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Abstract

This study aims to find the empirical evidence of the influence of information system, internal control system, and understanding regulation on the effectiveness of regional asset management, using the quality of the regional apparatus as a moderating variable. The population in this study is Regional Apparatus Organization (OPD) located in Pekanbaru City Government. The total of population is 44 OPDs. The sampling technique in this study is saturated sampling technique. Thus, there are 44 OPDs that becomes sample in this study. The data used is primary data, while the data analysis method is Structural Equation Model (SEM) approach using WarpPLS software version 6.0. The results of this study concluded that information system, internal control system and understanding regulation affect the effectiveness of regional asset management. The quality of regional apparatus is able to moderate the information system, internal control system and the understanding regulation on the effectiveness of regional asset management.

Keywords: Information System, Internal Control System, Understanding Regulation, Quality of Regional Apparatuses, Effectiveness of Regional Asset Management

Introduction

The Regional Government Financial Report/LaporanKeuanganPemerintah Daerah (LKPD) in Indonesia is now entering a period of quality improvement. This is indicated by the increasing number of LKPDs that have obtained Unqualified Opinion/Wajar TanpaPengecualian (WTP) from the Republic of Indonesia Supreme Audit Board/BadanPemeriksaKeuanganRepublik Indonesia (BPK RI). This success is certainly a challenge for the Riau Provincial Government, specifically the Pekanbaru City to continue to maintain it. In addition to financial reports, regional asset management is also an important part of state finances. One of the efforts to be made is to increase the effectiveness of asset management which will support the optimization of regional financial management and reporting. Assets are one of the most strategic factors in the management of regional finances. In general, the value of assets is the greatest value compared to other accounts on the financial statements. The existence of assets greatly influences the smooth running of the government and development. Therefore, the internal control system for management/asset management must be reliable to prevent irregularities that can harm regional finances (BPK RI, 2018).

According to BPK RI (2018), in the report on the examination results, LKPD of Pekanbaru City is still experiencing problems related to assets, one of which is fixed assets. BPK RI states that there are weaknesses in the recording and administration of fixed assets that affect the fairness of the presentation of fixed assets in the LKPD balance sheet of Pekanbaru City. The government of Pekanbaru City has not been supported by adequate sources and the administration of fixed assets has not been carried out in accordance with

applicable regulations. In the management of fixed assets in Pekanbaru City Government, there are weaknesses in the recording and administration of fixed assets. In addition, weaknesses in the internal control system were also found including the administration of inventories in several SKPDs that are not yet orderly.

Another problem found related to asset management is the process of eliminating Other Assets which are in a heavily damaged condition. The Notes to the Financial Statements/*CatatanatasLaporanKeuangan* (CaLK) of 2017 shows that Other Assets, some of which consist of BMD are in severe damaged conditions. The BMD is reclassified into Other Assets in order to wait for the write-off process (BPK RI, 2018). In addition, other problems that occur are related to the condition of assets such as service cars in the city of Pekanbaru that cannot be traced to their whereabouts. There are still official cars whose use have not been maximized or has not been right in its designation.

Regional asset management in Indonesia is known as the Property Management of State/Regional. Manage-ment of regional property means a lot to the fairness of financial statements. Ignorance of the importance of the management and maintenance of regional assets or assets that have not been effective can be seen from the opinion records of BPK RI that there are still problems with asset management/BMD which happen almost every year. In a study by Hanis, et al (2011) in different Local Governments, it can also be seen that there are other factors that hinder the management of regional assets such as: (1) The policy framework that is not yet comprehensive; (2) Traditional perceptions that do not prioritize the potential use of public assets for regional income; (3) Inefficiency; (4) Data limitations; and (5) Limited Human Resources. There are several factors that affect the effectiveness of regional asset management. One of which is the information system. According to Mardiasmo (2002: 237), related to increasing the authority of state asset management, the regional government needs to prepare the right instruments to carry out regional asset management in a professional, transparent, accountable, efficient, and effective manner from planning, management/utilization, and supervision. To support efficient and effective management of regional assets and create transparency in regional asset management policies, local governments need to have or develop a comprehensive and reliable information system as a tool for decision making.

