The Seybold Report

ISSN 1533-9211

DOI 10.17605/OSF.IO/R42B3

THE INFLUENCE OF INSTITUTIONAL REGULATIONS, ENVIRONMENTAL MANAGEMENT STRATEGIES, AND ORGANIZATIONAL PERFORMANCE WITH ENVIRONMENTAL ACCOUNTING MANAGEMENT AS A MEDIATING VARIABLE

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Abstract

This study aims to examine the relationships among institutional regulations, environmental management strategies, organizational performance, and environmental accounting management. It proposes that environmental accounting management acts as a mediating variable between institutional regulations and organizational performance, as well as between environmental management strategies and organizational performance. A conceptual model is developed and tested through a survey of companies in various industries. The findings suggest that institutional regulations and environmental management strategies have a significant positive effect on environmental accounting management, which in turn positively influences organizational performance. The study contributes to the literature by providing empirical evidence of the importance of environmental accounting management as a mediator between institutional regulations, environmental management strategies, and organizational performance. The results have practical implications for companies seeking to improve their environmental performance and accounting practices.

Keywords: Corporate Sustainable Development, Environmental Management Accounting, Environmental Management Strategy, Organizational Performance

1. INTRODUCTION

Businesses are under increasing regulatory and public demand to integrate environmental and social issues into their operations. These demands have forced companies to adopt various environmental management strategies [1]. Environmental accounting aids businesses in the implementation of environmental management policies. [2]. Despite increased academic interest, further research on how these systems might transfer environmental strategies into organizational success is needed [3]. Thus, the issue is whether environmental accounting helps environmental strategies achieve business sustainability.

Environmental management accounting (EMA) is an interface between internal-oriented management accounting and corporate environmental strategies, allowing managers to plan, implement, decide, and control organizational environmental practices. It supports business sustainability management decision-making to achieve sustainability goals, but how EMA translates environmental management strategy (EMS) into business performance is still being determined [4].

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ISSN 1533-9211
DOI 10.17605/OSF.IO/R42B3

Corporate environmental strategies and EMA have been studied empirically, especially from a contingency theory perspective [5]. EMS-EMA relationships have been mixed in these few trials. Some studies claim that EMS is strongly linked to EMA practices [6], but others disagree [7]. These studies have not examined corporate success despite finding any empirical relationship between EMS and EMA.

However, social-based theories have been suggested for understanding business environmental strategies [8] and EMA implementation [9] beyond contingency theory. This study addresses two literary gaps that suggest future research [10].

This work contributes by examining these issues. This study adds organizational success to the corporate EMS-EMA debate. This study looks at how accounting (or EMA) aids in converting environmental strategies into positive financial and environmental results for corporations. Researchers have explained these discrepant findings by the operationalization of environmental management approaches [11].

Second, this study examines how EMA is related to the EMS. Only a few empirical research have looked at how EMA system installation influences company environmental initiatives, despite the fact that there are increasing numbers of studies on EMA and particular EMA tools. Third, it illuminates why developing nation institutions adopt corporate environmental strategies and EMA. This is critical because many earlier research concentrated on developed and a few underdeveloped countries [12], ignoring emerging Asian economies like Indonesia.

The paper has several parts. Section 2 covers theory and theories. Section 3 covers the study method, while Section 4 covers the analysis and results. We discuss the results and conclusions.

2. HYPOTHESES DEVELOPMENT

2.1 Environmental management strategy (EMS)

Company's EMS efforts lower environmental effects through products, processes, and company policies [13]. Thus, it refers to business-environment integration tactics [14]. Organizations adopt complete environmental management systems to develop environmental entrepreneurship [15], which is defined as the "voluntary implementation of practices and efforts aimed at improving environmental performance" [8].

However, not all companies actively adopt environmental strategies. Thus, experts suggest that a firm's strategy range from reacting (passive) to proactive (leadership) [16]. Martensson and Westerberg [17] noted that EMS implementation depends on the material, knowledge, experience flow, connections, communication, teamwork, and control. Accounting information tools like EMA can help execute environmental strategies by tracking environmental costs and financial success [18].

