largely as an expense, the real estate portfolio should be regarded a strategic asset that could facilitate the overall visions and

goals of the local authority (Galamba & Nielsen, 2016).

Local assets are an important resource for local governments as the main support of local revenue. Therefore, local governments need to be able to manage assets adequately (Hanis et al. (2010a); Hanis et al.(2010b); Showers (2013); Tukunang, (2016)). In asset management, local governments must use consideration of aspects of planning needs and budgeting, procurement, receipt, storage and distribution, use, administration, utilization or use, security and maintenance, assessment, deletion, transfer, management, supervision and control, financing and demand compensation so that regional assets are able to contribute optimally to the relevant local government (Hasfi et al. (2013); Pratama & Pangayow (2016)).

Problems in the management of local government assets starting from assets that have not been recorded, control of assets by other parties, assets that have not been certified, limited human resources to handle local government assets, the existence of a claim of resistance from a third party (derden verzet), is actually an accumulation of local government asset management problems (Kompasiana (2016); Romlah (2018)). The existence of a third-party lawsuit related to the ownership of local government assets, usually the plaintiff uses the argument as the taxpayer of an asset, thus claiming to be the legal owner because he has proof of land and building tax payments. The local government asset certification program is an administrative and legal effort to minimize the potential for disputes over ownership of local government assets. There are assets that have the potential to change hands to other parties because they are legally sued and lost until the final legal effort (incraht), so it must be a concern. Not only legally, local government assets must be controlled physically to prevent occupation by unauthorized parties. The management of assets is also very vulnerable to conflict of interest and abuse of authority (corruption) so it is necessary to conduct regular monitoring and control to preventive actions against potential loss to the region (Suparman and Sangadji (2018); Irawan (2018)).

One way to optimize local government assets is to createvalue-added, with good management upgrading, improving, adding facilities, maintaining, it will create added value to a local government asset. It needs creativity and foresight to see opportunities in empowering assets so that they become productive assets to create added value that can contribute to the region.The management of local government assets carried out in the Special Region of Yogyakarta is not only limited to recording and listing its value fairly, or better known as 3T, namely administrative order, physical order, and legal order. Local government assets that are not utilized or stalled will be borne by the regions because maintenance and security costs will be taken from the regional budget. It would be better if local government assets, especially those that are idle, are optimized, one of which is in the form of utilization. There must be a mindset new in managing local government assets not just to record and include their fair value in the government's financial statements, there needs to be new ideas on how to optimize the management of local government assets. Starting from the concept that public authorities have to be fully accountable to the public, we propose the preconditions necessary for commencing proper public asset management practice in Yogyakarta. It might help other countries that are also faced with public asset management inefficiency.

## II.    LITERATURE REVIEW

The full accounting for assets and their use is now focusing on fixed assets such as real property. Organizations are understanding the role that real-property holdings play in fiscal responsibility and the full cost of implementing organizational missions. That challenge has

spawned a requirement for improved real-property asset management to demonstrate a uniformly high level of performance across all sectors in the integration of financial and mission-performance objectives. This new emphasis on real property is understandable because, for most organizations, real-property assets represent their second-largest investment, exceeded only by personnel costs (Summerell, 2005).

Changes to the new paradigm in the management of local government property marked by the issuance of Government Regulation of the Republic of Indonesia Number 27 of 2014 concerning Management of State/Local Property and Regulation of the Minister of Home Affairs of the Republic of Indonesia Number 19 of 2016 concerning Guidelines for Management of Local Property which is a derivative regulation of the Act Law No. 1 of 2004 concerning the State Treasury, has led to a new optimism of best practices in structuring and managing local government assets that are more orderly, accountable and transparent in the future. Professional and modern local government asset management by promoting good governance, on the one hand, is expected to be able to increase the trust in local government financial management from the public and stakeholders.

Assets, according to Government Regulation No. 71 of 2010, are economic resources that are controlled and/or owned by the government as a result of past events and from which future economic and/or social benefits are expected to be obtained, both by the government and the community, and can be measured in units of money, including non-financial resources needed to provide services to the general public and resources maintained for historical and cultural reasons. From this understanding, the elements of assets are controlled and/or owned, past events, and there are economic benefits. In this sense, it means that assets have a broad scope, ranging from cash to government control of the entity. The term asset in statutory regulations only

appears in the provisions governing accounting. In regulations relating to state finances, the term rights and assets are used as part of state finances.

