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Environmental Management Accounting Practices and Environmental Performance for Malaysian Manufacturing Industry

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Abstract

The aim of this study is to review the relationship between environmental management accounting practices and environmental performance for Malaysian manufacturing industry. This paper is to explore the environmental management accounting practices (environmental cost, environmental safety, continuous improvement, management commitment, and customer focus) and environmental performance (financial performance and operational performance). This study proposed relationship model between environmental management accounting practices and environmental performance for Malaysian manufacturing industry. Based on the proposed conceptual model and reviewed, research hypothesis are being developed.

Keywords: Environmental management accounting, environmental performance, environmental cost, financial performance, manufacturing industry

Introduction

The manufacturing industry is one of the most important and strategic industries in Malaysian manufacturing sector (Kamaruddin & Masron, 2010; The Star, 2015; Habidin, Salleh, Latip, Azman, & Fuzi, 2015). The manufacturing industry is the key driver of the economy in Malaysia with a manufacturing sector which is expected to increase by five percent per year (The Star, 2015; Habidin, Salleh, Latip, Azman, & Fuzi, 2016a, 2016b). Thus, manufacturing industry in Malaysia is chosen in this study in order to improve the environmental management and their performance.

There are several environmental practices that can be used in the organizational activities such as Environmental Management Accounting Practices (EMAP) which can provide the organization for reducing their environmental impacts and improving environmental performance (Staniskis & Stasiskiene, 2006; Ramli & Ismail, 2013). EMAP is an important of

environmental management and its role in managing and reducing environmental impacts. However, the level of implementation of the EMAP is still weak in manufacturing industry, especially in developing countries in Malaysia (Vasile & Man, 2012; Jamil, Mohamed, Muhammad, & Ali, 2015). Thus, EMAP can be implementing for Malaysian manufacturing industry in order to improve the environmental management and performance.

By implementing EMAP, it is necessary for an organization to understand and measure the performance improvement in Environmental Performance (EP). This is supported by Albelda (2011) noted that EP can increase the performance measures in the organization. This is because the companies can achieve environmental goals which can be applied and measure the EP in the organization. One of the benefits of EP is to provide environmental improvement, improve corporate image, encourage environmental practice of company, and encourage the use of sustainable environment, and promoting the use of environmentally friendly methods for waste reduction (Laurent, Olsen, & Hauschild, 2010; Bocken, Morgan, & Evans, 2013; Fuzi, Habidin, Hibadullah, Zamri, & Desa, 2015). Thus, it is an important for the company to focus on EP in order to improve the performance measurement, especially for Malaysian manufacturing industry.

This study is focused on the relationship between EMAP and EP for Malaysian manufacturing industry. Therefore, by implementing EMAP, EP will be benefit the Malaysian manufacturing industry in order to success and sustain environmental management and the performance.

Literature Review

Environmental Management Accounting Practices (EMAP)

Environmental accounting emerged in the 1970s as a result of an increase in environmental management and concerns about social and environmental (Jasch, 2006). One of the management accounting practices to measure and monitor these operational actions is Environmental Management Accounting Practices (EMAP). EMAP is a response to the challenges faced by the management accounting systems related to environmental activities (Jamil et al., 2015). EMAP also is as a tool that measures the environmental performance and report environmental information to the stakeholders. According to Jain and Sharma (2014) and Jamil et al. (2015), EMAP affect the costs associated, especially in the accounting system failure in providing the information needed in order to reduce the costs. The importance of environmental management in managing and reducing environmental impacts, thus EMAP is an important role to assist the company to increase the environmental management.

EMAP is becoming increasingly important in terms of the results of the environmental management, environmental reporting, cost allocation, and performance evaluation. EMAP is defined to be the identification, collection, analysis, and information for internal decision making (Ferreira, Moulang, & Hendro, 2010; Abiola & Ashamu, 2012; Jamil et al., 2015). Hence, EMAP refers to as a decision making that concerned with environmental quality, environmental measures such as eco-efficiency, to promote environmental management, and to increase the environmental performance.

EMAP objectives are to optimize environmental management in terms of environmental cost and environmental decision making within an organization (Khalid, Lord, & Dixon, 2012). Research by Sulaiman and Mohktar (2009) and Khalid et al. (2012), EMAP shows the positive outcomes on the environmental performance. Therefore, EMAP is an importance of environmental awareness and practices for Malaysian manufacturing industry.

Environmental Performance (EP)

Environmental performance (EP) is the environmental control of the organization based on the objectives, policies, and environmental goals (Laurent et al., 2010). In order to measure the EP, the company controls the manufacturing process related to the efficiency of the materials used and reduce the environmental pollution (Sofia, 2010; Maguire, 2011; Medarevic, 2012; Habidin, Yusof, & Fuzi, 2016). The environmental effects the processes, products, or services to companies which use natural resources for waste discharge such as energy, water, raw materials, production wastes, and toxic product. Hence, EP provides to make decisions on the production process that involves environmental pollution, reduce waste, and waste disposal.

Besides, one of the examples of EP is to utilize eco-friendly products and operations. In order to increase environmentally friendly practices, the role of stakeholders is very important to improve the company's performance (Sridhar, 2011; Bocken et al., 2013; Hibadullah, Habidin, Zamri, Fuzi, & Desa, 2014). In accordance with the process of production such as waste reduction, emission reduction, and utilization of available resources will help to improve the EP in Malaysian manufacturing industry. Thus, EP can give to the protection of resources and environmental protection by implementing the environmental measures.