2.2 Environmental Management Accounting (EMA)

Environmental Management Accounting (EMA) is based on an idea that accounting information should support corporate environmental management for planning, decision-making, and control [4]. EMA collects, analyzes, and communicates business sustainability

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ISSN 1533-9211
DOI 10.17605/OSF.IO/R42B3

information to help managers attain environmental sustainability [19].

EMA has been suggested as a technique of accounting for business decisions about environmental management responsibilities [4],[20]. EMA helps environmental strategy implementation by supplying environmental accounting data on a physical and monetary level [21], [22]. Thus, EMA devices provide tangible or monetary information on ecosystems, the element carbon, materials, water, energy, and waste [7].

2.3 The Relation between Organizational Performance and EMS-EMA

Corporations can profit from EMS [3], [8]. These benefits include cost savings, stakeholder relationship management, eco-innovation performance, resource efficiency, regulatory compliance, and pollution prevention [8], [23], [24]. Thus, growing evidence shows that a firm's environmental plan improves organizational success [12]. Several studies have shown that environmental tactics improve corporate success from environmental, economic, and social viewpoints [3], [11], [25].

Many studies show that green strategies improve corporate success, but some show that they only work under certain conditions. Organizations can gain a sustainable competitive edge by developing green skills like EMA-based sustainability control systems [3], [26]. Organizations pursue environmental management practices to realize these benefits by developing environmental accounting and control systems [27]. Different organizational methods require businesses to find unique systems of information for accounting to fulfill managerial requirements for information [28]. Management accounting and information systems usage are strongly correlated with corporate strategies.

Through the identification of environmental costs and hazards and the dissemination of information to decision-makers and stakeholders, EMA systems can assist businesses in improving their environmental and economic performance [19],[28], [29]. Wijethilake [3] found that sustainability control systems link corporate sustainability performance and proactive sustainability strategy. Through EMA, environmental strategies included in an eco-control package can enhance a company's financial and environmental performance (Journeault (2016). The corporate green resources, including environmental policies, enhance the environmental performance of EMA (Latan et al. (2018). Thus, the theories are:

H1a Environmental management strategy and organizational performance are positively correlated.

H1b Environmental management strategies have an indirect positive correlation with organizational performance through EMA.

2.4 Institutional regulations and EMS

Institutional demands from governments, industries, or society on corporations to adopt environmental management practices go beyond technical efficiencies [30]. Three processes cause these forces. Research indicates that institutional rules support sustainability management techniques, such as corporate environmental policies [16], [31]. Regulatory regulations can affect corporate environmental practices through cohesion through regulators,

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DOI 10.17605/OSF.IO/R42B3

foreign investors, standardization agencies, industry norms, parent companies, or rating organizations [23].

H2 There is a positive corellation between institutional regulations and environmental management strategy.

2.5 Institutional regulations and EMA

Since EMA studies are increasing, there is still a need to understand the factors that impact firm-level EMA adoption. Several studies have used institutional theory to examine how social imperatives impact firm-level EMA adoption [32], [33].

In one of the first EMA studies, Qian et al. (2011) studied Australian local councils from a structural perspective. They find that environmental regulation requirements, local community standards, and peer council pressures affect the creation of EMA for trash and recycling management. Christ [5] found that regulation demand drives EMA in Australian wine. Christ [5] also found that managers' business corellations favorably affect monetary EMA use.

In a recent survey-based study, Qian et al. [33] Found that public environmental standards are favorably linked with EMA use in both physical and financial terms in Australian towns. Jalaludin et al. [30] Argued that normative institutional regulations influence Malaysian manufacturing companies' adoption of EMA practices. At the same time, Herold, Farr-Wharton, Lee, and Groschopf [34] suggested that institutional regulations can affect carbon-related management, accounting, and disclosure practices. Wang et al. [10] Found that coercive and normative institutional forces affect EMA adoption in China. The above research suggests:

H3 Institutional regulations are positively correlated with the implementation of EMA.