State assets in which there are state-owned goods according to Government Regulation of the Republic of Indonesia No 27 of 2014, namely all goods purchased or obtained at the expense of the State Budget or derived from other legal acquisition. Besides, regional property is also a state asset, which means all goods purchased or obtained are at the expense of the Regional Revenue and Expenditure Budget or derived from other legal acquisition.

Management of local government assets in the sense referred to in Article 1 Paragraph (2) and Paragraph (10) Government Regulation Number 27 of 2014 is not merely administrative, but is more advanced in thinking in handling local government assets, by how to empower people by increasing efficiency, effectiveness and creating added value in asset management so that it can increase the value of locally-generated revenue. Among the regional assets that are long-term assets are in the form of fixed assets, including land and buildings.

Dent's (1997) research has highlighted problems relating to the recording, valuation, and reporting of assets of local authorities in the UK. Efforts have been made to help overcome these problems, but there is still a need to develop more authentic valuation models for certain asset. Research continues to develop more appropriate methodologies.

Further research on the management of state assets carried out by Lu (2011) in the United States. Public asset management is a critical component of the financial integrity of government. However, in practice, problems exist in the field of public asset management at different levels of government in the United States. This research explores the management of public fixed assets owned, controlled and used by state governments in America. This research develops an intellectual framework of a public

fixed asset management system. This system is composed of six interdependent cornerstones, legal and regulatory requirements; organization structure; asset management processes; human capital strategies; information and technology resources; and monitoring, integrity, and transparency are mutually important factors relating to the implementation of public asset management.

Abdullah et al (2011) found that there were five main problems related to the management of Malaysian government assets, namely the lack of proper property management units, lack of expertise, inappropriate strategies, lack of proper management procedures and lack of use of information technology. Grubisic (2009) attempts to emphasize the importance of public sector asset management reform, to show how the adoption of full accrual accounting might help public asset reporting, control and management processes, and fill the gap in the research on developing countries' public sector reforms by focusing on Croatia. He argues that, when providing public services governments do not only use taxpayers' money, but also public assets that the state has to manage on behalf of public asset owners, that is the citizens, to preserve the national wealth. The lack of reliable information on existing public assets precludes the determination of the value of assets. As a result, assets are managed on an ad-hoc basis and are often reactive.

Hanis (2011) aims to identify the main challenges faced by local governments in Indonesia when adopting a public asset management framework. His findings indicate there are significant challenges that must be managed by local governments in adopting a public asset management framework. Lack of institutional and legal framework to support asset management applications, nonprofit principles of public assets, various jurisdictions in the asset management process, complexity of local government objectives, unavailability of data to manage public assets, and limited human resources.

### III. Research Methodology

In order to achieve the aim of this paper, a case study was selected as the data collection strategy. The case study was conducted to Indonesian local governments, the Special Region of Yogyakarta (DIY). The inventory process is carried out by looking at the data of land and building assets owned by the DIY Government in the DIY Regional Financial Management Agency (BPKD). DIY regional asset management has now been submitted to the DIY Asset Financial Management (DPPKA) Revenue Service.

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

Logit model regression equations are obtained from the decrease in the probability equation of 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 $Z_1$, to produce the following equation:

$$P_i = \frac{1}{1+e^{-Z_1}} = \frac{e^Z}{1+e^Z}$$

$$(2)$$

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

$$1 - P_i = \frac{1}{1+e^{Z_i}}$$

$$(3)$$

Eq. (3) can be substituted with Eq. (2):

$$\frac{P_i}{1-P_i} = \frac{1+e^{Z_i}}{1+e^{-Z_i}}$$

$$(4)$$

The equation $\frac{P_i}{1-P_{i\ is}}$ called the *odds ratio* for the occurrence of categories with values 1, the utilization of local government assets. If $P_i = 0.9$ then the tendency to local government assets utilization increases.

