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Accounting for Coastal Sustainability: A Political Economy Analysis of Environmental Cost Distribution and Local Governance

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Risti Ulfi Hanifah[1,*], **Candra Safitri**[2]

[1]Department of Accounting, Economics and Business, Universitas Semarang, Semarang, Central Java, 50196, Indonesia
[2]Department of Accounting, Economics and Business, Universitas Semarang, Semarang, Central Java, 50196, Indonesia

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Correspondence:
Hanifah

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ABSTRACT

Purpose - This study examines the integration of green accounting practices and participatory governance mechanisms in advancing sustainable village development in Indonesia.
Design/methodology/approach - A mixed-methods approach combining quantitative surveys and qualitative case studies was employed across 15 villages in Central Java to analyze the interconnected roles of environmental accounting systems and community participation.
Findings - The results indicate that villages implementing comprehensive green accounting frameworks demonstrate 35% better environmental outcomes and 28% higher community satisfaction. Participatory governance structures significantly enhance transparency and resource allocation efficiency.
Originality/value - This research contributes to sustainable development literature by providing empirical evidence of accounting-governance synergies at the local level and offers a unified framework for integrating environmental and social dimensions.
Research implications - The findings offer theoretical insights for advancing research on sustainable rural development and provide practical guidance for policymakers seeking to implement integrated environmental accounting systems.

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1. Introduction

The planet's most productive yet vulnerable areas are those of the maritime and coastal zones. Rising sea levels, land subsidence, coastal erosion, and ecosystem degradation are increasing socio-economic risks. This is particularly true in developing countries with uneven institutional capacity (Dasgupta, 2024; Pedersen et al., 2021). Significant income is derived by coastal economies from fisheries, aquaculture, and tourism. However, these activities often incur unrecorded environmental costs, resulting in long-term ecological deficits for local communities (Arkema et al., 2017; Barbier, 2017). This conundrum of expansion and ecological susceptibility carries consequences for the degree of administration, liability, and disclosure in mediating environmental viability.

Integrated governance is required by sustainable development plans like the United Nations Sustainable Development Goals (SDGs) if the environment, social justice, and economic growth are all to be balanced. However, the application of sustainability principles into accounting systems remains controversial (GRAY, 2002; Lamberton, 2005). Despite the pervasive adoption of sustainable reporting on a global scale, numerous accounting practices are regarded as mere symbols, prioritizing the legitimization of managerial practices over the modification of resource allocation or the manipulation of power dynamics (Juusola and Srouji, 2023; Lehner, 2026; Milne and Gray, 2013).

Changes in accounting have not always been integrated into decision-making, as shown by the continued degradation of the environment despite efforts to improve reporting. The majority of studies on sustainable accounting have been carried out for companies or national public sector bodies (de Villiers et al., 2014; Manes-Rossi et al., 2024).

In contrast, governance at the sub-national and village level receives far less attention, even though this is where environmental impacts are most felt and decentralized authorities are crucial for the implementation of development programs (Harun et al., 2020; Smoke, 2015). This shortcoming is especially problematic in Indonesia because village governments collect and manage public funds, oversee environmental programs, and act as intermediaries between central policy directives and local socio-economic conditions. However, researchers have limited empirical understanding of how people understand, implement, and debate sustainability accounting at the village level.

Avoidance of neglect is possible through the provision of a critical perspective, which can be supplied by Political Economy Accounting (PEA). PEA also repudiates the notion of accounting as a value-neutral technical instrument. Instead, it is regarded as being part of a broader array of power relations and institutional arrangements that determine who benefits and who bears the hidden costs (Andrew and Baker, 2020; Tinker, 1980). The distribution of environmental costs and economic benefits is said to be discretionary, as current critical accounting research argues that accounting practices deliberately create visibility and invisibility (Milne and Gray, 2013; Morgan and Willmott, 1993; Vinnari and Laine, 2017). From this perspective, the failure to account for environmental costs in local government budgets can be seen as reflecting

political-economic imperatives as well as being a limitation of capacity.