Figure 1 Shows The Connection Between These Factors And The Study's Structural Model.

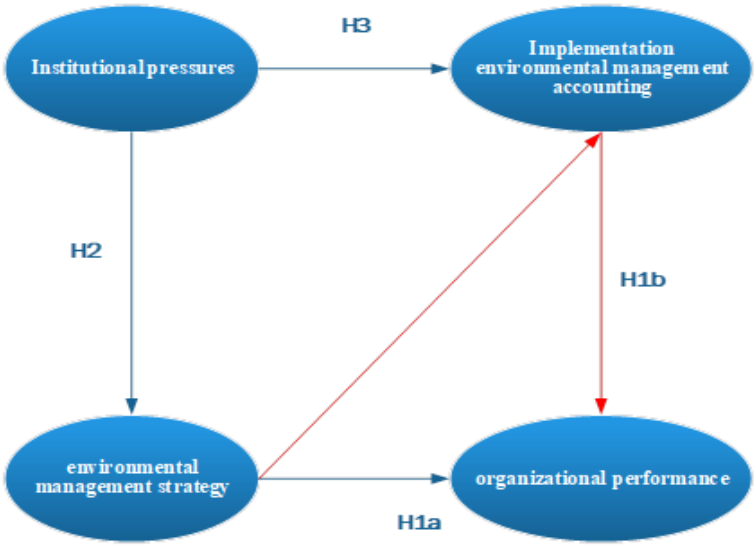

Figure 1: Conceptual Model

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3. METHOD

3.1 Data collecting and survey design

The study sampled 700 Indonesian businesses members of The Indonesia Stock Exchange. Finance managers, directors, and accounting division CFOs got the questionnaire and cover letter. We recruited a finance expert because they are most familiar with EMA and EMS implementation and assessing corporate success with understanding of accounting and a strategic perspective [22], [30], [35].

Web-based surveys can swiftly and cheaply collect data from a big regionally scattered group [36]. Mokhtar et al. pretested the questionnaire [35]. Three accounting teachers and three seasoned accountants pretested the questionnaire. The questionnaire was simplified based on their comments. Second, we piloted the questionnaire online with five working accountants and made minor changes.

Nonrespondents received three follow-up texts. We called chosen respondents to boost response rates like Latan et al. [37]. All respondents were told their personal and organizational money information would stay private.

One hundred sixty-four responses were recorded. Twenty-two incomplete replies were removed, leaving 142 usable responses (12.9%). Other studies on novel accounting and environmental management methods in wealthy nations found a similar low reaction rate [22], [30], [35]—table 1 lists response companies.

The t-test showed no significant difference between early and last responses for EMA implementation and success metrics. Nonresponse bias is unlikely to impact this study [36]. Several measures reduced common method bias. Ex-ante questionnaire design and delivery reduced "common rater" and "item feature" impacts [8]. First, all answers were kept confidential. Complex terms were avoided. The order of the questionnaire made it difficult for respondents to mentally connect the questions, which could have caused method bias. Ex-post statistical methods eliminated common method flaws. They have tested model structure varying collinearity. The highest variance inflation factor (VIF) was 3.124, below the allowed 3.3.

3.2 Measurement of the Constructs

This survey was three-part. It was adapted from previous exams. Part one collected the company, ownership structure, number of workers, expertise, gender, and age from respondents. Part two covered organizational needs and EMS. Part three covered EMA and business success. Parts two and three of the questionnaire asked about EMS, institutional regulations, EMA, and corporate success on a 7-point Likert scale from 1 (Not at all) to 7 (Very much) (To a great extent). Each item was rated for accord or disagreement. Approved scales provided these data. We assessed forceful, mimetic, and normative institutional forces using 13 Phan and Baird [8] questions and one Jalaludin et al. question [30] (see Table A1). Three Wijethilake [3] and two Latan et al. [27] questions rated EMS (see Table A2).