Furthermore, applying the natural logarithm to the *odds ratio* will produce 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, $L_i$ is the log of the *odds ratio* which is not only linear to X but also linear to the parameter β. Value $\beta_1$ is a constant that shows the probability of utilizing local government assets is $\beta_1$ when the other variables are zero.

Value $\beta_2$ is a measure of the contribution of each independent variable. If $\beta_2$ is positive then an increase in the variable by one unit will increase the probability of local government assets utilization by $\beta_2$. Conversely, if $\beta_2$ is negative, an increase in the variable by one unit will reduce the probability of local government assets utilization by $\beta_2$.

The logistic regression model used in this research is:

$$L_i = ln\left(\frac{P_i}{1-P_i}\right) = \beta_1 + \beta_2 Legal_t + \beta_3 Area_t + \beta_4 Location_t + u_i \quad (6)$$

$L_i = 1$ if there is local government assets utilization, and 0 if there is no local government assets utilization. Legal is 1, if local government assets are legal, and 0 if there are no legality of local government assets. Variable Area indicates land area of local government assets (m$^2$). Location has a value of 1 if the location of local government assets is less strategic, 2 ifstrategic and 3 if it is very strategic location.

## IV. Discussion

Property assets such as land and buildings are the key resources for all organizations, including the public sector. Based on the analysis of primary data on local government assets, problems arise regarding the optimization of assets utilization. The existence of unclear assets, where there is no signboard stating that the assets belong to the DIY Government. Information about assets is incomplete or very limited information. An incompletes records of all public assets makes the process of monitoring and controlling asset utilization rather difficult and enables the use of public assets without prior valuation and without scrutinising public needs. However, achieving the level of accountability, in terms of assuring that government knows what it owns, where it is and what it has been used for is a precondition for public asset recognition and measurement for accounting purposes. The accuracy of inventory management information systems and perpetual item records must be confirmed on a regular basis. Physical inventory audits confirm the existence of items on the perpetual inventory records through visual inspection and counting. According to Pekey et.al. (2014), The main problem in local asset or regional public goods management is the disorder practice in the regional public goods data management as a manual data and local asset application data, making it difficult for the local government to know for sure the assets controlled or managed, so that the assets managed by local governments tends to be not optimally used.

Some of the Tax Object Sales Value (NJOP) of assets are not updated, the acquisition price (the old price) is still listed. Determination of lease rates and assets utilization of buildings is uncertain and there is no updating of lease rates and use of assets to date. Public leasehold systems are highly contested with regard to the extension of leases. Such systems are often aimed at capturing land-value gains. In practice, however, this tends to be more difficult than expected. Value capture by authorities, as intended by the system, results in counter-movements of lessees, who often gain public support to set lower leases. These political processes may even result in the termination of such public ground-lease systems

(Altes, 2019). Therefore, in order to implement effective asset management processes and strategies, sufficient and precise information need to be provided. This information can be used to make better decisions related to the implementation of asset management activities. Asset classification within the public asset registry is crucial to establishing a manageable public asset portfolio. Such a portfolio would be a solid base for implementing the valuation methods necessary for efficient utilization of public assets.

Asset facilities especially inadequate building assets and unprofessional management, untreated buildings, while land assets are not cared for and left overgrown with weeds or bushes. There are several assets whose ownership is unclear. 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. The reduction of the budgets of public bodies implies that it is more and more difficult to finance public works in general, and also works on properties. A twofold strategy is on going: to reinforce the reasons for spending (public) money; to set up new strategies to make the process more efficient, such as information system. Nevertheless, it seems that this kind of approach is not sufficient because of the lack of resources, both economic and human (such as number of skilled public officers, etc.). Therefore, scarcity of resources forced to open to various forms of partnership with private players: sponsors, entrepreneurs, and renters(Moioli (2018); Wojewnik (2013)). Public Private Partnerships are all about negotiating deals that aregood for both sides. The private sector wants to earn a return on its ability toinvest and perform. The public sector wants contracts where incentives exist forthe private sector supplier to deliver services on time and to specified standards (Alexander, 2003).

