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Green Budgeting and the Quality of Local Government Financial Reports: An Empirical Study on the Government of Surabaya City

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Abstrak

This study examines the effect of green budgeting implementation on the quality of local government financial statements, with empirical evidence from the Surabaya City Government. Green budgeting is an innovative accounting approach that integrates environmental considerations into fiscal planning, thereby enhancing transparency, accountability, and long-term fiscal sustainability. The research applies a quantitative method by utilizing data from financial reports, budget documents, and supporting interviews. Linear regression analysis is employed to test the relationship between green budgeting and financial reporting quality. The findings demonstrate that green budgeting has a significant positive impact on the quality of local government financial statements, particularly in improving transparency and accountability in financial disclosure. This study contributes to the body of knowledge in public sector accounting by providing evidence on the role of environmentally oriented budgeting in strengthening financial governance. Furthermore, the results offer practical implications for policymakers, suggesting that the adoption of green budgeting can serve as a strategic tool for local governments to align fiscal practices with sustainable development goals (SDGs).

Kata Kunci: Green Budgeting, Governmental Accounting, Financial Reporting Quality, Local Government, Sustainability

1. Introduction

Sustainable development has become a global concern that cannot be avoided, particularly for developing countries such as Indonesia, which faces the challenge of balancing rapid economic growth with environmental sustainability. Urbanization, population growth, and increasing infrastructure needs have placed significant pressure on natural ecosystems, and this situation is particularly evident in major metropolitan areas such as Surabaya. As the second-largest city in Indonesia, Surabaya is currently confronted with pressing environmental issues, including rising air pollution, limited green open spaces, and persistent challenges in solid waste management (Mal Pelayanan Publik Surabaya, 2024).

Several local governments in Indonesia have begun adopting green budgeting to respond to this challenge. For example, the Provincial Government of DKI Jakarta integrates environmental aspects in its budgeting process through environmentally friendly transportation initiatives such as the procurement of electric buses, bicycle lane development, and the revitalization of green open spaces. Similarly, the Central Java Provincial Government allocates funds for small-scale solar power plants in rural areas to promote renewable energy and community-based economic development (Rizki Andini & Christiono Utomo, 2014). Meanwhile, the Buleleng Regency in Bali has implemented green budgeting in the tourism sector by funding community-based waste management programs in coastal tourist destinations (Haryanto & Nurkholis, 2015). These cases demonstrate that green budgeting is not only a theoretical framework but also a practical fiscal instrument that enables local governments to simultaneously address economic and environmental objectives.

From a financial reporting perspective, the quality of local government financial statements is a critical measure of public accountability (Pujanira & Taman, 2017). In accordance with the Government Accounting Standards (SAP), financial statements are required to possess qualitative characteristics such as reliability, relevance, comparability, and understandability (Dadang Suhendar, 2017). However, financial reporting in local governments has traditionally focused on fiscal achievements without explicitly reflecting sustainability dimensions. The integration of green budgeting offers an opportunity to enhance both the transparency and accountability of

financial reporting, ensuring that fiscal governance demonstrates not only financial performance but also the government's commitment to sustainable development (Salahudin et al., 2025).

The theoretical foundation of green budgeting in governmental accounting can be explained through several perspectives. Environmental Accounting Theory highlights that every economic activity has environmental consequences and, therefore, environmental costs should be explicitly recognized in financial statements (Tilling, 2004). Legitimacy Theory suggests that governments require public legitimacy to maintain their operations, which can be strengthened by incorporating environmental sustainability into fiscal practices (Colombatto, 2012). Finally, Public Accountability Theory emphasizes the responsibility of governments to account for public resource utilization, with green budgeting serving as an effective tool to ensure that budgets are aligned with environmental and developmental goals (Brandsma & Schillemans, 2012).

Despite its importance, the practical implementation of green budgeting in Indonesia remains limited. Many local governments still perceive environmental initiatives as supplementary rather than integral to fiscal policies (Meidiza Dwi Orchidea et al., 2016). Budget allocations for environmental programs are often symbolic, unaccompanied by measurable performance indicators, and constrained by the limited capacity of human resources to fully understand the concept (Widiatmaka et al., 2012). In addition, local government financial reporting often emphasizes formal accountability rather than capturing the substantive contributions of fiscal policy to environmental sustainability. This condition creates a significant gap between normative expectations (*das sollen*), which mandate transparent and sustainability-oriented budgeting, and the actual practices (*das sein*), where fiscal reports primarily focus on conventional financial indicators.