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DOI 10.17605/OSF.IO/R42B3

Table 1: Profiles of the respondents

Item	Categories	Frequency	%
Respondent profile			
Experience (years)	< 5	14	9.7%
	5 to 10	44	30.6%
	10 to 20	54	37.5%
	> 20	32	22.2%
Gender	Male	110	76.38%
	Female	34	23.62%
Age (years)	< 30	27	18.8%
	30 to 40	40	27.8%
	41 to 50	49	34.0%
	> 50	28	19.4%

Christ and Burritt [22] offered one topic (see Table A3). Christ and Burritt [22] and Latan et al. [27] assessed EMA efficacy with this complete tool.

Business sustainability management evaluates fiscal, social, and environmental success [3]. Since EMS and social performance could be more explicit, we focused on economic and environmental performance following Journeault [26]. Thus, we assessed corporate performance using a nine-question environmental and six-question economic performance tool [38].

Company size, field, and ownership were considered [8], [22], [26]—workers-sized organizations. Manufacturing or services were dichotomous factors (State Owned or international).

4. ANALYSIS AND RESULTS

PLS-SEM examined H1a, H1b, H2, and H3 ideas. The PLS-SEM approach for its capacity to test "mediation effects," its quickness, and its capacity to assess a theory's goodness of fit [27]. This study employed PLS-SEM since our structural model (Figure 1) includes a mediating variable (EMA) whose positive mediating influence on other variables was examined. As shown below, model reliability, discriminant validity, and convergent validity were high.

4.1 Reliability and validity

Table 2 presents data related to the average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha (α) for each latent variable, along with factor loadings for each of their indicators. The VIF for each latent variable was also calculated and falls within the recommended range of VIF values (<3.3 or <5), indicating that there is no significant collinearity [39]. Most factor loadings exceeded 0.9, and all factor loadings were above 0.7 except for the lowest two, which were 0.684 and 0.696. All model values were significant at $p < 0.01$, and the skeletal model performed well. The best model was achieved by removing early factors with lower factor loadings (NPr1, EP9, ECP1, EMA2, EMA4, EMA5, EMA10, and EMA11) and re-running SEM. Table 2 confirms convergent validity as the α, CR, and AVE values passed the threshold values ($\alpha > 0.7$, $CR > 0.7$, and $AVE > 0.5$) [40]. Additionally,

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DOI 10.17605/OSF.IO/R42B3

Dijkstra–rho Henseler's (rhoA) was used to evaluate data consistency and ensure that items loaded on each construct are reliable [37], [41].

Discriminant validity was also assessed using Dijkstra–rho Henseler's (rhoA) to ensure that the items loaded on each construct were distinct and not measuring the same underlying concept. This helps to confirm that the measurement model has discriminant validity, which is important for ensuring that each construct is unique and can be reliably measured [37], [41], confirming the items put on each construct's reliability. The Fornell and Larcker criterion, cross-loadings, and HTMT criterion were used to evaluate validity [40]. Table 3 displays the AVE measures derived from the square roots of the correlation matrix. The diagonal values were found to be larger than the corresponding off-diagonal values of the correlation matrix between the latent variables, which provides evidence of discriminant validity. Furthermore, all HTMT values were lower than 0.90 [40], proving discriminant validity.

4.2 The Performances Model And The Goodness Of Fit

Several metrics, including R-square (R2), f-square (f2), standardized root mean squared residual (SRMR), and normed fit index (NFI), were used to assess the performances of structural models and the goodness of fit (see Table 4). The path end and mediating variables had acceptable R2 (coefficient of determination) values that ranged from 0.569 to 0.679. In many social sciences, coefficients of determination are regarded as acceptable when they are above 0.2 and as excellent when they are between 0.25 and 0.5. (Latan et al., 2018). This suggests that 56.9% of the differences in EMA can be predicted by institutional pressure and EMS. Additionally, it demonstrates that institutional pressure alone can explain about 65.7% of the differences in the EMA. More significantly, EMA and EMS in the structural model can account for roughly 67.9% of the variation in organizational success.