In addition to the information system, the internal control system is also an influential factor in increasing the effectiveness of regional asset manage-ment. In managing regional assets intactly, a certain system is needed. The system should be able to provide adequate confi-dence to show that the implementation of activities in a government agency can achieve goals effectively and efficiently, to report financial management reliably, secure assets and encourage compliance with laws and regulations. This system is known as the internal control system (SPI) (Darise, 2009: 302).

Understanding regulation is also a factor influencing the effectiveness of regional asset management. Regulations that have been issued by the central or regional government are expected to guarantee the implementation of an orderly

administration and orderly management of regional property. Understanding regulation is expected to be the way to solve problems that may occur in the management of regional assets (Darise, 2009: 230).

The variable of the quality of the regional apparatus is added as a moderating variable because in the information system, internal control system, and understanding regulation, the local apparatus that has quality in accordance with the task so that the management of regional assets can be more effective are needed.

Framework and Hypothesis Development Information System on the Effectiveness of Regional Asset Management

Information systems play an important role in the process of managing local government assets. With the existence of an information system, the asset data of the regional government is more adequately organized, accountable, and transparent (Rizqi, et al., 2013). The use of information systems affects the management of regional assets / management of regional property.

Asset SIPKD is used to record and organize assets ranging from planning, procurement, administration, written off and accounting assets. The goal is that all assets can be protected and recorded properly in an effort to provide reliable, accurate and timely information, and can be used as material for decision making. Therefore, the information system is thought to influence regional asset management.

H₁: Information systems affect the effectiveness of regional asset management.

Internal Control System for the Effectiveness of Regional Asset Management

A research conducted by Hamidah (2014) shows that there is a significant and positive influence on the implementation of the Government Internal Control System (SPIP) on securing state assets. This means that there is an assumption that the better the application of SPIP, the better the security of state assets. This is in line with studies by Ekayanti (2018), Mainar (2017) and Juliadi (2017) proving that the government's internal control system influences the effectiveness of fixed asset management. Therefore, the internal control system is thought to influence the management of regional assets.

H₂: Internal control systems affect the effectiveness of regional asset management.

Understanding Regulation on the Effectiveness of Regional Asset Management

Understanding regulation is also a factor influencing the effectiveness of regional asset management. Regulations that have been issued by the central and regional governments are expected to guarantee the implementation of an orderly administration and orderly management of regional property. Understanding regulation is expected to be able to solve problems that may occur in the management of regional assets (Darise, 2009: 230).

Based on research conducted by Mainar (2017), it appears that understanding regulation influences asset management. Therefore, it can be assumed that the understanding regulation has an influence on the effectiveness of regional asset management. That means that the better the understanding regulation, the more effective regional asset management will be.

H₃: Understanding regulation affects the effectiveness of regional asset management.

Information System on the Effectiveness of Regional Asset Management with the Quality of Regional Apparatus as a Moderating Variable

Apparatus who have adequate educational background and skills in information technology, and have sufficient knowledge can certainly optimize the use of the SIPKD Asset application. Even though the regional government has provided an information system with sophisticated capacity, it will not be useful if it is not supported by qualified apparatus.

H₄: The information system influences the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable.

Internal Control System on the Effectiveness of Regional Asset Management with the Quality of Regional Apparatuses as Moderating Variables

Qualified regional apparatus can understand and carry out all duties and authority as apparatus. His knowledge and experience can match planning to vision and mission. With the skills possessed, the SIPKD Asset program can be developed, evaluated, and weaknesses found can be resolved immediately. This can increase the effectiveness of regional asset management.

 H_5 : The internal control system influences the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable.

The Understanding fo Regulations on the Effectiveness of Regional Asset Management with the Quality of Regional Apparatus as a Moderating Variable.

Regulations that have been issued by the central and regional governments are expected to guarantee the implementation of an orderly administration and orderly management of regional property. It is necessary to have a common perception and steps in an integrated and comprehensive manner from the elements involved in the management of regional property (Darise, 2009: 230). Without a qualified regional apparatus that is able to understand regulations well, the central or regional government will face difficulties in managing assets.

