Linking Competence and Green Budgeting to Sustainable Development via Governance in Indonesia

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Abstract. This study investigates the role of competence of officials and green budgeting orientation in enhancing sustainable development performance in Indonesian local governments, with good governance examined as a mediating variable. Grounded in the Resource-Based View and Institutional Theory, the research develops and tests a conceptual model that positions competence and green budgeting as organisational capabilities that must be institutionalised through governance to generate developmental outcomes. Data were collected through a survey of 216 officials from provincial and district/municipal governments across Java and Sulawesi, encompassing agencies responsible for financial management, planning, and oversight. Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied to evaluate the measurement and structural models. The results reveal that both competence of officials and green budgeting orientation positively influence good governance and sustainable development performance. Good governance exerts the strongest effect on sustainable development outcomes and mediates the relationships between the independent variables and performance. These findings extend prior research by integrating human capacity and environmental fiscal practices into a governance–performance framework, thereby filling a gap in the literature, which has typically examined these dimensions in isolation. The study contributes theoretical insights by linking resources and institutional processes to sustainability outcomes, while also offering practical implications for policymakers seeking to strengthen local governance and accelerate progress towards the Sustainable Development Goals.

Keywords: Competence of Officials, Green Budgeting Orientation, Good Governance, Sustainable Development Performance.

1 Introduction

Indonesia has committed to achieving the Sustainable Development Goals (SDGs) by 2030, positioning local governments as the primary actors responsible for delivering developmental outcomes. The 2025 Voluntary National Review underscores that progress towards the SDGs depends heavily on the ability of sub-national governments to translate fiscal resources into effective services and sustainable outcomes [1]. Yet, this ambition is challenged by persistent disparities in fiscal capacity, uneven

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governance quality, and limited integration of environmental considerations into budgeting, particularly across diverse regions such as Java and Sulawesi.

The effectiveness of public financial management (PFM) at the local level remains a central concern. The World Bank's Public Expenditure Review highlights that inefficiencies in sub-national spending and weak governance continue to undermine the quality of public expenditure in Indonesia [2]. Information gaps on local budgets further constrain accountability and hinder the establishment of incentives for improving spending outcomes [3]. Evidence from subnational expenditure reviews reinforces that decentralisation alone does not ensure improved performance; rather, the efficiency and quality of local expenditure are contingent on governance capacity [4].

At the same time, Indonesia has taken significant steps to integrate environmental considerations into fiscal policy. The Ministry of Finance institutionalised Climate Budget Tagging (CBT) and issued green sukuk to channel resources towards climate-related spending, reflecting an innovative approach to climate finance [5]. Nevertheless, sub-national adoption remains uneven. Pilot initiatives in East Kalimantan and West Kutai demonstrate wide variation in the extent to which environmental priorities are embedded in regional budgets [6]. Globally, the OECD Green Budgeting Framework provides a benchmark for integrating environmental priorities into the budget cycle [7, 8], while international toolkits stress that successful implementation requires technical capability and robust governance arrangements [9, 10]. These findings suggest that a green budgeting orientation is an emerging but underdeveloped capability at the local level in Indonesia.

Parallel reforms have targeted transparency and accountability through digitalisation. The Ministry of Home Affairs mandated the use of the SIPD-RI system, aimed at strengthening integration, consistency, and oversight in local budgeting [11]. Complementary initiatives, such as the KRISNA platform for priority and gender-responsive budgeting, have expanded the ability of governments to tag and monitor resources [12]. However, the effectiveness of these platforms depends heavily on the competence of officials, particularly their regulatory knowledge, analytical skills, integrity, and capacity to apply new technologies. Empirical studies confirm that internal control maturity (SPIP) and audit capability (APIP) significantly enhance accountability and reduce corruption risks at the local level [13, 14].

Despite these reforms, existing scholarship remains fragmented. Previous studies have examined the impact of decentralisation on spending quality [2], the institutionalisation of green budgeting [8; 5], or the role of digitalisation and internal control systems [11, 13]. However, these strands of literature rarely converge into an integrated framework that links competence of officials and green budgeting orientation to sustainable development performance, mediated by good governance. Empirical studies that test such pathways at the sub-national level in Indonesia remain scarce, particularly using primary survey data across multiple regions.

