



# Determinant Factors of Sustainable Management Accounting System in Increasing Company Performance

Ria<sup>1\*</sup> and Yvonne Augustine<sup>1</sup>

<sup>1</sup>Doctoral Program of Universitas, Trisakti University, Indonesia.

## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

The aim of writing this paper is to identify determinant factors of Sustainable Management Accounting System (SMCA) in increasing company performance. This paper uses a quantitative research approach while analyzing using Multiple Regression techniques with the help of the SPSS program. A questionnaire was distributed to the employees with simple random sampling. The results have represented that significant influences are Accounting in the scope of Environmental Management, Accounting within the scope of Social Management and Workplace Spirituality moderated by Corporate Governance on Corporate Performance simultaneously. Workplace Spirituality significant positive influence on Corporate Performance moderated by Corporate Governance partially, but there is a significant negative influence of Environmental Management Accounting moderated by Corporate Governance partially on Corporate Performance. This study builds a conceptual model of SMAS that is expected to contribute theoretically and can be used as a support for literature. By implementing the SMAS model, companies can encourage better performance when using Corporate Governance to improve management decisions about the determining factors for implementing SMAS.

**Keywords:** *Environmental management accounting; social management accounting; workplace spirituality; SMAS; corporate governance; company performance.*

\*Corresponding author: E-mail: [riatrisakti99@gmail.com](mailto:riatrisakti99@gmail.com);

## 1. INTRODUCTION

In the manufacturing industry, concern for sustainability reviews is greater than before. In addition to facing high competition, producers must pay more attention to the use of resources, waste management, air emissions, water pollution, the role of HR and so on. Failure to manage this sustainability problem can substantially damage the company's image which will ultimately affect its performance. For example, Apple Inc. was said to be guilty of using labour under the public in producing iPhones and Macintosh; The Coca-Cola company is considered a company that is not environmentally friendly because it destroys local water resources in India; Dell Inc. has been condemned for disposing of electronic waste with no environmental insight [1]; Chinese milk producers even create crises that threaten safety and the environment [2].

The bad behaviour of these companies reflects that with poor environmental and social management patterns, it can affect the performance of their companies, and worse is to drop the reputation of their own companies. These examples show the importance of understanding & implementing sustainability management and its relationship to the reputation & performance of the company. Some studies can support the notion that there is a positive relationship between sustainable management and company performance. The previous study suggested that there is a strong relationship between environmental management practices, such as pollution control with economic performance, such as profitability, especially for the pulp and paper industry [3]. In Sustainability Management other practice's stated that sustainability will be the driver for the company's economic success as long as the company can build adequate control over sustainability management [4]. Some researchers support the assumption that environmental management practices can produce innovation. Innovation, in turn, can help companies increase their market share and reduce their costs, resulting in greater profits. [5] - [8] Other previous research supports this conclusion by stating that environmental and social management practices can help companies gain competitive advantage which will then be able to improve their performance [9].

However, there are also several previous studies which expressed opposing opinions, that is,

there is a negative relationship between sustainable practices and company performance. The main argument here is that sustainable initiatives often increase operating costs and increase product prices that affect financial performance and market share [10] - [12].

When connecting with accounting, sustainability is related to sustainability accounting that is implemented through the practice of Sustainability Management Accounting Systems (SMAS). Several studies have been conducted that discuss the relationship between the application of sustainability accounting principles and company performance [13]. However, most of these studies pay more attention to individual SMAS components, resulting in a limited understanding of the relationship between Sustainability Management Accounting Systems and company performance. For example, other studies focused on the impact of environmental management accounting (EMA) on company performance [14] - [19]. The results of other studies are also about the effect of EMA and SMA on financial performance; and the results of research on the influence of EMA on financial performance. Likewise, some researchers are investigating the relationship between social management accounting (SMA) and company performance [20] - [22]. Likewise, other studies discuss the practice of Activity Based Costing (ABC) without involving EMA and SMA in company performance [23].

Other previous studies recommended that manufacturing companies must holistically adopt a Sustainability Management Accounting System to improve performance and gain a competitive advantage compared to other competitors operating in the same industry. Environmental Management Accounting (EMA) and Social Management Accounting (SMA) need to be integrated so that company performance can be improved [24,25]. The inclusion of ABCs to measure the costs of environmental and social impacts allows achieving accurate measurements in the management of environmental and social impact costs. [26].

Seeing the limitations in understanding sustainable management accounting systems, the authors are interested in conducting research entitled "Determinants of Sustainable Management Accounting Systems in Improving Company Performance". The result of this research will be important as information for

