



Impact of Sustainable Practices on Business Performance - A Sri Lankan Perspective

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Abstract: *The main purpose of this paper is to determine the effect of sustainable practices (SP) on business performance (BP) of ISO 14001 EMS certified manufacturing firms of Sri Lanka. The study conducted using a questionnaire survey-based data and analysis of such data using SPSS 21 software. The major findings reveal that sustainable practices can be measured using environmental practices, corporate social responsibility practices and supplier involvement and out of those practices only supplier involvement has an influence on business performance. This paper can be considered as a complementary work for previous research as it contributes to understand the possible dimensions that can be used to measure sustainable practices (SP) and also to determine the practices that has a direct connection with the business performance (BP). Moreover, the findings are new to the Sri Lankan ISO 14001 EMS certified firms. The findings are helpful to ISO 14001 EMS certified manufacturing firms in Sri Lanka and also for the potential firms to broaden the understanding about which areas needs to be focused to enhance business performance. This research is based on the results of ISO 14001 EMS certified Sri Lankan manufacturing firms and that aspect needs to be considered in using results of this study.*

Keywords: *Sustainable Practices, Business Performance, Environmental Practices, Supplier Involvement, Corporate Social Responsibility Practices.*

1. Introduction

The extensive review of literature reveals that sustainable approach to business as one of the major activity in organizations. According to Kiron et al. (2013), sustainability came as a top priority. The incorporation of sustainability into business model is a challenging fact for the top management as most of the models are covered by the key aspects of business. Similarly, sustainability has become the most important and top priority activity for the future for “Chief Executive Officers” (Laine, 2011). Aras et al., (2010) stated that previous research work show that the organizations having a socially responsible practice provide sound organizational performance in financial, non-financial and also boosting of brand image as well as reputation. To understand the principles of sustainability in the businesses research a study has been conducted using the wine industry in „vineyard“ and „winery“ methods (Cordano, Marshall, and Silverman 2010). Among the findings of the study, the researchers conclude that there should an affordable and acceptable environmental plan develops considering the magnitude of the business. Dixon-Fowler et al., (2013) indicated that in ever-changing markets companies have understood that focusing only on the economic side of the business is not sufficient. Nowadays, leaders, managers“, and business people are pressurized about the necessity of giving donations to “sustainable development” covering all parties of the society. In this connection, organizations are forced to use sustainable practices to survive in the markets whilst strengthening the delivery capacity regarding time, quantity, quality, safety and conformity to internationally recognized standards. In this context, organizations are making every effort to reduce manufacturing cost with the intention of gaining better profits keeping in conformity with all applicable “quality”, “environmental”, or “health and safety” to be competitive while creating a better image. Similarly, Kolleck (2010) indicated that globalization and heightened competition has pressurized the

manufacturing firms to make changes in a more proactive manner in the business covering environmental and social areas.

According to Matos and Silvestre (2013), during the previous decades, the necessity of inclusion of the notion of sustainability into business models as indicated in the literature in a growing manner. One of the pressing issues faced by the manufacturing firms is to produce green products and services for the valuable customers as most of the governments have taken initiatives to ensure a sustainable development (Smith, 2012).

In Sri Lanka, over the years had initiated number of programs towards greening of environment with the intention of achieving sustainability and it was one of the priority areas of almost all the governments. This movement has created a lot of enthusiasm especially in the manufacturing sector of Sri Lanka and as a result, most of the manufacturing companies have adopted different concepts and make every effort to reduce manufacturing cost with the intention of gaining better profits keeping in conformity with all applicable “quality”, “environmental”, or “health and safety” to be competitive while creating a better image.