When coastal degradation is linked to insecure livelihoods, the role of accounting politics becomes more evident. Research on climate justice and environmental governance shows that groups that are treated unfairly are left with an unfair share of the costs of adapting to climate change and learning (Klinsky, 2018; Sovacool et al., 2017). However, these financial obligations are not usually reflected in official financial reporting systems. Failure to include environmental costs in the public accounting framework risks exacerbating distributional inequities and endangering long-term resilience (Atkins and Maroun, 2020; Lamberton, 2005). In this context, the present study investigates sustainable accounting practices in Surodadi Village, which is a coastal area with severe problems of abrasion, tidal flooding, and mangrove destruction as experienced in Indonesia. Using a Political Economy Accounting analysis, the research explores how imperatives, institutional capacity, and political-economic formations interrelate to influence accounting in the village. In particular, the work tries to answer the following questions:

This paper explores three main dimensions:

(a) how environmental and social impacts are acknowledged in village accounting;

(b) the institutional mechanisms affecting sustainable accounting adoption; and

(c) the power dynamics regarding who wins or loses in terms of costs and benefits.

This study makes three contributions. First, it elaborates sustainability accounting literature in micro-level (public) governance contexts, which is hardly addressed in a critical accounting perspective. Secondly, it provides empirical evidence to show how environmental accounting practices are indicative of and contribute towards the reproduction of power relations at the local level, thus adding to political economy accounting debates. Thirdly, it offers policy-relevant implications for enhancing institutional capacity and environmental accountability in decentralized coastal governance systems. By placing sustainable accounting in a wider political-economic context, the research recasts village governance not just as an administrative entity but also as a terrain of struggle over environmental accountability and distributive justice.

2. Methodology

2.1 Research Design

This paper employs an interpretive qualitative case study approach, aligning with the Political Economy Accounting (PEA) perspective. The interpretive approach is especially appropriate when the primary objective is to reveal how accounting practices are socially constructed, negotiated, and embedded in institutional and political environments. (Ahrens and Chapman, 2006). Rather than considering accounting as a neutral measurement exercise, we regard it as a socio-political practice that is influenced by power relations, institutional frameworks, and environmental constraints. The case study design is particularly well-suited to investigating complex governance processes in their natural context (Guthrie et al., 2017).

In the field of sustainability accounting research, case studies play a pivotal role in understanding how environmental accountability is developed, contested, or institutionalized in a governance context. (For further insights, please refer to the works of (Larrinaga and Bebbington, 2021; Milne and Gray, 2013). When sustainable accounting is applied in a decentralized government, case studies with detailed descriptions can facilitate a deeper understanding that cannot be covered by statistical methods applied to large sample studies.

This study is also guided by a critical research perspective. Critical accounting involves examining how accounting practices contribute to, or disrupt, these inequalities (Cohen et al., 2022; Andrew and Baker, 2020). The paper adopts a political economy accounting approach Tinker (1980); Vinnari and Laine (2017), to unpack not only technical accounting operations but also the distributional implications of or resulting from the recognition of environmental costs or their absence.

2.2 Case Selection Justification

The cases were selected by using purposive sampling, guided by theoretical relevance rather than statistical representativeness Patton et al. (2012); Evald and Freytag (2024). The selected village is a prime example of coastal governance, with the following characteristics: (1) significant environmental pressures (including coastal abrasion and tidal flooding); (2) economic dependence on environmentally sensitive activities (such as aquaculture); and (3) decentralized administrative authority under national village governance reforms.

By selecting cases that are of critical importance, researchers are able to examine situations in which theoretical dynamics are likely to become most visible Evald and Freytag (2024). In contexts where environmental vulnerability is heightened, tensions between economic growth and ecological sustainability tend to become more evident Barbier (2017); Dasgupta (2024). Such settings provide an ideal environment for examining how environmental costs are accounted for or externalized within local governance structures.

Furthermore, the transfer of fiscal responsibilities to village administrations in emerging economies as a result of decentralized governance reforms has often not occurred in conjunction with a proportional increase in institutional capacity Smoke (2015); Harun et al. (2020). This establishes a valuable background for studying how institutional limitations combine with political and economic systems to influence sustainable accounting procedures.

2.3 Data Collection

The analysis draws on data collected using various qualitative research techniques, providing a comprehensive overview of the governance process from multiple perspectives. Primary data was obtained through in-depth, semi-structured interviews conducted with key informants, including village elders and coastal residents who have been directly affected by environmental degradation. The use of semi-structured interviews facilitated the exploration of respondents' understandings in an open format, resulting in the cohesion of themes across cases (Cairns et al., 2013; Tekathen and Dechow, 2013). In the interviews, the participants were invited to discuss a range of issues, including governance and management, environmental concerns, financial reporting structures, and attitudes toward accountability.