Additionally, we assessed the model using the f2 statistic, which calculates the variation explained by each exogenous variable in the model [42]. According to Cohen (1988), $f2 > 0.02$ is typically adequate, and $f2 > 0.15$ is preferable. In light of the impact size, the structural model is appropriate. In PLS-SEM, a decent model fit is defined as an SRMR 0.01 [41], [43] and an NFI value that is closer to 1. Our model suggests a satisfactory fit because the SRMR was 0.054 (less than the threshold value of 0.08), and the NFI was 0.835 (higher than 0.8). [37]. Reliability, validity, and model fit can be confirmed by summarizing the findings of analysis parts 4.1 and 4.2.

4.3 Hypotheses Testing

The four hypotheses were tested on the structural model's path relationships, and the findings are shown in Table 5 along with the model's coef- ficients, test statistics, p value, and 95% confidence interval (CI). The null theories were disproved by the statistically significant p values. In other words, all four hypotheses—H1a, H1b, H2, and H3—have statistically significant data supporting them. As a result, with a p value that is very close to zero, the test results in the first row of Table 5 support Hypothesis 1a (H1a), that there is a positive relationship between EMS and organizational performance. Its 95% confidence interval (0.421, 0.601) is encouraging, supporting the findings even more. These data support earlier research

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ISSN 1533-9211
DOI 10.17605/OSF.IO/R42B3

from a number of studies [3], [11], [27], [44]. Additionally, Table 5 shows that EMS has a positive impact on EMA (row 2), while organizational success has a positive correlation with EMA (row 3); the coefficients for the relationships between EMS and EMA are 0.281 and 0.471, respectively, with a p-value less than 0.05. These results support Hypothesis 1b (H1b) while confirming the findings of the prior studies [3], [26], [27].

The findings also suggest that EMS and EMA are favorably correlated with the external paths from institutional regulations. As a result, a positive link between institutional regulations and EMS is identified (with a coefficient value of 0.944 and a significance level of 0.000), which is further supported by the fact that all 95% CIs are positive. It confirms the results of earlier works like [45], while Windolph et al. [46] Support Hypothesis 2 (H2). Further evidence that Hypothesis 3 (H3) is supported can be found in Table 5, which shows how institutional regulations favorably influence the implementation of EMA (with a coefficient value of 0.608 and a p value 0.01). Additionally, it backs up the conclusions of earlier EMA research that showed a strong correlation between various institutional regulations [5], [7], [10].

Table 2: Measurement Models For Latent Variables

Constructs indicators	Code	Mean*	SD*	FL
Institutional_Pressure α: 0.987; CR: 0.987; AVE: 0.853; rhoA: 0.987	IP			
Coercive_Pressure α: 0.983; CR: 0.983; AVE: 0.933	CP	3.746	1.847	
The extent to which international and national environmental standards are being followed.	CP_01	3.399	1.858	0.944
Adherence to regulations at the national or regional level that promote resource conservation and efficiency	CP_02	4.024	1.838	0.942
Environmental concerns and expectations from suppliers, partners, and clients that may exert pressure on an organization.	CP_03	3.774	1.865	0.965
The impact or control exerted by the headquarters of an organization.	CP_04	3.788	2.025	0.951
Mimetic_Ppressure α: 0.979; CR: 0.979; AVE: 0.902	MP	3.766	1.742	
The environmentally friendly strategies adopted by producers of the same product or substitute products.	MP_01	3.427	1.758	0.935
The rivalry and competitive dynamics within an industry or market.	MP_02	3.968	1.83	0.933
Knowledge and understanding of the most effective and efficient methods, processes, or procedures in a particular industry or sector.	MP_03	3.836	1.805	0.929
The level of consciousness or understanding that employees have about environmental issues and their impact.	MP_04	3.892	1.782	0.947
The degree to which customers are conscious or informed about environmental issues and concerns.	MP_05	3.704	1.896	0.943
Normative__Pressure α: 0.921; CR: 0.921; AVE: 0.885	NP	3.84	1.74	
The level of consciousness or understanding that the general public, including communities and non-governmental organizations (NGOs), have about environmental issues and their impact.	NP-02	3.753	1.826	0.907