In furtherance Crosby et al., (1981) indicated that consumers are very much interested on “environmental issues” and emphasized for environmental protection. Considering the importance of these concepts most of the Sri Lankan manufacturing firms are entered into programs like “corporate governance”, “CSR”, “green production”, However, very little research studies were carried out in the Sri Lankan manufacturing sector to ascertain the impact of sustainable practices and therefore this study was done in order to cover up that gap as the findings of the study would support to understand the impact of sustainability practices on business performance of the Sri Lankan ISO 14001 certified manufacturing firms. Moreover, the study further support(a) to examine the effect of corporate social responsibility practices on business performance (b) to determine effect of environmental practices on business performance and (c) to find out the influence of supplier involvement on business performance.

2. Literature Review

According to Linton et al. (2007), in Journals covering different technical subjects such as “management”, “environmental science” and “social science” the concept of “sustainability” has defined. Moreover, Carroll and Shabana (2010), the necessity of conducting social responsible activities as indicated in the extant literature over the years which lead to a situation of creating this topic in the academic study. However, in recent years only that an upward trend is noted in the number of organizations having such practices and conducts (Carroll & Shabana, 2010). The experience gained by world population because of the impact of climate change issues connected with global warming, severe droughts, and many other activities sustainability has considered as a vital one in today’s global world. Furthermore, Kolleck (2010) indicated in this regard a situation has been created that to survive in the competitive markets the manufacturing firms need to give higher attention to meet customer demands. In furtherance, Garvare and Johansson (2010) indicate that the necessity of determining of major and minor needs and expectations of stakeholders in achieving organizational sustainability. Moreover, Lee and Saen, (2012) indicated that the environmental and social related requests from the shareholders and stakeholders are pressurized organizations to concern on sustainability matters. According to Wagner (2010), a majority of previous studies proved that sustainability provides economic benefits for businesses.

Institutional theory an organizational based theory described that Institutional environment and the production activities of the organizations are interconnected. Furthermore, the theories indicate the necessity of having acceptable rules and principles for environmental practices and comply with such practices paving the way to continuing suitability to have enhanced performance. However, the Institutional theory has no concern on organizational related internal aspects but mainly look for external aspects that have an effect on the execution of green practices. Li (2014) indicated that the attention of governments, general public, competitors and consumers were drawn towards the bad effects on environment because of corporate operations they call business entities to act in a way to preserve environment. Furthermore, Li (2014) indicated that business entities need to have better interaction and delight other players within their institutional area by taking into consideration of environmental sustainability as part of organizational goals. According to Brenner and Molander

(1977), in order to explain the manner of planning and making the strategy by manager the stakeholder theory can also be used. Hence, stakeholder theory can be used when making explanations on a firm's sustainable strategy and connected practices as such practices are having a linked with internal and external stakeholders. According to Ehrgott et al., (2011), sustainable development and its link with the stakeholder theory introduced suddenly because stakeholder is a main pillar in the research studies on sustainability. The stakeholders are most important because without their involvement the firm cannot achieve the set expected goals. Molina and Clemente (2010) mentioned that social responsible practices of the firms and the manner such activities lead to enhance the financial performance and the relations with the stakeholders are started to present in latest research work.

Environmental Practices and Business Performance

Sharma and Vredenburg (1998) indicated that concern for environmental management and the enhancement of environmental protection as a critical factor to be considered as proposed by the Brundtland Report.

Moreover, the concern by the stakeholders on the sustainability area with special reference to environmental issues taking place because of the operation of the business has created pressure on the management of firms to give more attention for tackling of those environmental issues. One of the pressing issues faced by the manufacturing firms is to produce green products and services for the valuable customers as most of the governments have taken initiatives to ensure a sustainable development (Smith, 2012). According to De Oliveira et al. (2010), the previous research findings revealed that with green implementation practices the organizations have benefited in operational activities covering "cost reduction", "productivity", and "innovation". As a result of that, according to Fonseca (2012), organizations have adopted environmental management system and implementing the same to enhance stakeholder satisfaction while contributing to the „environmental pillar“ paving the way for sound organizational performance. According to Prajogo et al. (2012), the environmental management system standard provides benefits such as "environmental", "social", and the market as it is connected with the triple bottom line. According to Schaltegger and Wagner (2011), the connection between "environmental" and "social practices" and "corporate economic performance" has been discussed over the years as business study for sustainability. In this connection, Alfred and Adam (2009) pointed out that most of the scholarly research work has been focused on the issue of receiving financial benefits because of "green" and sustainable. Pullman, Maloni, and Dillard (2010) conducted a mixed approach (qualitative & quantitative) Interview and questionnaire method-based study. The study was done using 56 wineries and 61 food processors and found that more emphasis on environmental practices provides better quality with market performance. Moreover, environmental practices and financial performance is positively connected (Tunget al., 2014). Based on the above, the following hypothesis is proposed. Hypothesis 1 (H1): Environmental Practices will have a positive effect on business performance.