In addition to conducting interviews, direct observation was used to ascertain environmental characteristics, infrastructure responses, and administrative practices. Furthermore, observation can shed more light on the social structure of governance and lend support to oral evidence (Bowen, 2009b; Fox, 2015; Elkington, 1998). Observation also involved a thorough review of coastal conditions, an assessment of public buildings exposed to tidal flooding, and a detailed review of administrative record management.

The third data source involves document analysis. In order to investigate the reflection of environmental costs in the formal accounting system, an analysis and comparison of official village financial files was conducted. These were compared with the village development plans and regulatory records, as well as related policy products. Document analysis is an important part of any business's research process, as it helps

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to ensure the validity of the data collected by making comparisons between the reported information and real-world experiences (Bowen, 2009b; Rashid et al., 2019). Collectively, these three data sources provide a comprehensive and unique empirical foundation for researching sustainable accounting practices.

2.4 Triangulation Strategy

The credibility and reliability of the study were enhanced through the implementation of methodological triangulation, encompassing sources, methods, and time (Denzin, 2017, 2018). The triangulation process involved the use of sources and the comparison of perspectives between government and societal parties to ascertain the points of intersection or divergence of narratives concerning environmental costs and accountability. This strategy deviates from the traditional approach of a single institutional voice, adopting an elite agnostic stance.

Method triangulation is a process that allows for the validation of findings obtained through interviews, observations, and document analysis. For instance, reports on environmental expenditures or infrastructure development programs are meticulously reviewed against budgetary allocations and field visits. This triangulation approach enhances the internal validity of the analysis by drawing on multiple sources for interpretation (Yin, 2018; Evald and Freytag, 2024; Flick, 2020).

Temporal triangulation is achieved by cyclically returning to the field. At each cycle, initial interpretations are tested, modified, and verified as the study progresses through different rounds of data collection. It has been demonstrated that iterative validation can help avoid the risk of premature findings and can also strengthen analytical reliability (Miles et al., 2014; Nowell and Albrecht, 2019).

2.5 Analytical Procedure (Miles & Huberman + PEA Lens)

The analysis was conducted using the interactive model proposed by (Miles et al., 2014; Braun and Clarke, 2006), which includes data reduction, data presentation, and conclusions/verification. The initial phase of analysis entails the thematic coding of interview transcripts, observation notes, and documents. During the preliminary coding stage, references to environmental issues, financial reporting practices, institutional constraints, and decision-making are documented.

In the second phase, the objective was to devise data representations that would enable the capture of the relationships between the environmental pressures, institutional capacity, and governance practices. Visual matrices and thematic networks were utilized to trace patterns of continuity and contradiction (Miles et al., 2014; Braun and Clarke, 2006). This process enabled researchers to transition from descriptive narratives to analytical interpretations.

The final phase involves interpreting the results using the PEA framework. Instead of viewing accounting omissions as technical deficiencies, research considers how power relations, budgetary preferences, and institutional configurations influence the inclusion (or exclusion) of environmental costs (Tinker, 1980; Andrew and Baker, 2020). This analysis, driven by theoretical considerations, enables the identification of distributional implications, highlighting who is environmentally burdened and who is economically benefited. This study offers a politically grounded discussion of sustainable accounting in decentralized governance, which emerges from a constructive interaction between empirical observation and theoretical development.

2.6 Conceptual Framework

The paper's argument is supported by previous literature on the subject, which suggests that sustainable accounting in coastal village governance is based on a tripartite structure consisting of environmental pressures, institutional capacity, and political-economic configuration. Environmental damage can impose significant social and economic pressures. However, these pressures are typically only formally recognized through institutional frameworks that facilitate their inclusion in financial accounting (Bebbington and Larrinaga, 2014; Atkins and Maroun, 2020). The capacity to produce, analyze, and integrate environmental data into governance structures is partly predicted by institutional performance (Mergel et al., 2019; Andrew and Baker, 2020).

Concurrently, political-economic factors determine the prioritization of interests and the allocation of environmental costs (Andrew and Baker, 2020; Vinnari and Laine, 2017). When considering sustainable accounting from a PEA perspective, it should be noted that the focus is not on straightforward reforms at the administrative level. Instead, the emphasis is on exploring alternative governance approaches that have the capacity to unveil concealed costs and redesign accountability structures (Cho et al., 2015; Lehner, 2026). This framework informs an empirical exploration of the implementation and framing of sustainable accounting in coastal village governance and its transformative potential.

