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THE APPLICATION OF GREEN ACCOUNTING AND PERFORMANCE MEASUREMENT SYSTEMS IN ENHANCING ACCOUNTABILITY IN THE CITY GOVERNMENT OF KEDIRI

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Abstract. Government agencies play an important role in designing, implementing, and evaluating policies that support resource efficiency, environmental protection, and socio-economic balance. The effectiveness of pro-environmental policies requires a comprehensive and accountable measurement system in the real impact on sustainability. The purpose of this study is to determine the application of Green Accounting in Kediri City Government Regulations in the form of Kediri Perwali No. 8 of 2021, Kediri Perwali No. 48 of 2023, and Kediri City Regional Regulation No. 9 of 2009, to the general public. This study uses quantitative research methods with multiple linear regression analysis, with a survey of 171 respondents. The results of the analysis show that the implementation of Green Accounting and the Performance Measurement System has a significant positive effect on the accountability of government institutions. The results of the analysis also show that Green Accounting together with the Performance Measurement System has a partial and significant effect on government institutions in Kediri City.

Keywords: Green Accounting, Performance Measurement System, Government Accountability, Environmental Policy.

I. INTRODUCTION

Environmental sustainability is not only the responsibility of the private sector, but also a top priority for government agencies tasked with achieving sustainable development. Government agencies play a strategic role in designing, implementing, and evaluating policies that support resource efficiency, environmental protection, and socio-economic balance. However, the effectiveness of these policies requires comprehensive and accountable measurement systems to ensure real impact on sustainability. Amid global challenges such as climate change, environmental degradation, and natural resource exploitation, tools such as Green Accounting and Performance Measurement System (PMS) offer integrative solutions for managing environmental performance in a transparent and accountable manner. Green Accounting enables government agencies to measure and report the environmental impacts of their activities while evaluating the effectiveness of policies. Meanwhile, PMS provides a systematic framework for assessing an organization's success in achieving sustainability goals across various aspects, including emissions reduction, energy efficiency, and the adoption of

environmentally friendly practices. Governments worldwide are undertaking administrative reforms to align the needs of stakeholders and public sector organizations. Based on research conducted (Castelo & Gomes, 2023), policy implementation can help public organizations align their goals with stakeholder needs. This article analyzes policies issued by the Kediri City Government in relation to Green Accounting.

Kediri City is one of the regions in East Java that has several potential disasters. Increasing disaster preparedness is a very important effort that must be carried out. Based on the sources we observed, Kediri City is classified as having a high flood risk based on flood disaster risk analysis. Mojoroto District has the largest potential risk area, namely 1,543.36 Ha with a high risk class. The risk class at the subdistrict level is also determined based on the highest risk class at the village level. Several areas classified as high-risk include the subdistricts of Kota and Mojoroto, while the subdistrict of Pesantren Kediri is categorized as low-risk for flooding. The total potential number of residents exposed to flood hazards in Kediri City is 168,278 people, which is more than half (57.37%) of the total population of Kediri City, which has a population of 293,287 people. Kediri City's vulnerability to flood disasters is also calculated based on the potential and critical facilities for flood disasters, which also impact the contribution value to the Regional Domestic Product (RDP) of Kediri City. Based on this phenomenon, the Kediri City Government issued a policy in the Kediri Mayor Regulation No. 8 of 2021 on the Detailed Spatial Plan for Kediri City for the years 2021-2041. The Kediri Mayor Regulation regulates the city planning plan designed to prevent negative impacts on the environment by regulating and protecting the sustainability of the environment, protected forests, rivers, and springs. The Kediri City Government has also issued Regional Regulation No. 3 of 2009 on Environmental Management, aimed at managing the environment, preserving it, and preventing pollution and environmental damage caused by flood disasters (Regulation of the Mayor of Kediri, 2023).

Research on green governance and environmentally conscious governance has been conducted extensively and represents an interesting segment of research, as demonstrated by studies such as that conducted by Suleiman et al. (2020), which examined case studies of rainwater management in Stockholm and Barcelona. Research on government accountability toward environmental issues (Guo & Qiao, 2024) indicates that government attention to the environment has a significant impact on a city's green efficiency, leading to reduced pollution in cities with contrasting emission levels. However, it is important to link performance measurement with green governance to enhance sustainable green programs within organizations, as demonstrated in the study by Caiado et al. (2019). Research on performance measurement and the environment (Tu et al., 2024) confirms that a Performance Measurement System can serve as a critical evaluation tool to assess the impact of policies such as Environmental Policy Tax Reform (EPTR) on emission reduction and green transformation in the business sector. Based on the above discussion, environmental issues within public organizations can be addressed through the implementation of Green Accounting to prevent environmental damage and preserve the environment. Furthermore, the implementation of Green Accounting requires a performance measurement system to conduct evaluations and improve sustainable performance. Through this article, the author aims to provide a deeper understanding of how the integration of Green Accounting and PMS can enhance accountability and efficiency in government institutions in supporting sustainability.

