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INTEGRATING SUSTAINABILITY INTO MANAGEMENT ACCOUNTING PRACTICES: EVIDENCE FROM INDONESIAN MANUFACTURING FIRMS

Nida Garnida Fitrianti[1*], Anggun Yolistina[2], Raden Roro Fatmasari[3]

[1,2,3] Yayasan Kreatif Indonesia Emas Bandung, Indonesia

[1] *nida.fitrianti@krisaninstitute.com,* [2] *anggun.yolistina@krisaninstitute.com,* [3] *raden.fatmasari@krisaninstitute.com*

Abstract

Background: Indonesian manufacturing firms face mounting pressure to integrate environmental considerations into business operations amid growing stakeholder expectations and regulatory requirements. While traditional management accounting focuses primarily on financial performance, sustainability integration demands broader metrics encompassing environmental and social dimensions.

Aims: This study investigates sustainability integration into management accounting systems across Indonesian manufacturing firms examining current adoption patterns, organizational factors influencing integration, specific practices employed, and relationships between sustainability accounting sophistication and performance outcomes.

Research Method: A convergent mixed-methods design combined survey analysis of 156 manufacturing firms with in-depth case studies of 12 organizations. Statistical analysis utilized hierarchical regression while qualitative data underwent thematic coding.

Results and Conclusion: Three distinct integration archetypes emerged: Compliance-Driven firms (38%), Strategic Adopters (29%), and Pioneering Transformers (33%). Advanced integration correlates significantly with superior environmental performance (24-31% improvements) and enhanced financial outcomes (12-18% cost savings). Regulatory pressures (β=0.34), customer requirements (β=0.41), and organizational capabilities (β=0.38) emerge as significant drivers.

Contribution: This research extends management accounting literature by empirically demonstrating sustainability integration patterns in emerging market manufacturing contexts. Findings provide practical guidance for firms pursuing sustainability accounting adoption and inform policy interventions supporting sustainable industrial development.

Keywords: Sustainability Accounting, Management Accounting, Environmental Performance, Manufacturing, Indonesia

Introduction

The imperative for sustainable business practices has intensified dramatically within Indonesian manufacturing sectors as environmental degradation concerns, resource scarcity, and climate change impacts accelerate. Manufacturing activities contribute approximately 24% of national greenhouse gas emissions while consuming substantial water and energy resources.

Management accounting systems traditionally emphasize financial metrics, optimization of production costs, and profit maximization. However, sustainability challenges require expanded measurement frameworks capturing environmental resource consumption, waste generation, emissions production, and ecosystem impacts.

Indonesian manufacturing firms operate within unique institutional contexts shaping sustainability accounting adoption. Regulatory frameworks have evolved substantially, with Ministry of Environment establishing mandatory environmental reporting for certain industries.

Research Method

This investigation employed a pragmatic convergent mixed-methods research design. The survey sample comprised 156 manufacturing firms spanning automotive, chemicals, food processing, textiles, and electronics sectors.

Survey instrument development followed established scale adaptation procedures. Sustainability accounting practices items encompassed material flow cost accounting, environmental cost tracking, carbon accounting, and sustainability-balanced scorecard implementation.

The case study component involved 12 firms purposively selected to represent diverse sustainability accounting maturity levels. Data collection involved semi-structured interviews with accounting managers, sustainability officers, and production managers.

Results and Discussion

Descriptive analysis revealed substantial heterogeneity in sustainability accounting adoption. Only 33% of surveyed firms demonstrated advanced integration

characterized by comprehensive implementation and systematic environmental cost internalization.

Hierarchical regression results identified regulatory pressures ($\beta=0.34$, $p<0.01$), customer requirements ($\beta=0.41$, $p<0.001$), and top management commitment ($\beta=0.38$, $p<0.01$) as significant adoption drivers.

Environmental performance analysis demonstrated significant positive relationships between sustainability accounting sophistication and multiple outcome dimensions. Advanced integrators achieved 24% improvement in energy efficiency compared to basic adopters.

Case study analysis revealed three distinct integration pathways. Compliance-Driven firms adopted primarily to satisfy regulatory requirements. Strategic Adopters selectively integrated aligned with business objectives. Pioneering Transformers pursued comprehensive integration as component of broader transformation strategies.

Conclusion

This research provides comprehensive empirical analysis of sustainability accounting integration within Indonesian manufacturing firms. Three distinct archetypes demonstrate different integration approaches appropriate for varying organizational contexts.

The study contributes by providing empirical evidence from emerging market contexts, integrating institutional and resource-based perspectives. Practical contributions inform firm implementation strategies, profession development, and policy interventions.

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