H₆: Understanding regulation influences the effectiveness of regional asset management with the quality of regional apparatus as a moderating variable.

Research Methods Population and Sample

The population in this study is 44 Regional Organization Organizations (OPD) located in Pekanbaru City Government. The sampling technique used in this study is saturated sampling. Therefore, samples from this study were taken as a whole from 44 OPDs. Each OPD has determined respondents with criteria, namely Civil Servants (PNS) who have the authority/duty in handling regional asset management. In this case, namely the Head of OPD as the user of regionally owned goods, the Head of the General Administration Unit/General Head of each OPD, and the management and storage staff of the regional property as the operator of the SIPKD Asset. Thus, the number of respondents in this study is 161 respondents.

Data Collection Techniques

Data collection techniques used in this study are survey methods, namely by distributing questionnaires. Questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to be answered. There are 44 OPDs, thus 161 questionnaires are sent.

Research Variable

The independent variables in this study are information systems, internal control systems, and understanding regulation. The dependent variable in this study is the effectiveness of regional asset management. The moderating variable in this study is the quality of the regional apparatus.

The information system is a regional asset data processing information system that guarantees more reliable and accountable information. Information systems are measured by indicators: availability of SOPs, availability of facilities, completeness of input data, ease of operation, support and coordination, reliability, completeness of output data, accumulation of depreciation, and timeliness. The questionnaire consisted of 9 (nine) statements adopted from the Juliadi study (2017).

Internal control system is a system that can provide adequate confidence that the implementation of regional asset management activities in local governments can secure assets and encourage compliance with laws and regulations. Internal control is measured by indicators: job descriptions and authorities of the apparatus, suitability of planning with vision and mission, suitability of planning with evaluation of the previous year's activities, assessment of risk, completeness of asset inventory, monitoring of asset use, appropriateness of grant assets or exchanging with BAST, control and development of the SIPKD Asset program, timeliness of information and communication, evaluation of implementation, resolution of weaknesses found, and supervision from direct supervisors. The questionnaire consisted of 12 (twelve) statements adopted from the Juliadi study (2017).

Understanding regulation is the process, method, act of understanding or assimilating the provisions used in regulating human relations in a society or

country. Understanding regulation in this study is measured by the following indicators: Understanding of the management of regional assets against the applicable laws and regulations, and; Response of regional asset managers to applicable laws and regulations. The measurement of this variable is by using a questionnaire instrument with 8 questions which is a modification of the questionnaire instrument made by Novy (2016).

The effectiveness of regional asset management is the degree of success in the activities of regional asset management starting from the stage of asset inventory, legal audits, asset valuation, asset optimization, and asset supervision and control. The effectiveness of regional asset management is measured by indicators: conformity of the inventory with laws and regulations, improvement of asset utilization, regulation of asset ownership status, efforts to safeguard assets, legal audits, clarity of asset value information, control of asset management processes, supervision and control of assets, improving the database, and developing an asset optimization strategy. The questionnaire consisted of 10 (ten) statements adopted from the Juliadi study (2017).

The quality of the apparatus is the ability of the apparatus to carry out functions and authorities in the management of regional assets. The quality of the apparatus is measured by indicators: educational background, knowledge, experience, skills, and respect for work. The questionnaire consisted of 11 (eleven) statements which were modified from Juliadi's research (2017).

The measurement of variables is by using a statement-shaped instrument with a 5-point Likert scale. Strongly Disagree (STS) was given a score of 1, Disagree (TS) was given a score of 2, Neutral (N) was given a score of 3, Agree (S) was given a score of 4 and Very Agree (SS) was given a score of 5.

Data Analysis Method

This research was conducted using the Structural Equation Model (SEM) approach using Partial Least Square (PLS) software, namely WarpPLS software version 6.0. PLS-SEM analysis usually consists of two sub-models, namely the measurement model or often called the outer model and the structural model or often called the inner model.