II. LITERATURE REVIEW

A. Application of Green Accounting

The concept of Green Accounting in (Lako, 2016, 2018) can be defined as a process that includes the recognition, measurement, recording, summarization, reporting, and disclosure of information related to transactions, events, and objects that have a dual impact on finance, society, and the environment. This information must be integrated into the accounting process to facilitate the preparation of integrated, comprehensive, and relevant financial statements that are useful for users involved in economic and non-economic evaluations and decision-making processes. Previous research indicates that Green Accounting helps identify and reduce negative environmental impacts through better decision-making. (Yu et al., 2024) note that environmental tax reforms, such as Environmental Policy Tax Reform (EPTR), not only reduce pollution levels but also improve law enforcement and prevent collusion between government and companies.

According to (Lako, 2016), Green Accounting has a much broader meaning than other terms such as social accounting, environmental accounting, social and environmental accounting, and even sustainable accounting. The subject matter of green accounting encompasses all phenomena, objects, realities, actions, and transactions inherent in or occurring within the universe and among humans. Given the cause-and-effect interdependence between human behavior (society) and corporate actions with the natural environment, green accounting integrates social accounting, financial/economic accounting, and environmental accounting. Significant aspects of Green Accounting include land, vegetation, forests, water, air, atmosphere, oceans, carbon, waste, as well as social and environmental responsibility. The fundamental principles of green accounting include the integration of environmental, social, and financial accounting information (Deegan, 2003; Lako, 2018). Articles discussing the application of Green Accounting in public sector organizations in Indonesia, such as (Ashari & Yudhi Anggoro, 2021), state that the application of green accounting in public organizations has an impact on environmental sustainability and the welfare of the surrounding community. Additionally, research (Guo, D., & Qiao, 2024) confirms that the implementation of Green Accounting by the government significantly improves resource management efficiency, supports pollution reduction, and enhances accountability, particularly through transparency in environmental impact reporting.

B. Performance Measurement System (PMS)

A performance measurement system is a tool used to identify strengths and weaknesses inherent in the delivery of information related to effectiveness in an organization (Ammons, 2001, in Dimitrijevska-Markoski, 2019). According to (Mardiasmo, 2009), the purpose of performance measurement in the public sector is to assist public administrators in evaluating the achievement of strategic plans through the use of financial and non-financial assessment instruments. Non-financial assessment instruments, such as research by (Tu et al., 2024), highlight the role of PMS as a critical evaluation tool in assessing the impact of environmental policies on green transformation in the business sector. PMS provides relevant metrics to measure the success of policies such as EPTR in achieving sustainability goals.

The measurement system proposed by (Halim, 2014; Mahsun, 2013) is defined as a system that aims to provide a means for public managers to assess the extent to which a given strategy has been achieved, based on the use of predetermined performance benchmarks. A

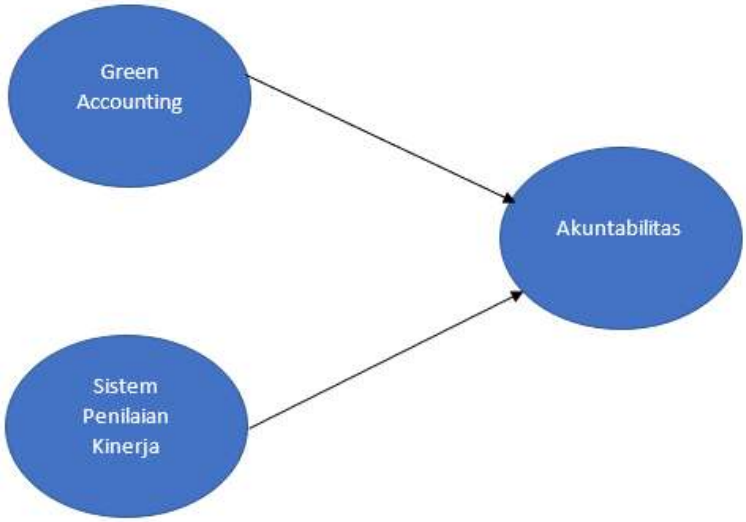
performance measurement system is a system designed to assist public managers in evaluating the success of a strategy through the use of financial and non-financial measurement techniques. An article discussing performance measurement systems in public organizations by (Kuntadi & Puspita, 2022) performance measurement systems can influence organizations or individuals to achieve performance goals. Additionally, research by (Caiado, R. G. G., et al., 2019) reveals that performance measurement systems integrated with sustainable operational programs not only enhance organizational efficiency but also promote sustainability by ensuring that economic, social, and environmental goals are achieved simultaneously.