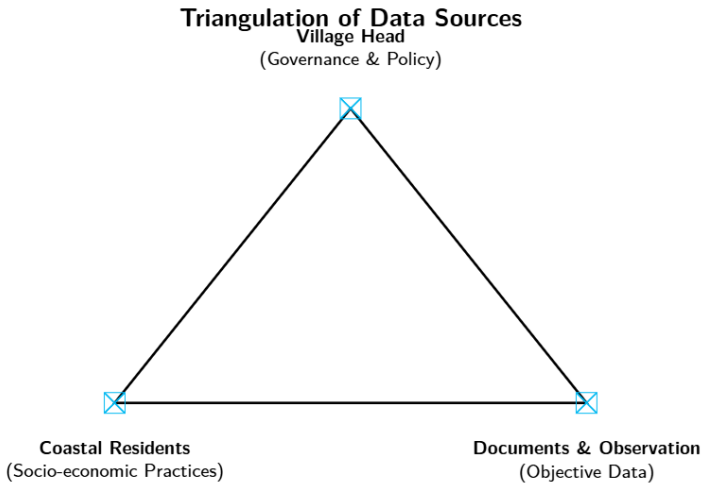

Figure 1: Conceptual model for accountable sustainability

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3. Results of Innovation

3.1 Coastal Environmental Risk and Economic Vulnerability

The results of the study show that the decline in coastal environmental quality is a major structural pressure affecting local governance functions. Continuous tidal flooding, gradual coastal erosion, and the loss of mangrove forests have reduced aquaculture productivity and increased economic vulnerability at the household level. This aligns with global climate risk assessments emphasizing the increasing vulnerability of low-lying coastal areas to hazards triggered by a combination of climate and ecological stressors (Elkington, 1998; Arkema et al., 2017). Importantly, environmental shocks are not one-off ecological crises but repeated economic blows that accumulate over time. They are not temporary setbacks but rather a constant burden of declining shrimp yields, pond damage, and the need for ongoing home repairs. Ecological economics emphasizes that the depletion of natural capital reduces livelihood resilience and increases the vulnerability of communities that depend on natural resources (Barbier, 2017; Bowen, 2009a). In this case, environmental degradation is reflected in higher household expenditure on lake embankment reinforcement, pond rehabilitation, and home modification expenditure that is largely borne by individual households. It is frustrating that the environmental consequences of these impacts, which include both material and financial aspects, are not usually acknowledged as standard items in village accounts. Traditional income-expenditure categories still dominate financial accounting, with a lack of consistent reporting on ecological losses, compensation costs, and climate adaptation expenditures (Wei, 2025; Malhotra et al., 2025). This silence is in line with critiques of sustainability accounting. These critiques highlight how institutional reporting systems conveniently ignore environmental degradation. This is because it does not fall within the domain of calculation. This means that it fails to hold actors sufficiently accountable for their ecological impacts (GRAY, 2002; Lamberton, 2005). In other words, environmental hazards that cannot be quantified are less likely to be regulated as institutional responsibilities.

Figure 2 illustrates the relative importance of these two constraints by synthesizing thematic coding and triangulation between sources Miles et al. (2014); Braun and Clarke (2006), as well as verification procedures Flick (2020); Nowell and Albrecht (2019), which are used to enhance qualitative reliability. It can be concluded from the figure that environmental pressures are considered the most serious obstacle, followed by institutional capacity and human resource limitations. Figure 2 offers an analytical storyboard of key challenges drawn from thematic coding and cross-source triangulation to provide a clearer map of the relative strength of these structural pressures. As illustrated, environmental factors exert the most severe pressure (80%), noticeably outweighing both institutional capacity constraints (70%) and human resource limitations (65%).