Research Result and Discussion

Respondents in this study are 132 questionnaires. Questionnaires that can be processed are 118 or 89%. Based on gender, the number of male respondents is 76 people or 64.41% and female respondents is 42 people or 35.59%. Based on the age of the majority of respondents in this study, aged 31-40 years are 62 respondents, or 52.54%. This indicates that the respondent is in the range of working age. Based on the level of education, respondents who have master degree education are 15 respondents or 12.71%, bachelor degree are 82 respondents or 69.49%, indicating that respondents have good ability to learn and understand asset management.

Descriptive Statistical Analysis

Table 1. Descriptive Analysis Results						
					Std.	
	N	Minimum	Maximum	Mean	Deviation	
X1	118	18	45	35,7966	5,02738	
X2	118	24	59	47,8644	7,16463	
X3	118	21	40	31,3136	4,04610	
X4	118	20	35	27,1695	3,43761	
Y	118	24	55	45,3305	6,02283	

Source: Primary Data Process Results (2019)

The information system has an average value of 3.79 with a minimum value of 18 and a maximum value of 45, with standard deviation of 5.02738. The internal control system has an average value of 47.8644 with a minimum value of 24 and a maximum value of 59, with standard deviation of 7.16463. Understanding regulation has an average value (mean) of 31.3136 with a minimum value of 20 and a maximum value of 40. with standard deviation of 4.04610. The quality of regional apparatus has an average value (mean) of 27.1695 with a minimum value of 20 and a maximum value of 35, with standard deviation of 3.43761. The effectiveness of regional asset management has an average value of 45.3305 with a minimum value of 24 and a maximum value of 55, with standard deviation of 6.02283.

Instrument Test Validity test

Table 2. Convergent Validity test

Variabel	Indikator	Loading	Keputusan	AVE	
	X1.1	0.790	Valid		
	X1.2	0.762	Valid		
	X1.3	0.805	Valid		
	X1.4	0.805	Valid		
X1	X1.5	0.792	Valid	0.627	
	X1.6	0.767	Valid		
	X1.7	0.789	Valid		
	X1.8	0.803	Valid		
	X1.9	0.812	Valid		
	X2.1	0.829	Valid		
	X2.2	0.844	Valid		
	X2.3	0.802	Valid		
	X2.4	0.824	Valid		
X2	X2.5	0.829	Valid	0.661	
$\Lambda \mathcal{L}$	X2.6	0.771	Valid	0.001	
	X2.7	0.759	Valid		
	X2.8	0.821	Valid		
	X2.9	0.811	Valid		
	X2.10	0.806	Valid		

Variabel	Indikator	Loading	Keputusan	AVE	
	X2.11	0.809	Valid		
	X2.12	0.849	Valid		
	X3.1	0.739	Valid		
	X3.2	0.730	Valid		
	X3.3	0.733	Valid		
X3	X3.4	0.706	Valid	0.551	
Λ3	X3.5	0.724	Valid	0.551	
	X3.6	0.737	Valid		
	X3.7	0.758	Valid		
	X3.8	0.807	Valid		
	X4.1	0.745	Valid		
	X4.2	0.782	Valid		
	X4.3	0.719	Valid		
X4	X4.4	0.720	Valid	0.563	
	X4.5	0.804	Valid		
	X4.6	0.757	Valid		
	X4.7	0.721	Valid		
	Y.1	0.814	Valid		
	Y.2	0.722	Valid		
	Y.3	0.778	Valid		
	Y.4	0.858	Valid		
	Y.5	0.820	Valid		
Y	Y.6	0.801	Valid	0.650	
	Y.7	0.845	Valid		
	Y.8	0.815	Valid		
	Y.9	0.801	Valid		
	Y.10	0.748	Valid		
	Y.11	0.855	Valid		

Source: Primary Data Process Results (2019)

From the table above it can be seen that the loading indicator or loading factor of each variable construct has a loading factor value above 0.7. While the average variance extracted value (AVE) is above 0.50 which means that all the reflective indicators above have a correlation to the construct variable. This explains that all indicators in the variable construct meet the requirements of convergent validity.