C. Public Sector Accountability

Public sector accountability is an important element in good governance. According to (Mardiasmo, 2009), public sector accountability is the obligation of the government to provide accountability, explain, and report on its performance and management of resources to interested parties. This concept encompasses not only financial aspects but also the social and environmental impacts of government policies and actions. In this context, the principle of accountability includes clarity of functions within government organizations and the means of accountability. To achieve good governance, research by (Aziz et al., 2015) shows that reform in financial reporting and increased transparency are important steps. This reflects a shift from a focus on compliance alone to more transparent and accountable reporting practices. Thus, the relationship between transparent financial reporting practices and improved governance and public trust has become increasingly relevant. In addition, the application of accountability principles such as transparency, integrity, and responsiveness is essential to create a strong accountability system in public sector organizations.

Framework

The implementation of green accounting and performance measurement systems has great potential to improve accountability in government institutions. By integrating environmental considerations into performance reports, institutions can provide more transparent information to the public, encourage public participation, and build trust in government practices. Therefore, it is important for the government to adopt this approach as part of its efforts towards good and sustainable governance. Therefore, the research framework is illustrated as follows:



Illustrative Figure of the Conceptual Framework 2.4

III. RESEARCH METHODOLOGY

A. Research Variables

This study uses three main variables, namely two independent variables and one dependent variable.

Independent Variables

1. Green Accounting
   Green accounting in the context of government institutions is defined as the integration of environmental aspects into the government financial reporting system. This practice includes the systematic recognition, measurement, recording, and reporting of environmental information, thereby enhancing transparency and strengthening public accountability (Lako, 2016; Yu et al., 2024).
2. Performance Measurement System (PMS)
   PMS in the public sector is a tool for evaluating the performance of government organizations through financial and non-financial indicators. According to Mardiasmo (2009), this system is used to measure the success of government programs and policies. PMS also functions as an evaluative instrument in identifying the impact of policies on green transformation (Tu et al., 2024).

Dependent Variables

1. Accountability in Government Institutions
   Accountability of government institutions is measured by the level of transparency, effectiveness, and accountability to the public. Accountability is a key indicator in the in assessing the success of institutions in carrying out their governmental functions, especially when implementing green accounting and PMS simultaneously.

Referring to the definition of hypothesis according to Sekaran and Bougie (2017) as a tentative assumption about the relationship between variables that can be tested empirically, the hypothesis proposed in this study is as follows:

H1: The implementation of green accounting has a positive effect on the accountability of government institutions.

With green accounting, government agencies can report the environmental impact of the mayor of Kediri's policies, thereby increasing transparency and enabling the public to understand how these policies affect the environment.

H2: A performance measurement system has a positive effect on government agency accountability.

Performance measurement systems provide a framework for assessing the success of policies and programs implemented by the government. With statistical analysis and explanations from this study, it is hoped that government agencies will be able to account for their performance more effectively to the public.

B. Research Design

This study uses a quantitative approach with an associative descriptive design that aims to examine and analyze the relationship between independent variables, namely green accounting and performance measurement systems, and dependent variables in the form of government accountability. The quantitative approach was chosen because it allows researchers to objectively measure the extent to which these two independent variables influence accountability, supported by statistical data obtained from the field.

The population in this study was all employees working in government agencies in Kediri City, including employees in various agencies such as departments, agencies, and sub-districts, who were involved in environmental management, financial reporting, and performance measurement and public accountability systems. The primary focus in selecting the population was on employees directly involved in decision-making processes, policy implementation, and reporting, particularly those related to the application of green accounting and performance measurement systems.

The sampling technique used was purposive sampling, which is the selection of respondents based on specific criteria in order to obtain a relevant sample with adequate understanding of the topic being studied. The sample selected included employees from various job levels, ranging from staff to structural officials. To determine the sample size, the researcher used the Slovin formula with the assumption of a population of 300 people and a margin of error of 5%. Based on these calculations, the sample size used in this study is 171 respondents, which is considered sufficient to represent the conditions being studied comprehensively.