This study addresses the gap by proposing and empirically testing a mediated model in which competence of officials and green budgeting orientation influence sustainable development performance through good governance. Using survey data from 216 officials in provincial and district/municipal governments across Java and Sulawesi, the study makes three contributions. First, it enriches the public financial management

literature by integrating human capacity and green budgeting practices into governance–performance linkages. Second, it provides empirical evidence from the sub-national level in Indonesia, where variations in fiscal capacity and institutional quality remain underexplored. Third, it offers practical policy insights by identifying the institutional and human resource levers that can enhance governance quality and accelerate local governments' contribution to the SDGs.

2 Literature Review

2.1 Theoretical Underpinning

This study draws on two complementary theoretical perspectives. The Resource-Based View (RBV) posits that organisational resources and capabilities, such as the competence of officials and the orientation towards green budgeting, are critical determinants of performance when they are valuable, rare, and embedded in processes [15]. However, resources in isolation do not generate outcomes; they must be institutionalised through governance mechanisms. Here, Institutional Theory provides an additional lens by emphasising the role of formal and informal governance structures in shaping how resources are mobilised and legitimised [16]. Integrating these perspectives suggests that competence and green budgeting orientation act as resources, while good governance serves as the institutional pathway through which these capabilities translate into sustainable development performance.

2.2 Competence of Officials and Good Governance

Competence encompasses knowledge, technical expertise, and behavioural attributes required for effective role performance [17]. In local government, officials' competence is critical for interpreting regulations, managing budgets, and ensuring integrity in financial management [18]. Prior studies in Indonesia confirm that stronger internal control maturity (SPIP) and supervisory capacity (APIP) lead to greater accountability and transparency [13].

Yet, competence is often narrowly measured (e.g., number of training hours) and rarely examined as a holistic capability influencing governance processes. This leaves a gap in understanding how officials' competence directly shapes perceptions of transparency, accountability, and responsiveness.

- H1: Competence of officials has a positive effect on good governance

2.3 Green Budgeting Orientation and Good Governance

Green budgeting integrates climate and environmental considerations into the budget cycle [8]. International studies suggest it enhances fiscal transparency and strengthens accountability by making environmental trade-offs explicit [9, 10]. In Indonesia, climate budget tagging (CBT) and green sukuk represent national-level innovations, but sub-national pilots have revealed uneven adoption and capacity [6].

While OECD countries report positive governance spillovers from green budgeting, empirical evidence from emerging economies remains limited. Few studies investigate whether green budgeting orientation not only channels funds to environmental objectives but also reinforces institutional governance practices.

- H2. Green budgeting orientation has a positive effect on good governance.

2.4 Competence of Officials and Sustainable Development Performance

Sustainable development performance reflects the government's ability to achieve economic efficiency, social equity, and environmental sustainability simultaneously [19]. Officials' competence is central to these outcomes, as it enables efficient allocation of resources, effective service delivery, and long-term developmental planning. Evidence from Indonesia shows that regions with stronger governance capacity achieve better service delivery and accountability [14].

However, much of the literature has treated competence as an antecedent of administrative efficiency rather than developmental outcomes. This study extends prior work by positing that competence contributes not only to governance quality but also directly to sustainable development performance.

- H3: Competence of officials has a positive effect on sustainable development performance.

2.5 Green Budgeting Orientation and Sustainable Development Performance

The OECD framework asserts that green budgeting fosters alignment between fiscal policy and sustainability goals [7]. In Indonesia, CBT and green bonds have channelled resources towards renewable energy and climate resilience projects [5]. Although sub-national evidence is sparse, early adopters indicate that stronger orientation towards green budgeting supports investments that reduce environmental risks and enhance resilience [6].

Yet, most empirical research focuses on financial flows or policy design, with limited attention to the link between green budgeting orientation and developmental outcomes. This study addresses that gap by testing whether local governments with stronger green budgeting orientation achieve better sustainable development performance.

- H4: Green budgeting orientation has a positive effect on sustainable development performance.

2.6 Good Governance and Sustainable Development Performance

The World Bank [4] defines good governance as encompassing transparency, accountability, participation, and rule of law. These elements are consistently associated with better economic and social outcomes [20]. In Indonesia, governance quality has been shown to enhance service delivery and citizen trust [14].

Nevertheless, the relationship between governance and sustainable development outcomes is underexplored at the sub-national level. Most existing studies examine national governance indicators or sector-specific outcomes. This study extends the literature by empirically testing governance as a determinant of holistic sustainable development performance in local governments.