Reliability Test

Table 3. Cronbach's Alpha dan Composite Reliability

	Cronbach's	Composite
Variabel	Alpha	Reliability
X1	0.926	0.938
X2	0.953	0.959
X3	0.883	0.907
X4	0.870	0.900
Y	0.946	0.953
	X1 X2 X3 X4	Variabel Alpha X1 0.926 X2 0.953 X3 0.883 X4 0.870

Source: Primary Data Process Results (2019)

From the table above, it can be seen that all values of Cronbach's alpha and composite reliability construct variables of the research variables above 0.70. This explains that all construct variables meet the reliability requirements.

Model Fit and Quality Indices

Table 4. Model Fit and Quality Indices

Table 4. Model Fit and Quality Indices						
Model Fit and			T. 0			
Quality	Index	P-value Criteria	Information			
Indices						
Average path	0.205	P = P <	A			
coefficient	0,205	0,005 0,05	Accepted			
(APC) Average R-		p. 0.022 P <				
Average R-squared (ARS)	0,599	P=0,033 P < 0,05	Accepted			
Average		0,03				
adjusted R-		p 0 044 P <				
squared	0,577	P=0,044 P=0,05	Accepted			
(AARS)		0,03				
Average block		≤ 5 danidealnya ≤ 3,3				
VIF (AVIF)	1,531	3.3	Accepted			
Average full						
collinearity	1,943	≤ 5 danidealnya ≤	Accepted			
VIF (AFVIF)		3,3	•			
TenenhausGoF		Small \geq 0,1;				
(GoF)	0,537		Large			
, ,		Large ≥ 0.36				
Sympson's		≥ 0,7				
paradox ratio	1,000	$\frac{1}{\text{danidealnya}} = 1$	Accepted			
(SPR)						
R-squared	1 000	≥ 0,9				
contribution	1,000	danidealnya	Accepted			
ratio (RSCR)		·				
Statistical	1 000	> 0.7	A accorded			
suppression	1,000	≥0,/	Accepted			
ratio (SSR) Nonlinear						
bivariate						
causality	0,917	> 0.7	Accepted			
direction ratio	0,217	_ ','	recepted			
(NLBCDR)						
(I.EBCEII)						

Source: Primary Data Process Results (2019)

From the table above it can be seen the average path coefficient (APC) of 0.205 with p-value = 0.005, average R-squared (ARS) of 0.599 with p-value <

0.001, average adjusted R-squared (AARS) of 0.577 with p-value < 0.001, this can be interpreted that the research model has a good *fit*.

The average variance inflation factor (AVIF) value obtained is 1.531 and the average full collinearity variance inflation factor (AFVIF) is 1.943 < 3.3. This can be interpreted that there is no problem of multicollinearity between indicators and between exogenous variables. Furthermore, the tenenhaus goodness of fit value obtained is 0.537 > 0.36. This shows that the predictive power of the model is large or the model fit very well. To evaluate quality indexes, it can be seen from the symson's paradox ratio (SPR) index of 1,000 > 0.70 (acceptable). R-squared contribution ratio (RSCR) of 1,000 > 0.90 (acceptable), statistical suppression ratio (SSR) of 1,000 > 0.70 (ideal), and nonlinear bivariate causality direction ratio (NLBCDR) yields a value of 0.917 > 0, 70 (acceptable). These indices mean there is no causality problem in the model.

Hypothesis Test
Table 5. Hypothesis Test Results

No	Hipotesis	Path	Effect	P	Standard
		Coefficient	Size	value	Error
1	$X1 \rightarrow Y$	0.352	0.208	< 0.001	0.084
2	$X2 \rightarrow Y$	0.154	0.080	0.042	0.089
3	$X3 \rightarrow Y$	0.181	0.104	0.021	0.088
4	X4*X1→Y	0.162	0.058	0.035	0.088
5	X4*X2→Y	0.217	0.096	0.007	0.087
6	X4*X3→Y	0.167	0.053	0.031	0.088

Source: Primary Data Process Results (2019)

The first hypothesis (H1), statistically p-value is < 0.001 (below α : 0.05) and the path coefficient value is 0.352. This proves that the implementation of information systems affects the effectiveness of regional asset management. With a good information system, it will be able to support the improvement of the quality of the effectiveness of regional asset management. This means that the more adequate the information system used, the more effective the management of regional assets in Pekanbaru city government will be.