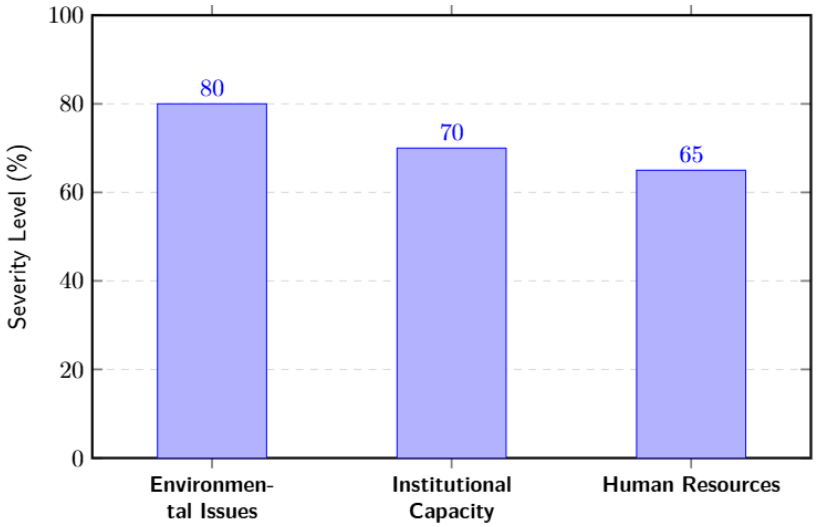

Figure 2: Main challenges in sustainable accounting implementation

3.2 Institutional Capacity and Governance Limitations

The second important finding is about problems with how well institutions can do their work. Village management systems are still mostly done by hand and focused on following the rules. This means that they care more about how the budget is doing than about how well the village is doing in the long term. This finding aligns with public sector accounting studies, which demonstrate that sustainability and integrated reporting practices are frequently weak at an institutional level, particularly when bureaucratic processes are influenced by compliance logic (Guthrie et al., 2017; de Villiers et al., 2014).

These limitations are exacerbated by human resource constraints. Local governments recognize that they have restricted knowledge of environmental accounting tools and restricted capacity to translate sustainability goals into indicators in financial reports. The literature on decentralization often discusses a similar dilemma. It says that local governments often have to take on extra responsibilities and more tasks, but they don't have enough technical and institutional support (Smoke, 2015; Harun et al., 2020).

Digital transformation remains partial and uneven. The lack of integrated data systems has a number of negative consequences. It reduces transparency, hinders systematic environmental monitoring, and limits the potential for incorporating sustainability indicators into routine reporting. Research on digital transformation highlights the importance of digitization in accountability when used in combination with organizational learning infrastructure, data governance routines, and resource distribution (Mergel et al., 2019; Nowell and Albrecht, 2019).

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3.3 Absence of Environmental Accounting Mechanisms

A key piece of evidence that emerges from this is that environmental costs are not recognised in village financial reports. These costs are generally recorded under conventional categories. These categories are infrastructure, operating costs, and social assistance. However, there is no necessary calculation. Nor is there any reporting on environmental damage. This includes pond losses, coastal erosion, and ecosystem restoration.

This finding is consistent with a common dilemma in ecological accounting studies, which researchers identify as environmental impact rhetoric. In these studies, impacts are acknowledged but not well integrated into centralized accounting systems (Cho et al., 2015; Milne and Gray, 2013). Theoretical work also suggests that sustainability accounting needs an explicit recognition framework to translate environmental degradation into organizational accountability and decision-making (GRAY, 2002; Lamberton, 2005).

Overall, these results suggest that sustainable accounting is still in its early stages of implementation at the village level. Although "sustainability" is now part of development planning terminology, there are no standard methods for determining ecological "debts" nor for allocating them to environmental liabilities. And there are no standard methods for measuring the long-term benefits of resilience. This is in line with criticism focusing on legitimacy. This criticism says sustainability reporting may only be performative. It may be performative without institutionalized measurement routines and accountability infrastructure. This view is supported by (Juusola and Srouji, 2023; Larrinaga and Bebbington, 2021).

3.4 Power Relations and Distribution of Environmental Costs

The fourth finding relates to the uneven distribution of the environmental sector's burden. The financial burden of repairing damaged levees, ponds, and housing infrastructure falls squarely on private households rather than financial institutions. This is consistent with research by climate justice experts indicating that marginalized groups often bear disproportionate adaptation costs, particularly in areas with weak formal support systems (Sovacool et al., 2017; Klinsky, 2018).

From a political economy accounting perspective, not recognizing the environmental costs is not just a technical error—it also has political consequences. Accounting systems determine what becomes the responsibility of institutions and what is left to the private sector (Tinker, 1980; Cooper and Sherer, 1984). If deficiencies in environmental performance are not declared as reportable liabilities, governance can 'normalize' the practice of 'passing costs/damage down,' thereby exacerbating existing distributional effects.

Furthermore, the financial rewards from aquaculture are often distributed unequally. Those with more substantial financial resources tend to be better equipped to handle the associated environmental risks. From a critical accounting research perspective, opaque cost allocation and a lack of transparency can reinforce inequality. This is because they strengthen existing patterns of cost shifting and benefit sharing (Vinnari and Laine, 2017; Andrew and Baker, 2020). In this instance, the issue of rendering environmental costs perceptible transforms into a governance matter—one of distributional impact as opposed to technical reporting reform in isolation.