Corporate Social Responsibility Practices and Business Performance

Stakeholder theory indicates that more CSR activities lead increase business performance (Freeman & Reed, 1983). Moreover, Michelon et al., (2013) pointed out that previous studies revealed that firms having socially responsible practices provide a path to achieve enhance performance related to financial, non-financial, brand image and reputation. The Scholars Rodriguez-Melo & Mansouri (2011); Kemper et al., (2013); Monowar and Humphrey (2013) indicated that Corporate Social Responsibility (CSR) practices are considered by companies as part of the activities that leads to improve the competitive advantage indelible sustainability. A larger portion of the extant literature shows that the scholars and researchers pointed out that use of CSR practices helps to enhance the level of performance (Weber et al. 2010). Griffin and Mahon, (1997); Roman et al., (1999) indicated that over the years a considerable empirical and theoretical research articles were published indicating the connection between CSR and firm performance. The firms need to embrace social responsibility related functions and execute such functions as that provides opportunities to gain excellent results whilst enhancing social responsibility (Porter & Kramer, 2006). Peloza (2009) indicated that the relationship between CSR and firm performance showed mixed results. For instance, Boyle et al.,

(1997) proved that CSR and financial performance are negatively related. However, Rodgers et al., (2013) indicated that Corporate Social Responsibility (CSR) and Corporate Financial Performance are positively related. Hence it is hypothesized that: Hypothesis 2 (H2): Corporate Social Responsibility Practices will have a positive effect on business performance.

Supplier Involvement Practices and Business Performance

According to Ford et al. (2008), in the today's business environment every firm is linked with many other players and hence relationship management exceeding the boundaries of the firm plays a vital role. Tang & Zhou, (2012) mentioned the necessity of having a proper connection with the suppliers and buyers by the organization in order to obtain the actual benefits within the sustainable perspective. However, Hollos et al., (2012) indicate that relationship with suppliers provides a strong connection and the theory provides a way to control environmental risk. Tang and Musa, (2011), mentioned not only doing so the firms may have to face risks arising out of "environmental", "economic", and "social" activities. For instance, literature revealed that Nike had to face the issue of local pollution caused by its suppliers (Parmigiani et al., 2011). According to Sarkis et al. (2011), indicated that a better cooperation with the suppliers provide good performance in the long run and short term gains at the expense of others. Based on the foregoing information the following hypothesis is proposed: Hypothesis 3 (H3): Supplier Involvement will have a positive effect on business performance. In view of the above, the following Conceptual Model is proposed. This study aims to determine impact of sustainable practices on business performance. The sustainable practices of ISO 14001 certified manufacturing firms in Sri Lanka are evaluated using three constructs as shown in the proposed model above. This study is significant for the manufacturing sector of Sri Lanka as the manufacturing industry is harping best practices for sustainability. Moreover, the study findings help to enhance the awareness of the manufacturing sector employees about the appropriate practices on sustainability having a contribution for business performance.