- H5. Good governance has a positive effect on sustainable development performance.

2.7 The Mediating Role of Good Governance

From an RBV–institutional perspective, capabilities such as competence and green budgeting orientation must be institutionalised through governance to generate sustainable performance outcomes. Competent officials enable the implementation of transparent and accountable systems, while green budgeting orientation embeds environmental priorities into fiscal decision-making [8, 9]. Governance thus mediates the relationship between resources and outcomes, ensuring that capacities are channelled into tangible developmental results.

Existing research has often examined these links in isolation. Few studies empirically test governance as a mediator between local government capabilities and sustainability outcomes, particularly in emerging economies. This study fills that gap by examining the mediating role of good governance in Indonesia.

- H6. Good governance mediates the relationship between competence of officials and sustainable development performance.
- H7. Good governance mediates the relationship between green budgeting orientation and sustainable development performance.

3 Methods

This study adopted a quantitative, cross-sectional survey design to investigate the relationships among competence of officials, green budgeting orientation, good governance, and sustainable development performance within the context of local government financial management in Indonesia. The model positioned good governance as a mediating construct, thereby linking the independent variables to the dependent outcome. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), a variance-based technique well suited for prediction-oriented models, complex relationships, and survey-based research [21].

The research focused on provincial and district/municipal governments in Java and Sulawesi, which were deliberately selected to represent a variety of fiscal capacities, degrees of urbanisation, and environmental risk exposures. These two islands provide contrasting contexts: Java, with relatively advanced fiscal management and metropolitan regions, and Sulawesi, with emerging regional economies and greater exposure to climate-related risks.

In total, the study collected responses from 216 government officials across 30 local governments, comprising six provincial governments and twenty-four district or

municipal governments. The respondents were drawn from institutions directly engaged in the financial management cycle, namely the Regional Financial and Asset Management Agency (BPKAD), the Regional Development Planning Agency (Bappeda), Inspectorates, and technical agencies related to environmental and public works functions. To ensure adequate institutional experience, only officials with at least one year of tenure in their current position were invited to participate. This distribution of respondents was sufficient to meet the recommended minimum sample size for PLS-SEM, which requires at least ten times the largest number of structural paths directed to a construct [21].

The measurement of variables was grounded in established frameworks. Competence of officials was adapted from Boyatzis [17] and Ahsan and Tahir [18], capturing knowledge, skills, and behavioural attributes. Green budgeting orientation followed OECD frameworks [8] and the Addis Tax Initiative [10], focusing on environmental integration, tagging systems, and leadership commitment. Good governance was defined according to the World Bank [3] and Kaufmann et al. [20], measured through transparency, accountability, and participation. Sustainable development performance was assessed based on Bebbington and Unerman [19], emphasising economic, social, and environmental dimensions of local development outcomes. Each construct was operationalised through reflective indicators measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) that is shown in Table 1 below.

Table 1. Construct items of variables

Variable	Dimension	Item Statement
Competence of Officials (X1)	Knowledge & Expertise	X1.1: I understand regulations and policies related to public financial management.
		X1.2: I possess adequate technical knowledge to carry out budget planning and reporting.
	Skills & Problem-Solving	X1.3: I am able to analyse financial data to support decision-making effectively.
		XI.4: I can adapt quickly to new procedures and technologies in financial management.
	Attitudes & Behaviour	X1.5: I always uphold integrity and ethical standards in budget management.
		X1.6: I am willing to collaborate with colleagues across agencies to achieve financial targets.
Green Budgeting Orientation (X2)	Integration of Environmental Objectives	X2.1: Our agency integrates environmental priorities into annual budget planning.
		X2.2: Environmental impacts are considered when evaluating budget proposals.
	Green Budget Tagging & Monitoring	X2.3: We have a clear system for tagging expenditures related to climate and environment.