By emphasizing EP, EP can improve environmental management, environmental expenditures, and environmental costs (Harazin & Horvath, 2011, Habidin, Zubir, Fuzi, Latip, & Azman, 2015). An effective EP can assist the company to create environmental awareness in order to increase the environmental management and to enhance the quality of production. According to Bocken et al. (2013), EP can be measured in order to enhance the performance. Therefore, it is important for the industry to focus on EP, particularly for Malaysian manufacturing industry. Therefore, by exploring the EMAP, it will be benefit toward Malaysian manufacturing industry in order to improve EP.

Research Methodology

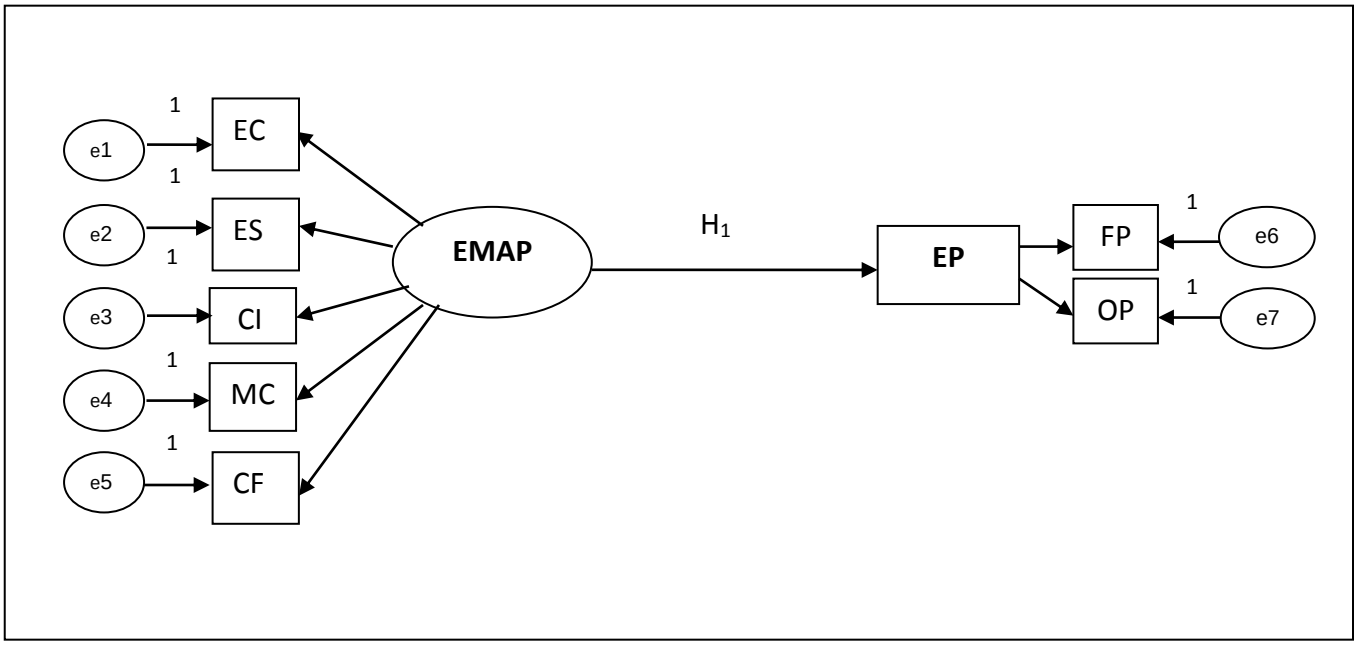
The study is going to use quantitative survey in the Malaysian manufacturing industry. Population of this study comprised on manufacturing industry in Malaysia. The main aim of this study is to review the relationship between the variables of EMAP and EP by using Structural Equation Modeling (SEM) approach. SEM using AMOS 21.0 will use to test the measurement model. In this study, the Statistical Package for the Social Sciences (SPSS) version 21.0 will use to analyze the preliminary data and provide descriptive analyses about sample such as means, standard deviations, and frequencies.

A Proposed Conceptual Model

To understand the relationship of EMAP and EP for Malaysian manufacturing industry, the following hypothesis is set up to be tested. This style of hypothesis statement is chosen due to the nature of answering hypothesis using SEM methods.

H_1: There is a positive and direct significant relationship between EMAP and EP for Malaysian manufacturing industry.

This paper author's proposed relationship model of EMAP and EP for Malaysian manufacturing industry. Figure 1 presented the proposed conceptual model.



*Notes: EMAP=Environmental Management Accounting Practices, EP=Environmental Performance, EC= Environmental Cost, ES= Environmental Safety, CI= Continuous Improvement, MC= Management Commitment, CF= Customer Focus, FP= Financial Performance, OP= Operational Performance

Figure 1. The Proposed Conceptual Model

Study by Debnath, Bose, and Dhalla (2012) found that EMAP has a positive relationship between EP. This finding shows that EP includes material, energy, and resources. Besides, EMAP can improve costs, decision making, and EP. Christ and Burritt (2013) noted that EMAP and EP have a positive relationship. Thus, EMAP can improve the EP for Malaysian manufacturing industry.

Conclusion

A conceptual model has been proposed to review the relationship between EMAP and EP for Malaysian manufacturing industry. Therefore, we believe this model can assist for managers to understand the factors influencing of EMAP and EP for Malaysian manufacturing industry. It is hoped that the findings of this study can be contribute not only to academic but also to the industry, especially to the Malaysian manufacturing practitioners. In future research agenda, the authors are looking at the relationship between EMIS and EP for Malaysian manufacturing industry.

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