Data collection was carried out using two types of sources, namely primary data and secondary data. Primary data was obtained through the distribution of questionnaires to respondents who were predetermined, with the aim of exploring information about their understanding and perceptions of the implementation of green accounting, performance measurement systems, and the level of accountability of government institutions. Meanwhile, secondary data was obtained from various official documents and relevant literature, such as

annual reports of government agencies, local regulations, internal policies, scientific journals, and other sources of information related to the research topic.

The primary data collection technique in this study was a field survey using a closed questionnaire. The questionnaire was designed in the form of a five-point Likert scale, where each statement was weighted from one to five, ranging from strongly disagree to strongly agree. This instrument was designed to systematically and structurally measure respondents' perceptions of each research variable. By using this approach, the researcher hopes to obtain valid and reliable data for further analysis to test the previously established hypotheses.

C. Research Instrument Testing Method

Instrument testing in this study includes validity and reliability tests. Validity is measured using the correlation between item scores and total scores, and items are considered valid if the correlation value is > 0.5 (Sekaran & Bougie, 2016). Reliability is tested using Cronbach's Alpha with a minimum value of 0.60 to ensure consistency among items in the questionnaire.

Classical assumption tests were conducted prior to linear regression analysis. Normality tests were conducted using histograms, P-P plots, and Kolmogorov-Smirnov tests to ensure that the residuals were normally distributed. Multicollinearity tests were conducted using tolerance values (> 0.10) and VIF values (< 10). Heteroscedasticity tests were conducted using scatter plots to ensure that there were no specific patterns in the distribution of residuals.

1. Multiple Linear Regression Test
   Multiple linear regression analysis is used to examine the simultaneous effects of two independent variables on one dependent variable. Regression model: $Y = \alpha + \beta 1X1 + \beta 2X2 + e$, where Y is Accountability, X1 is Green Accounting, and X2 is Performance Measurement System.
2. Coefficient of Determination Test
   The R^2 test aims to determine how much of the variation in the dependent variable is explained by the independent variables. The higher the R^2 and adjusted R^2, the better the model explains the relationship between variables.
3. F Test
   The F test measures the simultaneous influence of independent variables on the dependent variable. If the calculated F value is greater than the table F value or p is less than 0.05, then the regression model is significant overall.
4. t-test
   The T-test measures the effect of each independent variable on the dependent variable individually. If the p-value is < 0.05, then the variable has a significant effect on accountability.

IV. RESULTS AND DISCUSSION

A. Research Instrument Test

The questionnaire in this study was used as a tool to analyze data, where the results were assessed based on the scores given by the respondents. An effective data collection instrument must meet two main criteria, namely validity and reliability, which were tested through validity and reliability tests.

Validity Test

Validity testing is very important in research, especially when using questionnaires as a tool for collecting data. The purpose of validity testing is to ensure that the instrument can accurately measure what is intended and that there is consistency between the concept being measured and empirical reality. Validity testing is used to measure the extent to which an instrument is valid and reliable. An instrument is considered valid if it can accurately measure the variables being studied. The level of validity of an instrument indicates how accurately the data collected represents the variables in question.

The validity testing process was conducted by correlating each factor or variable with the total factors or variables using product-moment correlation ®. The following are the results of the validity testing of the instruments for each variable studied. The following are the results of the validity testing of each variable used in this study.

0. Validity Test of Green Accounting Variables

Table 1. Results of the Green Accounting Variable Validity Test

Item	Calculated r	Sig	r Table	Description
GA1	0.852	0.000	0.197	Valid
GA2	0.727	0.000	0.197	Valid
GA3	0.673	0	0.197	Valid
GA4	0.494	0.000	0.197	Valid
GA5	0.601	0.00	0.197	Valid
GA6	0.695	0.000	0.197	Valid

(Source: Primary data processed, 2024)

Based on the table above, it can be seen that all calculated r values are greater than the table r value of 0.197 at a significance level of 5%. In addition, the sig. values for each question indicator are also less than 0.05 ($\alpha = 0.05$). Thus, it can be concluded that the instrument used is valid for measuring Green Accounting. Another study supporting the validity of Green Accounting measurement was conducted by (Yu et al., 2024), which showed that Green Accounting measurement through environmental tax policy reform yields significant results in assessing emission reduction and environmental efficiency.

b. Validity Test of Performance Measurement System Variables

Table 2. Results of the Validity Test of Performance Measurement System Variables