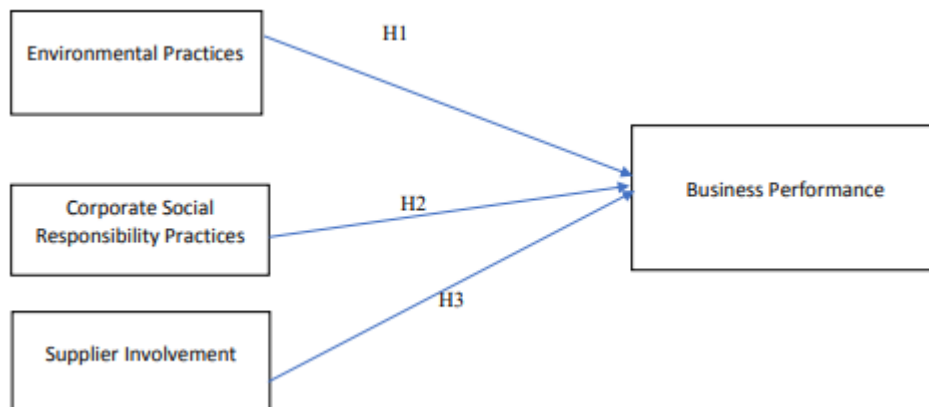


Figure 1- The proposed hypothesized Model

3. Research Methodology

Survey Questionnaire

The questionnaire items were adopted based on a comprehensive review of the previous research as those were considered as reliable, valid and acceptable. The questionnaire was well - structured under different headings and all items were based on five-point Likert scale. The questionnaire was pretested before conducting the pilot test by giving it to few academic and industry experts and obtained their feedback and based on that slight modification were done. The questionnaire was distributed among 20 manufacturing firms and based on the pilot study results the items had to change slightly to make the questionnaire more appropriate to the study.

Population and Sampling

The Population of the study is the ISO 14001 certified manufacturing firms in Sri Lanka as end of July 2018. The sample has been selected using simple random sampling technique. The main respondents for this study were Managing Directors, Directors, Managers, Executives of the ISO 14001 certified manufacturing firms who have extensive understanding and experience on ISO 14001

EMS and the practices of the manufacturing firm. To collect the data, the survey questionnaires were posed and followed up so as to get the acceptable response to the survey. Out of 151 distributed questionnaires for data collection 146 were returned (96.6% response rate) and only 138 questionnaires (91.3% response rate) were found usable for this study.

Data Analysis Techniques

The study used SPSS- version 21 to analyze the data. The preliminary tests like detection of missing data, normality assumption, validity, and reliability, descriptive analysis, Linearity, homogeneity, multicollinearity tests were performed before proceeding to test hypotheses to understand the behavior and suitability of the data. The study used the multiple regression technique to tests the hypotheses.

4. Results and Discussion

Demographic Profile of Respondents

The demographic results of data are given in the tables presented below.

Table 4.1: Respondent Category

Gender	Frequency	Percentage
Male	99	71.7
Female	39	28.3
Total	138	100

(Source: Survey Data 2019)

The above results showed that 71.7% are male respondents whereas 28.3% are female respondents.

Table 4.2: Frequencies on Demographic Variables

Demographic Variable	Category	Frequency	Percentage (%)
Job Category	Senior Management	11	8
	Middle Management	56	40.6
	Junior Management	71	51.4
	Total	138	100

(Source: Survey Data 2019)

As per the above analysis, 51.4% are junior management category and 40.6% are middle management and 8% are Senior Management. This reveals that the majority of respondents are from middle level and junior management level.

Table 4.3: Age Distribution

Range	Frequency	Percent
25-30	6	4.3
31-35	41	29.7
36-40	65	47.1
41-45	22	15.9
46-50	4	2.9
Total	138	100.0

(Source: Survey Data 2019)

The above results revealed that 47.1% are within the age range of 36-40 and 29.7% are within the age range of 31-35.

Testing of Hypotheses

Results of Reliability Analysis

The table 4.4 given below showed the results of reliability analysis of data. Since Cronbach's alfa value for all dimensions are over 0.7 the data are reliable and can be used for further analysis.