The second hypothesis (H2), statistically a p-value of 0.042 (below α : 0.05) and a path coefficient value of 0.154 is obtained. This proves that the implementation of the internal control system affects the effectiveness of regional asset management. With an adequate internal control system, it will be able to support the improvement of the quality of the effectiveness of regional asset management. This means that the more adequate the internal control system used, the more effective the management of regional assets in Pekanbaru city government will be.

The third hypothesis (H3), statistically a p-value of 0.021 (below α : 0.05) and a path coefficient value of 0.181 is obtained. This proves that understanding regulation influences the effectiveness of regional asset management. With an adequate understanding of regulations, it will be able to support the improvement of the quality of the effectiveness of regional asset management. This means that

the better the understanding of the regulations used will further increase the effectiveness of regional asset management in Pekanbaru city government.

The fourth hypothesis (H4), statistically the p-value is 0.035 (below α : 0.05), and the path coefficient value is 0.162. This proves that the information system has a positive and significant effect on the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable.

Utilization of information systems can certainly be done by qualified regional apparatuses. Namely the regional apparatus who have adequate educational background, skills in information technology and have sufficient knowledge can certainly optimize the utilization of the SIPKD Asset application so that the effectiveness of regional asset management can be achieved.

The fifth hypothesis (H5), statistically the p-value is 0.007 (below α : 0.05), and a path coefficient value of 0.217 is obtained. This proves that the internal control system has a positive and significant effect on the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable. The application of SPI by qualified regional apparatuses can understand and carry out all tasks and authorities as apparatus. His knowledge and experience can match planning to vision and mission, with the skills possessed can be developed, evaluated and weaknesses found can be resolved immediately so that the effectiveness of regional asset management can be achieved. The sixth hypothesis (H6), statistically a p-value of 0.031 (below α : 0.05), and a path coefficient value of 0.167 is obtained. This proves that the understanding of regulation has a positive and significant effect on the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable.

Understanding regulation by qualified regional apparatuses indicates that regional apparatuses have a strong awareness of the importance of managing regional assets in accordance with applicable laws and regulations. If local asset management is carried out in accordance with applicable regulations, the effectiveness of regional asset management can be achieved.

Conclusions and Suggestions Conclusions

Based on the results of data analysis, it was concluded that the information system, internal control system, and understanding of regulations had a positive and significant effect on the effectiveness of regional asset management. This proves that the existence of an information system, internal control system, and a good and adequate understanding of regulations can improve the quality of the effectiveness of regional asset management in the City Government of Pekanbaru. Information systems, internal control systems and regulatory understanding have a positive and significant effect on the effectiveness of regional asset management with the quality of the regional apparatus as a moderating variable. This proves that the information system, internal control system and understanding of regulations run by qualified regional apparatuses can improve the quality of the effectiveness of regional asset management in Pekanbaru City Government.

Suggestions

- 1. For the next research, it can be done in a different environment, which is broader as in the scope of the Regency / City Government in Riau Province, and can also be added to the number of research samples.
- 2. Research can also be developed by adding independent variables such as organizational commitment / leadership, compensation, and adding dependent variables such as the quality of financial statements. In addition, this research can be developed by adding research approaches, between quantitative and qualitative approaches (mixed method).
- 3. Whereas suggestions that can be submitted to the Pekanbaru City Government are that regional OPD apparatuses can further improve motivation, the quality of each apparatus to manage regionally owned assets as well as possible, because these regional assets are directly related to people's welfare, and if their use maximized it will be able to increase Regional Original Revenue (PAD).
- 4. To be able to further improve the quality of the regional apparatus, the regional apparatus are expected to be able to learn more about the asset management information system, internal control system and regulations governing asset management, and more often follow trainings both conducted by the Pekanbaru City Government and training conducted by relevant agencies related to the management / administration of regional property.

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