Item	Calculated r	Sig	r Table	Description
SPK1	0.869	0.000	0.197	Valid
SPK2	0.818	0	0.197	Valid
SPK3	0.859	0.000	0.197	Valid
SPK4	0.889	0.000	0.197	Valid
SPK5	0.772	0	0.197	Valid
SPK6	0.845	0	0.197	Valid
SPK7	0.811	0	0.197	Valid
SPK8	0.590	0	0.197	Valid

(Source: Primary data processed, 2024)

Based on the table above, it can be seen that all calculated r values are greater than the table r value of 0.197 at a significance level of 5%. In addition, the sig. values for each question indicator are also less than 0.05 (α = 0.05). Thus, it can be concluded that the instrument used is valid for measuring the Performance Measurement System. Another study conducted by (Tu et al., 2024) supports the validity of this system for evaluating green transformation, ensuring the relevance and reliability of evaluation metrics.

c. Validity Test of Accountability Variables

Table 3. Results of the Validity Test of Accountability Variables

Item	Calculated r	Sig.	r Table	Description
AK1	0.901	0.000	0.197	Valid
AK2	0.894	0.000	0.197	Valid
AK3	0.856	0.000	0.197	Valid
AK4	0.889	0.000	0.197	Valid
AK5	0.916	0.000	0.197	Valid

(Source: Primary data processed, 2024)

Based on the table above, it can be seen that all calculated r values are greater than the table r value of 0.197 at a significance level of 5%. Additionally, the sig. values for each question indicator are also less than 0.05 (α = 0.05). Therefore, it can be concluded that the instrument used is valid for measuring Accountability.

Reliability Test

Reliability testing is used to assess the accuracy, consistency, and stability of measuring tools or instruments used in research, as well as to determine how consistent a person's answers are in repeated measurements. The technique used in this reliability test is to calculate

the alpha reliability coefficient. The decision criteria state that if the alpha reliability coefficient value is greater than 0.6, then the variable is considered reliable.

Table 4. Reliability Test Results

Variable	*Cronbach's Alpha*	Criteria	Description
Green Accounting	0.806	0.6	Reliable
Performance Measurement System	0.789	0	Reliable
Accountability	0.815	0	Reliable

(Source: Primary data processed, 2024)

Based on Table 4, it can be seen that the value of Cronbach's alpha for all variables is greater than 0.6. From the provisions mentioned earlier, all variables used for the study are reliable.

B. Classical Assumption Test

This classical assumption test was conducted to fulfill the requirements for multiple linear regression. The classical assumption tests conducted in this study were normality test, multicollinearity test, and heteroscedasticity test. The test results are presented as follows:

Multicollinearity Test

The multicollinearity test aims to ensure that there is no overly strong relationship or correlation between independent variables. The test is conducted by comparing the Tolerance values obtained from multiple regression analysis. If the Tolerance value is less than 0.1, it can be concluded that multicollinearity exists. Additionally, the test can also be conducted by examining the Variance Inflation Factor (VIF) value. If the VIF value exceeds 10, multicollinearity is considered to be present. The results of the multicollinearity test can be seen in Table 5 below.

Table 5. Results of Multicollinearity Testing

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	5.647	1,716		3,291	,001		
	GA	,457	,097	,433	4,722	,000	,503	1,988
	SPK	,189	,076	,228	2,493	,014	,503	1,988
a. Dependent Variable: AK								

(Source: Primary data processed, 2024)

Based on the results of the multicollinearity test in Table 5, it can be explained that:

a. For the Green Accounting (GA) variable, the tolerance value is 0.503 > 0.1 and the VIF value is 1.988 < 10, indicating that there is no multicollinearity.
b. For the Performance Measurement System (PMS) variable, the tolerance value is 0.503 > 0.1 and the VIF value is 1.988 < 10, so it can be concluded that there is no multicollinearity.

Normality Test

The normality test aims to examine whether the residual values have a normal distribution or not. The testing process is carried out by observing the distribution of data (points) on the graph, especially around the diagonal line. If the data is scattered along the diagonal line, the residuals are considered to be normally distributed. The following are the results of the normality test of the data.