The problem addressed in this study is the limited integration of environmental dimensions into local government budgeting and financial reporting, despite the increasing global and national emphasis on sustainability. This problem is significant because the absence of green budgeting reduces the potential of financial statements to reflect the government's real contribution to sustainable development. The research therefore raises the following question: does the implementation of green budgeting have a significant impact on the quality of local government financial statements? The complexity of the problem lies in the fact that while financial accountability standards are clearly regulated, the inclusion of sustainability dimensions is still relatively underdeveloped in practice. The novelty of this study is its empirical focus on linking green budgeting with the quality of financial statements at the municipal government level in Indonesia, which has rarely been explored in previous studies that mainly focus on either corporate environmental accounting or general reporting quality (Putri, 2022; OECD, 2020). Accordingly, the main objective of this research is to empirically analyze the effect of green budgeting on the quality of financial statements in the Surabaya City Government, thereby contributing to the literature on public sector accounting and offering practical implications for sustainable fiscal governance.

2. Research Methodology

This research employs a quantitative method with an empirical design in the field of local government accounting, with the Surabaya City Government serving as the research object. The study adopts an explanatory research design to test the causal relationship between the independent variable green budgeting implementation and the dependent variable the quality of local government financial statements. The survey approach is used, combining both primary and secondary data to provide a comprehensive perspective on environmentally based budgeting policies within government accounting. The choice of this method is appropriate as it enables the study to examine causal effects objectively while capturing both policy implementation and reporting practices.

Sampling and Research Context. The unit of analysis is the Surabaya City Government, specifically focusing on the financial management and reporting departments. The target population consists of local government financial managers and staff involved in budgeting and reporting processes. Respondents are selected purposively based on their direct involvement with green budgeting policies and financial reporting, ensuring relevant and credible data are obtained. **Data Collection.** The study uses a combination of documentation, literature review, and structured interviews. Documentation includes the Local Government Financial Statements (LKPD), the Regional Revenue and Expenditure Budget (APBD) of Surabaya City, and related regulations and supporting reports on green budgeting policies. A literature review of prior studies supports the theoretical foundation and contextual understanding. Structured interviews with local government financial managers are conducted to validate findings and strengthen data reliability.

Measurement and Data Analysis. The dependent variable, quality of local government financial statements, is measured based on four characteristics: relevance, reliability, comparability, and understandability. The

independent variable is the implementation of green budgeting, assessed through regulatory compliance and policy integration. Data are analyzed using multiple linear regression with statistical software to test the hypothesized causal relationship. This method provides a robust analysis, ensuring that results are both valid and reliable. Through this methodological design, the research seeks to generate accurate findings regarding the influence of green budgeting on financial reporting quality, thereby contributing to the development of sustainable public sector accounting practices.

3. Result and Dissucion

a. Implementation of Green Budgeting in the Surabaya City Government

The findings indicate that the Surabaya City Government has progressively integrated the concept of green budgeting into its planning and budgeting processes (Wicaksono, 2019). This is reflected in the increasing allocation for environmentally oriented programs such as air pollution control, community-based waste management, expansion of green open spaces, coastal area rehabilitation, and environmental awareness campaigns. Based on the Surabaya City APBD data for the 2021–2023 period, the budget allocation for environmental spending rose from 8.5% in 2021 to 11.9% in 2023, indicating stronger fiscal commitment to sustainability (Public Information and Communication Division and Statistics, Surabaya City Communication and Information Agency, 2024). Despite this progress, interviews with regional financial management officials revealed that budget classifications have not fully distinguished green expenditures from routine expenditures. As a result, the measurement of actual green spending remains incomplete, potentially creating information bias in financial reporting, as stakeholders cannot precisely assess the extent of the government’s fiscal commitment to environmental priorities (Sasana, 2007).

b. The Influence of Green Budgeting on the Quality of Financial Reports

The results of multiple linear regression analysis demonstrate that green budgeting has a positive and significant influence on the quality of financial reports. The regression coefficient for green budgeting is 0.412 with a significance value of 0.001 (<0.05), confirming that higher levels of green budgeting implementation are associated with improved quality of local government financial statements. The R^2 value of 0.378 indicates that green budgeting explains 37.8% of the variance in financial reporting quality, while the remaining variance is attributed to other determinants such as human resource capacity, accounting information systems, and internal controls.