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DOI 10.17605/OSF.IO/R42B3

Constructs indicators	Code	Mean*	SD*	FL
The process of obtaining official or legal recognition or approval for the activities of an organization	NP_03	3.857	1.805	0.909
The level of emphasis or priority given to environmental policy in the vision and/or mission statement of an organization.	NP_04	3.829	1.814	0.912
The degree of interest or concern that professional groups have towards environmental issues.	NP_05	3.927	2.001	0.92
Environmental management strategy α: 0.978; CR: 0.983; AVE: 0.920; rhoA: 0.979	EMS	3.721	1.632	
Encouraging the responsible and efficient use of resources to ensure their sustainability over the long term.	EMS_01	3.468	1.56	0.961
Decreasing or minimizing the release of pollutants or harmful substances into the atmosphere, bodies of water, or soil.	EMS_02	3.857	1.733	0.968
Reducing or mitigating the negative environmental impacts associated with the production and consumption of products and services.	EMS_03	3.732	1.651	0.966
Implementing systems and processes that help an organization to manage and minimize its environmental impact, such as environmental management systems.	EMS4	3.836	1.725	0.972
A sustained dedication or pledge to promoting environmental stewardship and sustainability over the long term.	EMS5	3.711	1.835	0.978
Environmental_Management_Accounting α: 0.919; CR: 0.934; AVE: 0.641; rhoA: 0.938	EMA	3.587	1.475	
Recognition of expenses related to the environment.	EMA1	3.343	1.871	0.832
Categorization of expenses associated with the environment.	EMA3	4.084	1.836	0.909
Implementation or enhancement of management for costs related to the environment.	EMA6	3.593	2.01	0.898
Creating and utilizing cost accounts that are specifically related to the environment.	EMA7	3.934	1.823	0.894
Designing and utilizing key performance indicators that are specifically related to the environment.	EMA8	3.828	1.746	0.723
Analyzing and evaluating the costs associated with the entire life cycle of a product, from its creation to its disposal, including any environmental impacts.	EMA9	3.434	1.504	0.694
A process of analyzing a product in order to identify areas where improvements can be made, whether in terms of cost, efficiency, performance, or environmental impact.	EMA12	3.031	1.629	0.706
Evaluating the possible environmental effects that may result from making capital investments and considering them as part of the decision-making process.	EMA13	3.448	2.068	0.794
Organizational_Performance α: 0.985; CR: 0.987; AVE: 0.851; rhoA: 0.985	OP			
Environmental_Performance α: 0.982; CR: 0.982; AVE: 0.849	EP	3.732	1.648	

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Constructs indicators	Code	Mean*	SD*	FL
Selecting inputs from sources that are restored or replenished, ensuring sustainable usage and minimizing environmental impact.	EP1	3.281	1.725	0.939
Incorporating waste materials into the production processes as inputs, in order to reduce waste and promote sustainability.	EP2	3.691	1.689	0.917
Discarding waste materials in a manner that is environmentally responsible, minimizing any potential negative impacts on the environment	EP3	4.093	1.855	0.936
Decreasing the usage of materials that are hazardous, harmful, or toxic, in order to minimize their negative impact on the environment and human health.	EP4	3.698	1.778	0.94
Minimizing the amount of waste, whether in the form of water or solid materials, by optimizing and streamlining the operational processes.	EP5	3.982	1.76	0.947
Decreasing the release of pollutants into the air, in order to reduce the negative impact on the environment and human health.	EP6	3.496	1.788	0.941
Minimizing or eliminating any negative effects that operational activities may have on the environment, in order to promote sustainability and reduce environmental damage.	EP7	4.003	1.863	0.925
Making efforts to decrease the occurrence of accidents that may have a negative impact on the environment, in order to promote environmental safety and prevent harm to human health.	EP8	3.614	1.8	0.933
Economic_Performance α: 0.942; CR: 0.942; AVE: 0.846	ECP	3.714	1.651	
Generating revenue by selling waste materials, which may be reused, recycled or repurposed, instead of disposing of them as waste.	ECP2	3.531	1.834	0.915
Reducing the expenses incurred by purchasing materials, either by negotiating better prices or finding alternative sources, in order to decrease overall costs and promote sustainability.	ECP3	3.718	1.768	0.923
Reducing the expenses associated with energy consumption, either by using more efficient equipment or implementing conservation measures, in order to decrease costs and promote sustainability.	ECP4	4.052	1.748	0.928
Reducing the fees incurred for disposing of waste materials, either by decreasing the amount of waste produced or finding alternative, less expensive methods of disposal.	ECP5	3.545	1.723	0.936
Enhancing the profitability of an investment, either by increasing revenue or decreasing expenses, in order to improve the return on investment.	ECP6	3.725	2.04	0.941