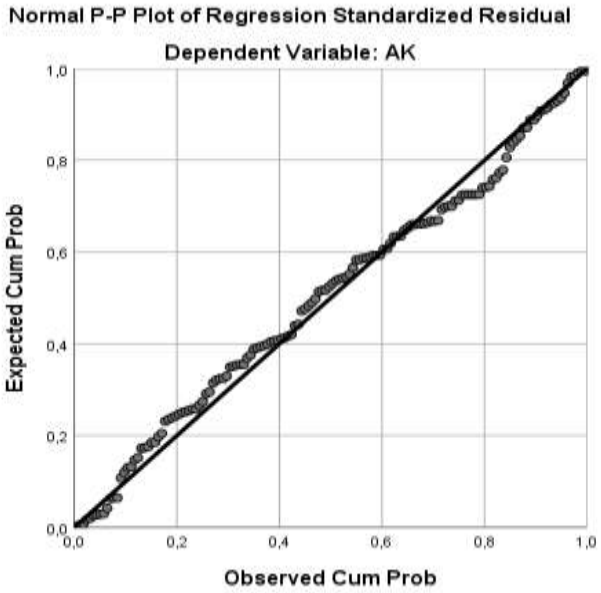


Figure 1. Results of Normality Test (P-Plot)

(Source: Primary data processed, 2024)

Based on the P-P Plot test, it can be seen that the data points are scattered along the diagonal line, so it can be concluded that the residuals have a normal distribution. In addition, data normality can also be tested using the Kolmogorov-Smirnov test (Ghozali, 2016) with the following criteria:

Hypothesis:
H0: The residuals have a normal distribution.
H1: The residuals do not have a normal distribution.

The decision is made based on the significance value (p-value):

- If the sig. (p-value) is > 0.05, then H0 is accepted, meaning the residual distribution is considered normal.
- If the significance value (p-value) is≤ 0.05, then H0 is rejected, meaning the residual distribution is not normal.

Table 6. Results of the Normality Test (Kolmogorov-Smirnov)

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		1
Normal Parameters [a, b]	Mean	,000000
	Standard Deviation	5.12327601
Most Extreme Differences	Absolute	0.069
	Positive	0.069
	Negative	-,056
Test Statistic		0.069
Asymp. Sig. (2-tailed)		0.080[c]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors significance correction.		

(Source: Primary data processed, 2024)

Based on the results in Table 6 above, it can be seen that the significance value is 0.080 > 0.05, so it can be concluded that the data is normally distributed.

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether there is a difference in residual variance influenced by the magnitude of one of the independent variables. In other words, this test examines whether the residual variance changes as the value of the independent variable increases. One of the methods used is the Glejser test, which is based on the following hypothesis:

Hypothesis:
H0: Residual variance is homogeneous (no heteroscedasticity).
H1: The residual variance is not homogeneous (heteroscedasticity exists).

The test is conducted by examining the significance value of the regression results. If the significance value (p-value) is > 0.05, then H0 is accepted, meaning that there is no heteroscedasticity. Conversely, if the significance value is≤ 0.05, then H0 is rejected, and heteroscedasticity is considered to exist. The following are the results of the heteroscedasticity test.

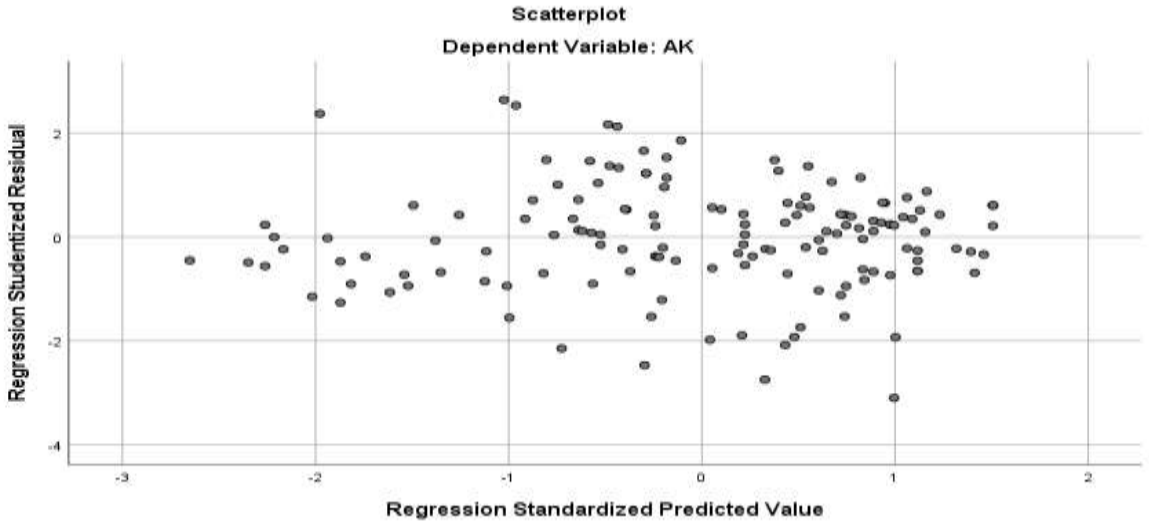


Figure 2. Results of the Heteroskedasticity Test (Scatter Plot)
(Source: Primary data processed, 2024)

The presence of heteroscedasticity can be detected by observing the pattern in the Scatterplot graph (Ghozali, 2016:138). The basis of the analysis is as follows:

- If a specific, regular pattern is observed, such as points forming a wavy pattern, widening, or narrowing, this indicates the presence of heteroskedasticity.
- If there is no clear pattern and the points are randomly scattered above and below the 0 mark on the Y-axis, it can be concluded that there is no heteroscedasticity.