Table 4. 4 - Summary of Reliability Tests of data collected

Variable	Cronbach's Alfa Coefficientscores	Interpretation
Environmental Practices	0.701	Acceptable (Reliable)
Corporate Social Responsibility	0.723	Acceptable (Reliable)
Supplier Involvement	0.710	Acceptable (Reliable)

Business Performance	0.732	Acceptable (Reliable)
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(Source: Survey Data 2019)

It was found that all other pre-requisite tests as described above are fulfilled the requirements ensuring that the data set can be used for the testing of hypotheses. Hypotheses of this research were tested using multiple regression technique. The analysis details are given in the below table 4.5.

Table 4.5-Multiple regression analysis of the effect of Sustainable practices on business performance

Dimension	R	R ²	Adjusted R ²	F-value	Sig*	Standardized Beta	t-value	Sig*.
	0.526	0.277	0.250	10.116	0.000*			
Environmental Practices						0.025	0.287	0.775
Corporate Social Responsibility Practices						0.119	1.442	0.152
Supplier Involvement						0.260	3.397	0.001*

(Source: Survey Data 2019)

The correlation coefficient $R = 0.526$ indicates that there is a positive correlation between Sustainable Practices and Business Performance. The R^2 value is 0.277, hence the model is considered as being fit to be used for multiple regressions with the data. The results of the multiple regression analysis that regress the three dimensions of sustainable practices are shown in the above table 4.5. In addition, table 4.5 shows that the supplier involvement dimension has the most contribution on business performance, where ($Beta = 0.260$, $sig. = 0.001$).

Therefore, that indicates that the supplier involvement is the most significant, and it positively and directly regresses to business performance. Moreover, the analysis indicated that Environmental Practices and Corporate Social Responsibility Practices do not have any significant effect on Business Performance. In view of the above, H3 is accepted. This indicates that supplier involvement of the ISO 14001 certified firms are very much important as it contributes to enhance business performance of the firms directly. In other words, the results indicate supplier active involvement with the firms directly supports to enhance business performance. The hypothesis H1 was not supported that is environmental practices has an impact on business performance. This finding provides that in a firm environmental practices do not contribute for business performance directly. The analysis further indicates the hypothesis H2 was not supported. That shows there is no statistically significant effect from corporate social responsibility practices ($Beta = 0.119$, $sig. = 0.152$) on business performance. This shows that corporate social responsibility practices have no contribution for firm business performance even though in today's competitive markets firms are using such practices.

Table 4.6 – Summary of Results of Hypotheses Testing

Hypothesis	Description	Results
H1	Environmental Practices will have a positive effect on business performance.	Rejected
H2	Corporate Social Responsibility Practices will have a positive effect on business performance.	Rejected
H3	Supplier Involvement will have a positive effect on business performance.	Accepted

5. Conclusions

In summary, supplier involvement plays a greater role in improving the business performance of ISO 14001 certified firms. This finding is very important as without the proper suppliers it may not possible to obtain the right quality raw materials for manufacturing firms that may create defective products leading to increase of production cost which boiled down to reduction of profits. The findings also suggest that directors and managers of the manufacturing firms need to consider in developing a sound partnership with the suppliers so that the firms can obtain better business performance. The environmental practices have no direct connection with the business performance and this may due to the fact that the selected manufacturing firms are ISO 14001 certified firms and it indicates that certification has not given any tangible benefits of enhancing business performance. This is a crucial finding and it has managerial implications. In other words, the findings direct the managers of ISO 14001 certified firms to re-examine the existing environmental management system

to see whether how the system could be further improved in order to obtain the main benefits. Furthermore, the corporate social responsibility also has no influence on enhancing business performance which indicates that such practices may be used by the ISO 14001 manufacturing firms as a social service and not as a mechanism to increase business performance.

6. Recommendations

Future studies can be focused especially considering a particular sector so that the findings can be more unique to that sector. Furthermore, future studies should explore the influence of factors like firm size and firm age (number of years of certification to ISO14001 environmental management system) on business performance. The research is carried out using ISO 14001 certified Sri Lankan manufacturing firms and therefore that factor need to be considered when considering the findings of this study.

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