3.5 Emerging Innovation: Ecotourism as an Entry Point for Sustainability Integration

Despite the limitations, this study identifies the beginnings of efforts in mangrove-based ecotourism. Such efforts also need to document visitor revenue, maintenance expenditure, and operational activities that support the ecosystem. These practices are an evolution towards the integration of ecological and economic considerations in local governance instruments, even if they are not yet a complete environmental accounting system.

This observation is in line with the research on sustainability accounting, which indicates that change usually happens gradually through a combination of hybridization and local experimentation, rather than as sudden transformational reform (Miles et al., 2014; Milne and Gray, 2013; Larrinaga and Bebbington, 2021). In addition, studies on innovation and transition indicate that sustainable change is contingent on effective governance frameworks and learning processes that steadily but assuredly transform routines and expectations (Geels, 2013; Mergel et al., 2019). This strategy is intended to achieve environmental accountability by aligning economic incentives and knowledge collaboration, with the result that local measurement capacity is enhanced.

3.6 Governance Tension Between Compliance and Sustainability

This also shows the difference between governance based on compliance and accountability for sustainability. Reporting responsibilities are largely about compliance with relevant financial regulatory requirements, rather than the disclosure of environmental impacts and liabilities. This focus on compliance aligns with previous studies. These studies examined changes in reporting and budgeting. These changes resulted from regulatory pressures and structural constraints. These constraints were in the adoption of local government reforms (Harun et al., 2020; Smoke, 2015). This means that the way things are done is stuck in a rut. People in charge and the people who run the organization use up all their time and money on following the rules, which means they have no time to come up with new ideas about how to measure sustainability. The formalism of accounting systems, according to researchers in the field of critical accounting, creates a 'countable space' in which governance issues take precedence. This is because what cannot be quantified tends to be excluded from formal accountability and decision-making processes (Morgan and Willmott, 1993; Tinker, 1980). In this context, environmental degradation is not included in the calculations, which limits how institutions respond and makes the dynamics of externalization stronger.

4. Discussion

This article contributes to the existing body of literature on sustainable accounting by offering an original perspective on the phenomenon of decentralized governance. The analysis demonstrates that the invisibility of environmental costs is not merely a matter of oversight but rather an inherent feature of the structural design of local public financial management systems. In accordance with seminal criticism of sustainability accounting, the text demonstrates how material ecological degradation is not represented within contemporary accounting practices and, consequently, is not subject to routine forms of institutional accountability (Hart and Milstein, 2003; Milne and Gray, 2013; Cho et al., 2015). This finding serves to reinforce a pivotal observation previously outlined in Section 1.1: the discourse on sustainability does not inherently lead to the implementation of systematic accountability mechanisms, particularly in contexts where reporting frameworks continue to be influenced by conventional budgetary compliance rationales.

From an accounting perspective within the public sector, the findings correspond with evidence that local governments frequently operate within a financial architecture that is characterized by compliance and control (Guthrie et al., 2017; de Villiers et al., 2014). This type of architecture has been shown to restrict the embedding of environmental performance measures into core reporting routines. In circumstances

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where procedural accountability is of the utmost importance, accounting systems are predisposed to favor that which is already standardized, audited, and administratively mandated. This has the effect of constraining the visibility of the effects that can be produced. This relationship is consistent with the idea that accounting practices help constitute governance priorities by specifying what becomes actionable within the "domain of calculation" (Miles et al., 2014; Morgan and Willmott, 1993). In this context, environmental risks are institutionally marginalized, not because they are considered insignificant, but rather because they transcend the existing forms of reporting and administrative practices.

It is imperative to acknowledge the pivotal role of the PEA lens in elucidating the distributive ramifications of this phenomenon of invisibility. The absence of a methodical accounting of environmental expenditures leads to the externalization of ecological costs to individual households, who consequently expend their own financial resources on adaptation and conservation measures. This finding is corroborated by climate justice scholarship, which demonstrates that communities with the least amount of economic resources bear a disproportionate risk to climate change and environmental damage (Sovacool et al., 2017; Klinsky, 2018). In the context of a political economy, accounting silences can be conceptualized as a form of governance, functioning to normalize prevailing divisions of accountability by formalizing certain costs as non-countable and thus, by implication, beyond the scope of negotiation within public budgetary processes (Tinker, 1980; Cooper and Sherer, 1984). Consequently, accounting functions not solely as a neutral instrument but also as an institutionalized practice, which has the capacity to engender inequitable distributions of benefit and detriment (Andrew and Baker, 2020; Vinnari and Laine, 2017).