Note: FL = factor loading, SD = standard deviation.

The scoring for each item was done using a 7-point Likert scale that ranged from 1, indicating "Not at all," to 7, indicating "A great extent."

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Table 3: Discriminant Validity

	EMA	EMS	IP	OP
EMA	0.803	0.775	0.787	0.835
EMS	0.757	0.957	0.843	0.835
IP	0.771	0.846	0.925	0.841
OP	0.714	0.816	0.835	0.923

The HTMT is shown above the diagonal, the diagonal elements (bolded) represent the square root of AVE, and the intercorrelations between the latent variables are provided below the diagonal.

Table 4: Structural Model Results

	EMA	EMS	IP	OP
EMA	0.803	0.775	0.787	0.835
EMS	0.757	0.957	0.843	0.835
IP	0.771	0.846	0.925	0.841
OP	0.714	0.816	0.835	0.923

Table 5: Path Relationships

Structural path	Coeff. (β)	t-test	p values	95% CI	Conclusion
EMS ! OP	0.513	11.218	0.000**	(0.423, 0.603)	H1a supported
EMS ! EMA	0.283	2.455	0.016*	(0.048, 0.496)	H1b supported
EMA ! OP	0.473	10.477	0.000**	(0.389, 0.557)	H1b supported
IP ! EMS	0.946	125.918	0.000**	(0.937, 0.950)	H2 supported
IP ! EMA	0.628	5.474	0.000**	(0.409, 0.823)	H3 supported

**Significancy at the 1% level.

* Significancy at the 5% level.

5. DISCUSSION

This research looked into how EMS affected corporate performance and discovered that EMS had a positive and significant impact on the economic and environmental performance of the company. Environmental [8], [23], [27] or economic [23], [27] factors were the most frequently examined in earlier research [26]. The previously sent research, however, demonstrated that the EMS enjoys simultaneous economic and environmental benefits. This finding helps to resolve the earlier comprehensive findings on the relationship between EMS and corporate success to support the idea that being environmentally conscious is beneficial [8].

The majority of earlier studies that looked at the corporate advantages of adopting a green strategy concentrated on developed nations [27], but this research expands it to developing nations like Indonesia. Companies in developed nations typically exercise greater caution when managing environmental issues because of the developed institutional and environmental policies, regulatory frameworks, and customer awareness. However, because of institutional limitations, a lack of policy and regulatory support, technological limitations, and ineffective

The Seybold Report
ISSN 1533-9211
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law enforcement, businesses in emerging nations frequently fail to consider the environmental effects of their operations [16] . This research demonstrates, however, that businesses can still gain from EMS compliance even in developing nations. This is significant because studies show that some business groups in Indonesia still view environmental management initiatives as an extra expense or a form of corporate giving, rather than incorporating them into daily operations and corporate policies [28]. Organizations can benefit from adopting environmental management practices in the areas of greater cost savings through improved resource management and productivity, improved stakeholder relationships, improved eco-innovation performance, better regulatory compliance, and pollution prevention [8], [23].

The present study has discovered positive and significant results by investigating the mediating role of EMA in the relationship between EMS and corporate performance. Similar conclusions were reached by previous studies such as [26], [27], and [3] when examining comparable aspects of corporate sustainability accounting and control systems. EMA also promotes continuous improvement by providing financial and environmental information for decision-making and control [18], [19].