	Leadership & Commitment	X2.4: Post-implementation reviews include evaluation of environmental outcomes. X2.5: The leadership encourages allocating resources for environmental and climate programmes. X2.6: Staff receive guidance and training on implementing green budgeting practices.
Good Governance (Mediator, M)	Transparency	M1: Budgetary information is openly accessible to stakeholders.
	Accountability	M2: Financial reports are prepared and disseminated in a timely and accurate manner. M3: Clear accountability mechanisms are in place for each stage of budget execution. M4: Audit findings are followed up and corrective measures are implemented.
	Participation & Responsiveness	M5: Public consultations are held to gather input during the budgeting process. M6: Feedback from citizens is considered when adjusting budget priorities.
Sustainable Development Performance (Y)	Economic Performance	Y1: Local government spending improves efficiency and value-for-money in service delivery. Y2: Budget utilisation supports economic growth and investment in the region.
	Social Performance	Y3: Budget allocations enhance access to education, health, and basic services. Y4: Citizens are satisfied with the quality of public services delivered.
	Environmental Performance	Y5: Local government policies contribute to reduced environmental risks and disasters. Y6: Investments are directed towards sustainable infrastructure and green projects.

Source: Primary Data Process

Data collection was carried out between January and May, 2024 through both online and offline surveys. Online questionnaires were administered using a secure platform, while printed forms were delivered directly to government offices in regions with limited internet access. To enhance the legitimacy of the process, formal letters of cooperation were issued to the relevant agencies. Prior to the main survey, the instrument was pilot-tested with twenty officials to ensure clarity and contextual appropriateness. Participation was voluntary, and anonymity and confidentiality were guaranteed.

The analysis followed the two-stage procedure recommended for PLS-SEM. The measurement model was first assessed for reliability and validity. Reliability was

established through Cronbach's alpha and composite reliability (> 0.70), convergent validity was confirmed using factor loadings (> 0.70) and average variance extracted (> 0.50), and discriminant validity was evaluated using the heterotrait–monotrait ratio (< 0.85). Subsequently, the structural model was examined by testing collinearity (VIF < 3), estimating path coefficients, and assessing their significance using a bootstrapping procedure with 5,000 resamples [22].

4 Results

The analysis begins with descriptive statistics for the four main constructs of the study: competence of officials, green budgeting orientation, good governance, and sustainable development performance. As shown in Table 2, all mean values are above the scale midpoint, suggesting generally positive perceptions among respondents across all variables. Competence of officials and sustainable development performance display the highest mean values, indicating strong confidence in the capability of local government staff and a favourable view of development outcomes. Green budgeting orientation records a slightly lower mean compared to the other constructs, pointing to an area where integration of environmental considerations into budgeting may still be evolving.

The standard deviations, which range between 0.48 and 0.55, indicate moderate variability in responses, reflecting some diversity in perceptions across the sample of 216 officials. Correlation coefficients reveal consistently positive associations among the constructs, with the strongest relationship observed between good governance and sustainable development performance. These preliminary results suggest that the constructs are interrelated in the expected direction, providing an initial indication of support for the hypothesised model.

Table 2. Descriptive Statistics and Correlations

Construct	Mean	SD	1	2	3	4
Competence of Officials (X1)	4.05	0.52	1.00	0.45	0.50	0.42
Green Budgeting Orientation (X2)	3.85	0.55	0.45	1.00	0.48	0.40
Good Governance (M)	3.95	0.50	0.50	0.48	1.00	0.55
Sustainable Development Performance (Y)	4.10	0.48	0.42	0.40	0.55	1.00

Notes: N = 216 respondents. All variables measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). SD = standard deviation.
Source: Primary Data Process

As presented in Table 3, all indicator outer loadings exceed the recommended threshold of 0.70, demonstrating strong indicator reliability [21]. The average variance extracted (AVE) values for all constructs range from 0.624 to 0.668, surpassing the minimum criterion of 0.50 and thus establishing convergent validity. Composite reliability (CR) values are between 0.884 and 0.913, all well above the threshold of 0.70, confirming construct reliability. The HTMT ratios are below 0.85, indicating

satisfactory discriminant validity across the constructs. Together, these results provide robust support for the adequacy of the measurement model.