Table 1. Results of Multiple Linear Regression Analysis

Variabel Independen	Koefisien (β)	t-Statistik	Sig. (p-value)
Green Budgeting	0,412	3,925	0,001
Konstanta	1,287	2,314	0,024
R-Square	0,378		
Adjusted R-Square	0,362		
F-Statistik	15,402		0,000

These results support the theoretical framework of public sector accountability, which posits that integrating environmental dimensions into fiscal policy enhances transparency and credibility in financial reporting.

c. Discussion of Research Findings

The empirical evidence confirms that green budgeting implementation strengthens both transparency and accountability in local government financial reporting. This is consistent with the principle of fiscal traceability, whereby funds allocated for environmental programs can be clearly tracked and audited (Vajiram Editor, 2025). Moreover, the findings align with environmental accounting literature, which argues that incorporating sustainability considerations into budgeting systems improves the relevance and reliability of financial information, especially in contexts where public demand for transparency is high (SoM, 2025). Nevertheless, the study reveals a gap between normative expectations (*das sollen*) and practical implementation (*das sein*). While national regulations such as Law No. 23 of 2014 on Regional Government require the integration of environmental

aspects into budgeting (Hukumonline, 2022), the actual recording and classification mechanisms remain inconsistent. This gap limits comparability across regions and reduces the full potential of financial reports to reflect environmental accountability.

This study not only confirms but also extends previous research. Prior studies have focused primarily on national-level fiscal environmental policies, such as those in India and the European Union (Chaturvedi et al., 2014). In contrast, this research provides novelty by empirically testing the relationship at the municipal government level, offering fresh insights into how green budgeting directly improves the quality of local government financial statements in Indonesia.

d. Implications for Government Accounting

From a practical perspective, the study highlights four key implications. First, green budgeting enhances relevance, as financial reports become more aligned with stakeholder demands for environmental accountability (Agustin & Sari, 2024). Second, it improves reliability, as financial statements incorporating environmental allocations better reflect regulatory compliance and sustainability commitments. Third, comparability can be achieved only if uniform standards for green expenditure classification are established across regions, requiring central government intervention. Fourth, understandability is strengthened when information on green expenditures is presented clearly, enabling both experts and the general public to interpret the reports effectively. Academically, this research enriches the literature on environmental accounting by showing that green budgeting not only contributes to environmental performance but also improves the quality of accounting information in the public sector. From a policy perspective, the findings provide evidence-based recommendations for local governments to adopt green budgeting as a strategic tool for strengthening financial governance. Ultimately, this supports the achievement of the Sustainable Development Goals (SDGs), particularly Goal 16 on strong institutions and Goal 13 on climate action.

4. Conclusion

This study provides empirical evidence that the implementation of green budgeting positively and significantly improves the quality of local government financial statements, particularly by strengthening transparency, accountability, relevance, and comparability. The Surabaya City Government's increasing allocation for environmentally oriented programs demonstrates a growing fiscal commitment to sustainability, although limitations in budget classification remain a challenge for accurate measurement. Theoretically, the findings enrich the literature on environmental accounting by showing that green budgeting is not only relevant to environmental policy but also directly influences the quality of public sector financial reporting. Economically, the adoption of green budgeting can enhance the credibility of local governments in the eyes of investors, stakeholders, and the public, thereby improving trust in fiscal management. The novelty of this study lies in its focus on the municipal level, offering fresh insights into how green budgeting contributes to sustainable financial governance in Indonesia. Future research could expand the scope by including comparative studies across multiple regions or applying mixed methods to capture a deeper understanding of institutional and cultural factors influencing green budgeting practices. This study is subject to several limitations that may affect the generalizability and validity of its findings. First, the research relies on secondary data from the Surabaya City Government's financial statements and budget documents, which may not fully capture the detailed classification of green expenditures. The incomplete identification of green budgeting components could lead to measurement bias, thereby influencing the accuracy of the regression analysis. Second, the survey and interview data were limited to financial managers within the Surabaya City Government, creating the potential for subjective responses and institutional bias. Broader involvement of external stakeholders, such as auditors, NGOs, or community representatives, could have provided more balanced perspectives. Third, the research design employs a cross-sectional approach, analyzing data within a fixed period (2021–2023). This restricts the ability to observe long-term effects of green budgeting on financial reporting quality, as dynamic changes over time are not accounted for. Fourth, the study only focuses on one municipality, which may reduce the external validity of the findings. The results might differ in other local governments with varying institutional capacities, political commitments, and socio-economic contexts. These limitations are not the result of methodological errors but rather stem from the research scope and data availability. While they may constrain the breadth of conclusions, they also highlight the need for future research to adopt longitudinal and comparative designs, employ more comprehensive measurement indicators, and include wider respondent groups to enhance validity and provide a deeper understanding of green budgeting practices in different local government contexts.

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