EMA systems can help corporate decision-makers better understand how the EMS impacts corporate performance by providing information on the environmental impact of economic systems. This study contributes to the growing body of research supporting the role of sustainability accounting and management systems in enhancing corporate performance, as previous scholars have consistently demonstrated that a green strategy is only beneficial under specific circumstances [8], [26].

This study examined the impacts of institutional forces on business environmental management strategies and EMA and found that they favorably and substantially affect both. These results support earlier corporate environmental strategy studies [8], [47] and EMA [22], [46], [47]. This implies that social support is a crucial driver of corporate sustainability.

In countries like Indonesia, where market pressures from international buyers in exporting countries, group affiliation, and professional environmental demands exert greater pressure on companies to act responsibly [48]–[50], EMS and related accounting practices can serve as a mediator. EMA tools can provide external parties with physical and financial details on firms' environmental management practices.

The influence of institutions on corporate environmental management strategies can result in a simultaneous process of diffusion from the top down, as well as counter processes of creation, shaping, and modification of a firm's environmental management practices. [16]. Previous studies have shown that organizational conditions can shape internal reactions despite institutional effects. This can determine how firms adopt EMS—reactively or proactively [13], [16]. The present study demonstrates that accounting information systems such as EMA can facilitate the implementation of environmental management strategies by offering financial and physical information about environmental costs and tracking both environmental and financial performance [3], [18], [27].

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ISSN 1533-9211
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6. CONCLUSION

This study examined how EMA converts corporate EMS into environmental and fiscal success. Institutional demands on EMS and EMA were also examined. EMS and EMA mediate a statistically significant positive link between companies' environmental and economic success. A firm's institutional environment favorably affected environmental management methods and EMA.

The study highlights the importance of environmental management strategies in enhancing corporate success, which has significant management implications. It suggests that adopting a green approach benefits both the environment and the bottom line. Accounting information systems, such as EMA, play a crucial role in supporting the adoption of EMS by providing decision-making, planning, and control information to achieve environmental and economic benefits. This underscores the importance of well-developed environmental management strategies and management accounting methods in boosting company performance. Therefore, managers should invest in EMS implementation and environmental tracking and control systems. Firms should also adopt sustainable accounting information tools like SoFi and continuously educate employees on environmental strategies, performance measures, and their practical applications to align with stakeholders.

The study further reveals that institutional demands, including regulatory pressures, drive companies to adopt environmental management strategies and EMA practices. Hence, policymakers and relevant government agencies like Indonesia's Central Environmental Authority should enact industry-specific laws and enforcement methods to promote the adoption of environmental management practices and monetary and physical environmental accounting. The study finds that expanding environmental laws in developing countries such as Indonesia can push companies to adopt advanced environmental management strategies and EMA systems. However, these interventions should support their development goal as emerging countries like Indonesia pursue rapid economic growth. Therefore, lawmakers and relevant government agencies should promote company skill-building and internal system development.

Given the normative pressures driving companies to enhance their corporate sustainability and reporting practices, the government can recognize environmentally leading companies that make a measurable contribution to environmental sustainability. This recognition may include national environmental honors, tax concessions, soft loans, and other incentives. Skill-building in business environmental sustainability can also involve creating and enhancing EMA information systems through training, sector-specific guidelines, and industry benchmarks.

The study has limitations, such as data collection only from Indonesia, which may limit generalizability due to its unique institutional setup. Future research should consider a more diverse sample from other geographic areas, both developed and developing nations, to test the model. The study's limited sample size and sector may also pose a constraint, calling for future studies with larger samples and businesses from various sectors. Additionally, the study's cross-sectional data calls for a longitudinal study to understand the evolution of environmental

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ISSN 1533-9211
DOI 10.17605/OSF.IO/R42B3

management techniques, EMA, and corporate success. Furthermore, since the study gathered data from listed firms and three national industry chambers with a unique environmental management practice, future studies can focus on small and medium-sized sectors that comprise most businesses in emerging nations.

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