**Table 1. Variable operational definition**

<b>Variable</b>	<b>Variable definition</b>	<b>Indicator</b>	<b>Scale</b>
<i>Environmental Management Accounting (X1)</i>	Information disclosure of environmental cost measurement	<ul style="list-style-type: none"> <li>- Disclosure of waste volume and emissions per unit of material, energy, &amp; water consumption used in production processes</li> <li>- Disclosure penalty fees/ penalties due to environmental pollution</li> <li>- Disclosure of budget/realization of the cost of materials, water and energy efficiency programs following the reduction of targeted waste/emissions</li> <li>- Disclosure of renovation costs of affected areas and facilities of surrounding communities</li> </ul>	Ordinal
<i>Social Management Accounting (X2)</i>	Information disclosure of social cost measurement	<ul style="list-style-type: none"> <li>- Disclosure of the cost of the program for improving working conditions to improve the quality of life of employees</li> <li>- Disclosure of health care costs and security guarantees to improve the quality of life of employees</li> <li>- Disclosure of the cost of an employee self- development program</li> <li>- Disclosure of the benefit reduction received by the company from employees</li> <li>- Disclosure of the social responsibility costs of the product</li> <li>- Disclosure of social responsibility costs</li> </ul>	Ordinal
<i>Workplace Spirituality (X3)</i>	The ownership of an inner life that nourishes and nurtures by meaningful work in a community.	<ul style="list-style-type: none"> <li>- The inner life</li> <li>- Meaning and purpose of work</li> <li>- Feelings connected with the community</li> </ul>	Ordinal
<i>Corporate Governance (Z)</i>	Mechanisms that can control the behaviour of management for the company to be managed efficiently.	<ul style="list-style-type: none"> <li>- Institutional and management ownership</li> <li>- The size of the board of commissioners</li> <li>- The size of the board of directors</li> </ul>	Ratio
<i>Performance (Y)</i>	The ability of companies to generate profits compared to using of productive assets.	- <i>Return on Assets (ROA)</i>	Ratio

suggesting decision-maker to consider about the Sustainability Management Accounting System and the performance of the company and other factors surrounding it, such as workplace spirituality and corporate governance.

ISRA (Indonesian Sustainability Reporting Award) in 2013-2015. While for sampling using Simple random sampling technique, the sampling process is simply random, without distinguishing certain groups and strata [27].

**2. RESEARCH METHODS**

**2.2 Research Variables**

**2.1 Data Collection Procedure**

The population of this study are all manufacturing companies participating in the

The operational definition of the variables to be performed concerning efforts to identify the variables collected. The operational definition of

a variable contains indicators of a variable relevant to that variable. The variables analyzed in this study based on the criteria used to measure each variable, as seen in the Table 1.

### 2.3 Analysis Technique

The analysis technique used is multiple linear regression. In regression analysis besides testing the relationship between two or more variables, it also shows the direction of the relationship between causal variables and outcome variables. In this study, causal variables are independent variables, medium variables and interaction variables between independent variables and moderate variables; while the outcome variable is the dependent variable. Variables that are assumed to be random/random means having a probabilistic distribution, while the causal variables are assumed to have a fixed value [28].

## 3. RESULTS AND DISCUSSION

### 3.1 Overall Significance of Regression Test Samples (F Statistic Test)

From the Table 2, the F test supported the hypotheses that Environmental Management Accounting (X1), Social Management Accounting (X2), and Workplace Spirituality (X3) moderated by Corporate Governance (Z) have significant effect simultaneously on Company Performance (Y) at a 5% error rate. The significance of F test results is also shown by p-value (Sig.) = 0,000 < ( $\alpha$  = 0,05).

### 3.2 Significant Individual Test Parameters (T Statistic Test)

Individual parametric test (T test) was performed for variable parameters and significant correlation was depicted in Table 3.

## 4. DISCUSSION

Hypothesis testing H1, accepted for a significant value smaller than 0.05, this means the increase and decrease to environmental management accounting (EMA) will affect the increase or decrease of company performance [14]-[19].

Hypothesis 2 was rejected, means that Social Management Accounting has not the relationship with Firm performance. The logical thinking is that it should have a relationship, but the statistical result is not supported. It could have happened because in this research used corporate governance as moderated variable between Social Management Accounting and Firm performance.

Hypothesis 3 was supported, means that Workplace Spirituality on Corporate Performance moderated by Corporate Governance partially. The higher score of Workplace Spirituality which is moderated by corporate governance will increase the Corporate Performance.

**Table 2. Simultaneous test results in regression analysis (F test)**

The regression model	F	Sig.	Conclusion
Multiple Regression Model	10.469	.000	Ha accepted

Hypothesis 4 is supported, which means that Environmental Management Accounting, Social Management Accounting and Workplace Moderation are moderated by Corporate Governance in Corporate Performance simultaneously and these results are consistent with several studies. [13] To improve competitive performance and gain excellence compared to other competitors operating in the same industry [24].

**Table 3. Individual parameter test results (T test)**

Variable	Regression			Conclusion
	Coeffisient ( $\beta$ )	T-Stat	Sig.	
Environmental Management Accounting	-0.072	-2.184	0.034	H1 accepted
Social Management Accounting	-0.001	-0.033	0.974	H2 rejected
Workplace Spirituality	0.020	2.066	0.044	H2 rejected

## 5. CONCLUSION

Based on the principal problems and research results can be summarized as follows:

- 1) There is a significant influence of Environmental Management Accounting on Corporate Performance moderated by Corporate Governance partially. Environmental Management Accounting has a negative effect that shows that Environmental Management Accounting moderated by corporate governance counter-productive to Company Performance.
- 2) There is a no significant influence of Social Management Accounting on Corporate Performance moderated by Corporate Governance partially.
- 3) There is a significant influence of Workplace Spirituality on Corporate Performance moderated by Corporate Governance partially. Workplace Spirituality leads to a positive the influence that shows that the better of Workplace Spirituality will result in higher Performance Companies.
- 4) There is a significant influence of Environmental Management Accounting, Social Management Accounting and Workplace Spirituality moderated by Corporate Governance on Corporate Performance simultaneously.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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