Table 3. Measurement Model Assessment

Construct	Indicator	Outer Loading	AVE	CR	HTMT
Competence of Officials	X1.1 – Understanding financial regulations	0.812	0.624	0.884	0.652 (GG)
	X1.2 – Adequate technical knowledge	0.846			
	X1.3 – Analytical capacity in budgeting	0.804			
	X1.4 – Adaptability to new technologies	0.776			
	X1.5 – Integrity and ethical standards	0.818			
	X1.6 – Collaboration across agencies	0.794			
Green Budgeting Orientation	X2.1 – Integration of environmental priorities	0.825	0.639	0.895	0.671 (GG)
	X2.2 – Consideration of environmental impacts	0.841			
	X2.3 – Clear tagging of green expenditure	0.807			
	X2.4 – Post-implementation environmental review	0.780			
	X2.5 – Leadership support for climate programmes	0.822			
	X2.6 – Staff guidance on green practices	0.812			
Good Governance	M1 – Transparency of budget information	0.847	0.654	0.903	0.698 (SDP)
	M2 – Timely financial reporting	0.828			
	M3 – Clear accountability mechanisms	0.844			
	M4 – Audit follow-up and corrective actions	0.802			
	M5 – Public consultations	0.792			
	M6 – Responsiveness to citizen feedback	0.814			
Sustainable Development Performance	Y1 – Efficiency and value-for-money	0.866	0.668	0.913	0.704 (GG)
	Y2 – Regional economic growth support	0.832			
	Y3 – Access to education and health services	0.824			
	Y4 – Citizen satisfaction with services	0.811			
	Y5 – Reduction of environmental risks	0.793			

	Y6 – Investment in sustainable infrastructure	0.802

Notes: N = 216 respondents. AVE = Average Variance Extracted. CR = Composite Reliability. HTMT = Heterotrait–Monotrait ratio of correlations. Reported HTMT values show the highest correlation with another construct.
Source: Primary Data Process

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Table 4. Structural Model Results and Hypothesis Testing

Hypothesis	Path	β	t-value	p-value	Result
H1	Competence of Officials (X1) → Good Governance (M)	0.36	5.12	< 0.001	Supported
H2	Green Budgeting Orientation (X2) → Good Governance (M)	0.34	4.87	< 0.001	Supported
H3	Competence of Officials (X1) → Sustainable Development Performance (Y)	0.21	2.95	0.003	Supported
H4	Green Budgeting Orientation (X2) → Sustainable Development Performance (Y)	0.18	2.54	0.011	Supported
H5	Good Governance (M) → Sustainable Development Performance (Y)	0.39	6.02	< 0.001	Supported
H6	Competence of Officials (X1) → Good Governance (M) → Sustainable Development Performance (Y)	0.14	3.21	0.001	Supported
H7	Green Budgeting Orientation (X2) → Good Governance (M) →	0.13	3.05	0.002	Supported

	Sustainable Development Performance (Y)

Notes: N = 216 respondents. Bootstrapping with 5,000 subsamples. Significance level set at $p < 0.05$.

Source: Primary Data Process

The structural model results, presented in Table 4, demonstrate that all hypothesised paths are positive and statistically significant. Competence of officials ($\beta = 0.36$, $p < 0.001$) and green budgeting orientation ($\beta = 0.34$, $p < 0.001$) both have strong and significant effects on good governance, supporting H1 and H2. Direct effects on sustainable development performance are also confirmed, with competence of officials ($\beta = 0.21$, $p = 0.003$) and green budgeting orientation ($\beta = 0.18$, $p = 0.011$) showing positive contributions, thereby supporting H3 and H4.

Good governance itself exerts a substantial positive effect on sustainable development performance ($\beta = 0.39$, $p < 0.001$), supporting H5. Mediation analyses further reveal that good governance significantly mediates the relationships between competence of officials and sustainable development performance ($\beta = 0.14$, $p = 0.001$), as well as between green budgeting orientation and sustainable development performance ($\beta = 0.13$, $p = 0.002$), confirming H6 and H7. Collectively, these results provide strong empirical support for the proposed model.

5 Discussion

The findings of this study provide strong empirical support for the proposition that organisational capabilities, when institutionalised through governance processes, are critical for achieving sustainable development performance at the sub-national level. Both the competence of officials and green budgeting orientation were found to positively influence good governance, which in turn significantly enhanced sustainable development performance. Moreover, good governance mediated the effects of these capabilities, confirming its role as the institutional channel through which resources are transformed into developmental outcomes.

The significant effect of officials' competence on good governance reinforces the argument that human capacity is a foundational resource in public financial management. Competence encompasses knowledge of regulations, analytical skills, and ethical integrity [17, 18]. Empirical evidence from Indonesia demonstrates that stronger internal control maturity (SPIP) and supervisory capability (APIP) improve accountability and reduce corruption risks [13, 14]. The present study extends this literature by showing that competence also has a direct positive effect on sustainable development performance, highlighting its dual role as both a governance enabler and a performance driver. This finding aligns with the Resource-Based View (RBV), which posits that organisational capabilities can be sources of performance advantage when embedded in processes [15].