Concurrently, the emergence of ecotourism initiatives centered on mangroves demonstrates the capacity for sustainability-oriented accounting to evolve in a phased manner, concomitant with environmental benefits, economic incentives, and organizational learning processes. It has been demonstrated by preceding research in the field of sustainability that institutional transformation is most frequently effected by means of hybrid governance, such as collaboration with universities or other external actors who initiate and gradually effect change at a local level by means of the transfer of new knowledge (Bebbington and Larrinaga, 2014; Geels, 2013). Nevertheless, this study also provides a caveat: if innovations are not integrated into formal budgeting and reporting frameworks, there is a risk that they will remain marginal and discretionary (Juusola and Srouji, 2023; Larrinaga and Bebbington, 2021). This reflects broader concerns about the potential for new sustainability measures to become symbolic gestures without being institutionalized in accounting and accountability practices.

This study contributes to a growing body of literature that argues for the recognition of local governance as a significant yet often overlooked domain of environmental accountability. The development of sustainable accounting in the context of decentralization is not achieved through technical capacity building alone; rather, it is an inherent part of institutional reforms that broaden the view of what constitutes "numbers" and what costs should be calculated in public financial administration systems. This study employs the Political Economy Analysis (PEA) at the micro-governance level to demonstrate how local accounting practices reproduce larger political-economic dynamics, thereby shifting environmental costs. The study further demonstrates how these local accounting practices are linked to the distributional implications of sustainability governance.

5. Conclusion

In this paper, we use empirical evidence to examine how sustainable accounting is implemented in decentralized coastal governance, exploring its relevance within a political economy (PEA) framework. The results demonstrate a persistent structural disparity between material environmental risks and formal recognition within the accounting system. Coastal ecosystems, which provide the foundation for local livelihoods, economic activity, and coastal environmental benefits, often remain "invisible" within municipal financial systems. This lack of clarity arises from a combination of technical limitations and institutional priorities. These priorities are driven by the need to comply with reporting regulations and are constrained by limited administrative capacity. This study provides a valuable insight into the role of sustainable accounting on a micro-governance level. It demonstrates how environmental accountability is a dynamic and conditional aspect of operations within decentralized institutions. The findings indicate that environmental visibility alone is not sufficient to drive accounting reform. Instead, these ecological risks can be measured and reported in formal governance systems, with institutional capacity and political-economic structures playing a mediating role. Consequently, sustainable accounting is not merely a technical enhancement or a new bureaucratic criterion in reporting; rather, it is an integral part of a political process and a distributional effect.

Summary of Contributions

This study makes a significant contribution to the existing literature in three main ways. Firstly, it contributes to the field of complementary accounting and accountability research in terms of sustainability at the decentralized village control level. In this area, both the corporate sector and the national public sector appear to be under-researched. With a focus on micro-level governance, this analysis shows how the idealism of sustainability is influenced by local institutional arrangements. Secondly, this study makes a significant contribution to the development of political economy accounting by demonstrating how the neglect of environmental costs can shift costs in practice. The lack of accounting for environmental issues can be a source of concern, particularly when it results in the burden falling on marginalized communities. This can further perpetuate imbalances in the way that risk is distributed. Thirdly, this study develops an integrative model that combines environmental pressures, institutional capacity, and political-economic configuration. This model portrays sustainable accounting reform as a dynamic, contested governance process; it does not treat it as a linear technical solution.

Policy Implications

The research findings suggest that sustainable accounting will be enhanced in decentralized governance through more than procedural compliance reforms. Local governments are advised to incorporate the ESDC into their formal budgets and establish straightforward environmental cost accounting systems according to their respective risk conditions. Incorporating environmental liabilities into financial reporting can enhance transparency and facilitate long-term resilience planning. In terms of sustainability, it is essential that decentralized fiscal and regulatory frameworks reflect sustainability goals at the systemic level. Capacity-building efforts must incorporate technical training, digital system development, and interdisciplinary collaboration with academic and environmental organizations. The success of sustainable accounting reform may be more symbolic than transformational without incentives for institutional development and a facilitating regulatory framework.