Table 7. Results of the Heteroscedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	(Constant)	5.427	1.100		4,934	,000
	GA	-,001	,062	-,002	-,018	,986
	SPK	-,050	0.049	-,120	-1,037	,301
a. Dependent Variable: ABS_RES						

(Source: Primary data processed, 2024)

Based on Table 7, the results can be interpreted as follows:

a. The heteroskedasticity test for the GA variable shows a Sig. value of 0.986 > 0.05, indicating that there is no heteroskedasticity.
b. The heteroskedasticity test for the SPK variable shows a Sig. value of 0.301 > 0.05, indicating that there is no heteroskedasticity.

C. *Multiple Linear Regression Analysis*

This regression analysis is used to calculate the magnitude of the influence between the independent variables, namely Green Accounting (GA) and Performance Measurement System (SPK), on the dependent variable, namely Accountability (AK).

Regression Equation

The regression equation is used to examine the relationship between independent and dependent variables. The following are the results of the multiple linear regression analysis in this study.

Table 8. Multiple Linear Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	(Constant)	5.647	1.716		3,291	0.001
	GA	,457	,097	,433	4,722	,000
	SPK	,189	,076	,228	2,493	,014
a. Dependent Variable: AK						

(Source: Primary data processed, 2024)

Through the regression analysis results in Table 8 above, the regression equation can be obtained as follows:

$$Y = 5.647 + 0.457X1 + 0.189X2 + e$$

From the equation above, the following interpretation can be made:

1. The constant of 5.647 indicates that without the influence of Green Accounting (X1) and Performance Measurement System (X2), the value of Accountability (Y) is estimated to be 5.647 units.
2. The regression coefficient of X1 is 0.457, indicating that every one-unit increase in Green Accounting (X1) will increase Accountability (Y) by 0.457 units, assuming all other variables remain constant.
3. The regression coefficient for X2 is 0.189, indicating that each one-unit increase in Performance Measurement System (X2) will increase Accountability (Y) by 0.189 units, assuming all other variables remain constant.

D. *Coefficient of Determination (R^2)*

To determine the contribution of the independent variables, namely Green Accounting (X1) and Performance Measurement System (X2), to the dependent variable, namely Accountability (Y), the R^2 value is used. The R^2 value can be seen in the table below:

Table 9. Correlation and Determination Coefficients

Model Summary[b]				
Model	R	R Square	Adjusted R-Square	Standard Error of the Estimate
1	,616[a]	0.379	0.370	5.15801
a. Predictors: (Constant), SPK, GA				
b. Dependent Variable: AK				

(Source: Primary data processed, 2024)

From the analysis in the table above, the R^2 value (coefficient of determination) is 0.379. This indicates that 37.9% of the Accountability (Y) variable is influenced by the independent variables, namely Green Accounting (X1) and Performance Measurement System (X2). Meanwhile, the remaining 62.1% is influenced by other variables not discussed in this study.

E. Hypothesis Testing

Hypothesis testing is a crucial stage in research conducted after data is collected and analyzed. Its main purpose is to evaluate and answer previously formulated hypotheses.

F-test (Simultaneous Test)

The F-test, or model test, is used to determine whether the results of the regression analysis are significant or not. In other words, this test aims to evaluate whether the model used is appropriate or accurate.

Table 10. F Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2386.128	2	1,193.064	44,843	,000[b]
	Residual	3,910,946	147	26,605		
	Total	6,297,073	149			
a. Dependent Variable: AK						
b. Predictors: (Constant), SPK, GA						

(Source: Primary data processed, 2024)

Based on Table 10 above, the calculated F value is 44.843, while the table F value ($\alpha = 0.05$; regression df = 2; residual df = 147) is 3.053. Since the calculated F value is greater than the table F value, i.e., 44.843 > 3.053, or the Sig. F (0.000) < $\alpha = 0.05$, the regression analysis model is significant. Therefore, it can be concluded that the dependent variable Accountability (Y) is significantly influenced by the independent variables, namely Green Accounting (X1) and Performance Measurement System (X2). Thus, the hypothesis that Green Accounting and Performance Measurement System together have a significant effect on the accountability of government institutions is supported.