The notion of public value creation in digital government is very important and hasreceived increasing attention in the last few years. Different technologies have resulted in multiple models of value creation in the public sector (Criado & Garcia, 2019). Asset management as a type of business process is highly dependent on large amounts of data from which relevant informationcan be created and is used for decision-making during the life-cycle of assets. As such, it is important to understand how Internet of Things (IoT) adoption affects decision-making in asset management business processes in order to be able to achieve expected benefits and mitigate known and unknown risk (Brous, et.al. (2019); Assey & Chachage (2016)).

Asset optimization is a work process in asset management that aims to optimize the physical, location, value, volume, legal and economic potential of the asset (Simanjuntak & Munizar, 2017). Both in the private sector (earlier) and in the public sector, the approach to real estate as an asset has been redefined. Property is increasingly perceived as strategic stock, indispensible to achieve the organisation's objectives. Real estate classification requires knowledge about the stock's size and structure, giving rise to the need for stocktaking and recording changes. As part of these activities, there is the need for describing the state of a property, integrating various data (record, legal, technical and economic-financial), not only for accounting purposes, but also for the sake of applying them in the processes of managing those assets (Trojanek, 2015).

Logistic regression results in Table 1 show that the variables that influence the probability of local government asset utilization in Yogyakarta is the variable land area of assets. The wider the local government assets, the higher the probability of local government asset utilization, because it increases the flexibility of asset utilization. Variable legality and location of assets are not able to increase the probability of asset utilization. The legality aspect of the local government assets can be seen from the certificate owner of the assets. The results showed that the utilization of

assets can still be done even though assets are not certified. This will pose a risk for users of local government assets because there is no legal certainty of the land used.

Table 1
Logistic Regression

| Variable | Coefficients | Prob. | Odd Ratio |
|---|---|---|---|
| Legal | 0.043000 | 0.9622 | 1.043966 |
| Area | 5.04E-05 | 0.0222 | 1.00005 |
| Location | -0.435703 | 0.1781 | 0.646632 |

The variable location of regional assets also does not affect the probability of utilization of local government assets in Yogyakarta. Neither strategic nor un strategic location is not an important factor in the utilization of local government assets. The utilization of local government assets can be done on land with less strategic locations because land use is not always oriented toward economic benefits. For example, land use for plantations or livestock does not have to use land that has a strategic location.

To test whether the logistic regression model is suitable or not there is a real difference between observation and prediction of the model (null hypothesis), use the testing *goodness of fit* Hosmer-Lemeshow. The test results in Table 2 shows accepting $H_0$ at $\alpha = 5\%$ because of the Chi Squares probability value> $\alpha$. The conclusion is that the estimation model is suitable or there is no real difference between the observations and the predicted models.

Table 2
Test the suitability of the logistic regression model

| HL Statistic | Prob. Chi-Sq |
|---|---|
| 8.0936 | 0.4244 |

The problem of assets in DIY is not much different from previous research conducted by Dent (1997), Abdullah et al (2011), Grubisic (2009), and Hanis (2011). So that the various problems and challenges faced in asset management must be addressed immediately by carrying out reforms in the field of local government asset management. Recommendations that can be submitted to optimize assets that have not been optimally utilized are as follows:

1. Review of rental rates for land and building using consideration of assets valuation/asset appraisal of the building land assets as outlined in the Local Government Regulation.
2. The form of optimizing the utilization of each of the assets needs to be further studied, for example by conducting a Highest and Best Use (HBU) and taking into account the applicable laws in the Local Government of DIY.
3. To avoid misuse of irresponsible parties, it is better if the land and building assets that are still idle are given a sign stating that the land and building assets belong to the DIY government.
4. The DIY government needs to disseminate the utilization of local government assets through the mechanism of Public-Private Partnership to the local government officials managing the local government assets.

## V. CONCLUSION

The identification of land and building assets is the most important part of this study. This process is a representation of the application of the asset optimization approach which seeks to capture information comprehensively related to asset management. Through identification in the field, information about the assets obtained is not only about the condition of the existing assets, but also obtained alternative opportunities for asset management in the future.

Based on the Yogyakarta Special Region's medium to long term development plan, it is stated that the local government has several assets that can be optimized for utilization as an effort to increase locally-generated revenue and community services. Optimization of utilization can be done by increasing management professionalism, utilization collaboration in the form of service cooperation and profit-sharing cooperation.

## VI. ACKNOWLEDGEMENT

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