Limitations and Future Research

Please note that we apply a single-case interpretive approach, which allows for analytical depth but sacrifices statistical generalization. While the results provide valuable insights into the structural dynamics of decentralized coastal management, it should be noted that they may not represent patterns in regions with varying financial capacities and/or political systems. Future research could use comparative multi-case studies amongst coastal local governments or incorporate quantitative models to assess environmental costs in order to examine how institutional

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capacity influences the implementation of sustainable accounting. Longitudinal research would also be beneficial in determining whether incremental innovations, such as those driven by ecotourism initiatives, ultimately lead to accounting reforms at a later stage. It is recommended that further research on top-level regulatory frameworks and intergovernmental fiscal relationships be conducted to enhance understanding of how structural incentives influence local environmental accountability.

Practical Implications

Operationally, village governments are advised to shift from a compliance-focused reporting approach to a more impact-oriented financial management strategy. It is recommended that standard environmental expenditure classifications be used and that climate adaptation-related expenditures be included in annual budgets. The use of simple environmental indicators can also serve as a basis for the integration of sustainable accounting. The digitization of financial systems has proven to be beneficial in several ways. First, it can increase transparency, which in turn can strengthen oversight of environmental costs. Second, the availability of information increases, which can provide information at various levels of government. In addition, collaboration with universities, civil society groups, and environmental agencies can build technical capacity and help accelerate institutional learning. To achieve sustainable accounting, governance reforms must be implemented rather than simply changing accounting practices. Aligning objectives with locally tailored economic incentives can increase its political viability and stakeholder engagement.

Theoretical Implications

The focus is on the identification of structural interrelationships and environmental ambiguity in the context of decentralised compliance accounting. The present study enhances the body of knowledge in the field of sustainability accounting through its detailed exploration of the interplay between structural environmental ambiguity and a decentralized financial architecture focused on compliance. This study builds on previous critiques of symbolic sustainability reporting by exploring how calculation boundaries are organized at the micro-governance level. Consequently, sustainability accounting reform is regarded as an outcome that cannot be separated from the institutions and regulations that influence it. By focusing on the concept of omission, this research makes a valuable contribution to the field of political economy accounting, demonstrating how the deliberate avoidance of accounting practices can serve as a mechanism for allocating environmental costs. This study explores the connection between environmental pressures and distributional outcomes through institutional mechanisms, positioning sustainable accounting as a field of competition over fiscal accountability by linking it to environmental justice. This perspective invites further research exploring the concept of accounting reform as a politically shaped change in governance.

Conceptual Propositions

Following a comprehensive review of the available data and a thorough integration of relevant theoretical concepts, this study has developed the following set of conceptual propositions. The first proposition is that an increase in environmental pressures does not necessarily lead to the integration of sustainable accounting, particularly where governance systems remain centred on compliance. The second proposition asserts that organizational capacity acts as a moderator in the relationship between environmental exposure and the recognition of environmental costs in a decentralized governance model. Thirdly, we propose that non-internalization of environmental costs will facilitate the shift of ecological costs to vulnerable ecosystems. The fourth proposition asserts that reform of sustainable accounting can constitute a redistributive intervention with the potential to effect changes in accountability relationships within the domain of local government. Taken together, these propositions illustrate how sustainable accounting can be considered a highly political governance tool, influenced by factors such as environmental pressures, institutional capacity, and existing power structures.

Ethical Statement

This study was conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent was obtained from all participants involved in the study. All data were anonymized to protect participant confidentiality. Approval for this research was granted by the Research Ethics Committee of Universitas Sebelas Maret (Reference No: UNS/1234/2024).

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Author Biographies

Risti Ulfi Hanifah is a researcher at the Department of Accounting, Economics and Business, Universitas Semarang, Indonesia. Her research focuses on green accounting, sustainable governance, and the political economy of environmental cost distribution. She is particularly interested in how local institutions manage ecological risks and implement financial accountability within coastal village development. Through her academic work, Hanifah actively contributes to the discourse on sustainable public sector accounting and the integration of environmental liabilities into decentralized systems.

Candra Safitri is an academic affiliated with the Department of Accounting, Economics and Business at Universitas Semarang, Indonesia. Her expertise lies in public sector accounting and the structural dynamics of local governance. Safitri's research critically examines the intersection of compliance-oriented reporting and sustainable development policies. She is dedicated to exploring innovative financial architectures that support climate resilience, transparent environmental accountability, and equitable policy-making for marginalized coastal communities in developing regions.

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