These results are consistent with the study (Guo, D., & Qiao, 2024), which shows that government attention to the environment through the implementation of green accounting principles improves resource management efficiency, which ultimately contributes to transparency and accountability in the public sector. Additionally, research (Ashari, M. H., 2021) also found that the implementation of Green Accounting in public sector organizations has a significant relationship with improved accountability, particularly in integrated environmental

and financial reporting. Research by (Caiado, R.G,G et al., 2019) shows that a well-designed Performance Measurement System helps government agencies improve accountability through objective and relevant performance monitoring aligned with organizational goals.

T-test (Partial Test)

The T-test or model test is used to determine whether each independent variable has a significant partial effect on the dependent variable, in other words, to evaluate whether the model used is appropriate or not. The decision criteria are as follows:

- If the Sig value is > 0.05, it is concluded that the independent variable does not have a significant effect.
- If the Sig value is < 0.05, it is concluded that the independent variable has a significant effect.

The results of the t-test in this study are presented in the following table.

Table 11. T-Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.647	1.716		3,291	,001
	GA	,457	,097	,433	4,722	,000
	SPK	,189	,076	,228	2,493	,014
a. Dependent Variable: AK						

(Source: Primary data processed, 2024)

The interpretation of the t-test results in Table 11 above is as follows:

a. Hypothesis Testing 1: Hypothesis 1 states that Green Accounting has a positive and significant effect on accountability. Based on the table above, the Green Accounting variable has a sig. t value of 0.000, which is less than 0.05, and the regression coefficient indicates a positive direction of 0.457. These results indicate that Green Accounting has a positive effect on accountability. Based on the test results, it can be concluded that H0 is rejected and H1 is accepted.
b. Hypothesis Testing 2: Hypothesis 2 states that the Performance Appraisal System has a positive and significant effect on accountability. Based on the table above, the Performance Appraisal System variable on accountability has a sig. t value of 0.014, which is less than 0.05, and the regression coefficient shows a positive direction of 0.189. These results indicate that the Performance Appraisal System has a positive effect on accountability. Based on the test results, it can be concluded that H0 is rejected and H2 is accepted.

The T-test results in this study indicate that Green Accounting and Performance Measurement System partially have a significant influence on the accountability of government institutions. The Green Accounting variable has a calculated T-value of 4.722 with a p- -value of 0.000, while the Performance Measurement System variable has a calculated T-value of

2.493 with a p-value of 0.014. Both p-values are less than 0.05, so it can be concluded that both independent variables individually have a significant effect on the dependent variable. These results are supported by research (Guo, D., & Qiao, 2024), which shows that the implementation of green accounting principles by government agencies has a positive relationship with resource management efficiency and increased accountability through transparency in environmental impact reporting. A study by (Kuntadi, C., & Puspita, 2022) supports this finding by emphasizing that the use of an effective Performance Measurement System encourages institutions to be more transparent and accountable for their work results, thereby strengthening overall accountability.

Based on the literature, the T-test in this study is consistent with previous findings, reinforcing that Green Accounting and Performance Measurement Systems individually contribute significantly to improving government agency accountability.

V. CONCLUSION

The implementation of Green Accounting and Performance Measurement Systems (PMS) is an effective approach to improving accountability in government institutions, especially in Kediri City. A review of the literature clearly shows that Green Accounting enables institutions to measure and report the environmental impact of their policies, thereby providing greater transparency to the public. This aligns with previous research that definitively shows that the implementation of Green Accounting can reduce negative environmental impacts and support better decision-making (Tu et al., 2024); (Guo, D., & Qiao, 2024).

The research method used in this study was quantitative research, with data collected through questionnaires filled out by employees at the Kediri city government agency. The results of the analysis clearly show that the implementation of Green Accounting has a positive effect on accountability in the Kediri city government agency. There is no doubt that governance of environmental impacts can increase public trust. Additionally, the implementation of PMS plays a crucial role in enhancing accountability by providing a structured framework for evaluating the success of policies and programs that have been implemented.

This study emphasizes the importance of integrating Green Accounting and PMS into good governance. This research is expected to serve as a reference for improving efficiency and effectiveness in resource management in the Kediri city government, contributing to environmental sustainability and community welfare, and achieving sustainable development goals by adopting these two approaches. The government must continue to develop and implement the principles of Green Accounting and PMS.

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