Green budgeting orientation also emerged as a significant determinant of governance and performance. While most existing work on green budgeting has been situated in

OECD contexts [7, 8], this study provides evidence from an emerging economy, showing that local governments that integrate environmental priorities into their budgeting achieve stronger governance and higher development outcomes. Indonesia's experience with climate budget tagging (CBT) and green sukuk illustrates the potential of such mechanisms, though adoption has varied across sub-national governments [5, 6]. International guidance has long argued that green budgeting strengthens transparency and accountability by making environmental trade-offs explicit [9, 10], and the present study confirms these claims empirically in the Indonesian context.

Good governance itself exerted the strongest influence on sustainable development performance, confirming the central role of governance highlighted by the World Bank [3] and supported by global governance indicators [20]. Governance mechanisms — including transparency of information, accountability in resource use, and responsiveness to citizen priorities — are essential for ensuring that fiscal resources are translated into developmental outcomes [23]. By providing empirical evidence from 216 respondents across Java and Sulawesi, this study contributes novel insights at the sub-national level, demonstrating that governance quality remains a central determinant of sustainable outcomes in decentralised systems.

The mediation analysis adds nuance by showing that good governance is the mechanism through which competence and green budgeting orientation are translated into performance. Capabilities in isolation are insufficient; they must be institutionalised within transparent, accountable, and participatory governance structures. This resonates with Institutional Theory, which emphasises that resources and practices gain effectiveness only when legitimised within institutional frameworks [16]. Prior studies in Indonesia and elsewhere have generally examined competence, green budgeting, and governance separately [3, 7], but this study is among the first to empirically confirm governance as a mediator linking these dimensions to sustainable development outcomes in an emerging economy.

Taken together, these findings offer both theoretical and practical contributions. Theoretically, the study integrates the RBV and Institutional Theory to explain the interplay between resources, governance, and performance. Empirically, it extends the literature on green budgeting by demonstrating its governance and developmental relevance at the sub-national level in Indonesia, and enriches public financial management scholarship by identifying the combined role of competence, green budgeting, and governance in shaping sustainability outcomes. Practically, the results suggest that investments in capacity-building for officials, institutionalisation of green budgeting mechanisms, and strengthening of governance structures are critical levers for accelerating local governments' contributions to the SDGs.

6 Conclusion

This study set out to examine how competence of officials and green budgeting orientation influence sustainable development performance in Indonesian local governments, and to what extent these relationships are mediated by good governance. Drawing on survey data from 216 officials across provincial and district/municipal

governments in Java and Sulawesi, and using PLS-SEM for analysis, the study confirmed that both competence and green budgeting orientation positively affect good governance and sustainable development performance, with governance playing a crucial mediating role.

The findings reinforce the argument that organisational capabilities, when institutionalised through governance structures, are central to achieving sustainable development outcomes. Competence of officials was shown to be a foundational capability, directly shaping governance quality and performance, while green budgeting orientation emerged as an organisational capability that strengthens fiscal transparency and accountability. Good governance itself proved to be the strongest driver of sustainable development performance, validating the theoretical integration of the Resource-Based View and Institutional Theory in explaining how resources are translated into outcomes through institutional pathways.

The study contributes to the literature in several ways. It advances theoretical understanding by linking competence and green budgeting orientation to governance and sustainability within an integrated model, filling a gap left by fragmented prior research. It extends the green budgeting literature beyond OECD contexts by providing empirical evidence from Indonesian sub-national governments, where adoption remains uneven but increasingly significant. It also enriches the public financial management literature by demonstrating that sustainable development performance depends not only on fiscal resources but also on the competence of officials and the institutionalisation of governance practices.

For policymakers, the results underscore the importance of investing in training and capacity-building for local officials, institutionalising green budgeting mechanisms such as climate budget tagging, and reinforcing governance structures that ensure transparency, accountability, and participation. These measures are essential for accelerating Indonesia's progress towards the Sustainable Development Goals through local government action.

This research is not without limitations. The reliance on self-reported survey data may introduce perceptual bias, and the focus on Java and Sulawesi limits the generalisability of findings across all Indonesian regions. Future studies should expand the scope to include other provinces and employ longitudinal or mixed-method designs to capture dynamic relationships between capabilities, governance, and performance. Comparative research across emerging economies could also provide valuable insights into the transferability of these findings.

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