An Analysis of the Stakeholders' Perception of Introducing Ecological Accounting in Sri Lanka

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Abstract:

There is a dearth of descriptive research on the ecological accounting (EA). So it is important to analysis the factors that can be a challenge to introducing ecological accounting in Sri Lanka. The aim of the present research is to gather information about ecological accounting related challenges and barrier in industry of manufacturing and constructing. Despite its widely acknowledging importance, the academic research in the area of ecological accounting is popular topic but unavailable of information. To fill this gap, data was collected through interview and questionnaire. 30 participant are randomly selected in industry of manufacturing and constructing. The study concludes that "perceived challenges and barriers in term of knowledge and information requirement are higher impact on introducing ecological accounting in Sri Lanka, and also other four aspect are moderately impact on introducing ecological accounting in Sri Lanka".

Keywords: Ecological Accounting (EA), Stakeholders, Perception, Challenges and Barriers.

1. Introduction

This study analyses the perceived challenge on various stakeholders in introducing ecological accounting (EA) in Sri Lanka. At the present, organizations place a greater importance in ecology accounting function since it fulfills the information needs of the management in achieving strategy to sustain. As per the study undertaken by (MacKenzie, 2010), it has recognized that the level of usage of EA practices has become more popular in today's business organizations than before. Further they have revealed that rate of adoption of EA practices by industries has increased over the years. The finding of the study seems to be true in Sri Lankan context since there is a trend of focusing more on EA practices. The premise behind EA is to incorporate the impacts of an entity's operations on the environment into its accounting and financial reporting and other non-financial information. It focuses on transparency in corporate reporting through disclosure of ecological related costs and revenue.

2. Statement of Research Problem

This study is to examine the perceived challenges and barriers on introducing EA in Sri Lanka. It seems that there are few published studies on EA practices. Further, there has been little research done on EA practices in Sri Lanka. EA practices enable management to obtain relevant information for meaningful decision making (Yan & Xiaoxiao, 2010). Therefore, this study aims to fill this gap. (Yan & Xiaoxiao, 2010), highlighted that the introduction of the EA is not only the need of sustainable development of economy but also for enterprise's long-term competitiveness. Sometimes this might be the reason where there is a limited usage of EA practices in developing countries. By justifying that finding, there seems to be lack of studies in Sri Lanka towards EA practices especially in the manufacturing and construction sector. As the global attention being paid on ecological environment, the EA can provide environmental information by its unique methods. The introduction of the EA is not only the need of sustainable development of economy but also for enterprise's long-term competitiveness, (Yan & Xiaoxiao, 2010). Because of the advantages to stakeholders of adopting EA, most of the develop country process of establishing the EA, whilst face multiple challenges on introducing an EA such as no defined framework, no clear guidance and motivation, (Zhifang, et al., 2016). Although various survey studies have been conducted to assess the adoption of EA in different countries of the world, most of the studies have been

carried out analyzing the data from developed country, but comparatively fewer numbers of studies have been carried out on data from other countries, (Zhifang, et al., 2016). Even though EA seems to be equally important for all countries, there is a dearth of empirical study that examines the data from developing countries and in particular Sri Lanka. Therefore, this study makes an attempt to bridge this gap and elaborated the challenges on introducing an EA in Sri Lanka.

3. Research Questions

What are the stakeholders' perceived challenges and barriers on introducing Ecological Accounting in Sri Lanka?

4. Research Objectives

Find out the perceived challenges and barriers of introducing on ecological accounting.
To find out stakeholders' perceived challenges barrier on introducing ecological accounting in Sri Lanka.

5. Literature review:

According to (Gernon & Wallace, 1995), ecological theory of accounting is used as an instrument of analysis to expose the interests. Theory of Accounting Ecology is used to analyze the research issue. Stated that there are five different environmental variables (Slice) that affect accounting namely societal, organizational, individual, professional and accounting. Accounting ecology refers to a multidimensional system related to one another. Each system has environmental sub-systems that influences, and are influenced by accounting.

(Hamidaha, et al., 2015), conducted qualitative analysis on adoption of IFRS in Indonesia (an Accounting Ecology Perspective) which concluded that adoption of IFRS covers business related ecology, actor related ecology, and political related ecology. Mainly adoption was strongly initiated and supported by an Indonesian individual who has personal and organizational interests. The individual finally has successfully driven Indonesia accounting standard setter to adopt and practice IFRS-

based accounting standards. This is the internal force that realizes the adoption of the IFRS. Further researcher concluded that these slices are not exactly the same as (Gernon & Wallace, 1995) that consists of societal, organizational, professional, individual and accounting slices. This is reasonable, because the context of this study may be different with (Gernon & Wallace, 1995).

(Zhifang, et al., 2016), conducted theoretical research and made three suggestion: Construct a specific theoretical framework, Further improvement of the system so that it contains functions like accounting, evaluation, optimization and control and Enriching the related research methods and increasing the variety of empirical study.

This research paper is mainly focus on challenges face on introducing an EA, main stakeholder's perceived challenges are to be considered based on approach to decision making, control and performance evaluation and disclosure of accounting, (Yan & Xiaoxiao, 2010) and (Frank, 1996).Recent challenges are cost and benefit consideration of owners (investors / Potential investors), knowledge availability to employee, financial reporting requirement, Regulators, customer and lenders.

6. Methodology

The study is based on the qualitative methodology and used questionnaire to collect data and data is analyzed using SPSS 16.0 package. The sample was drawn from the selected individual work at manufacturing and constructing company. The questionnaire was designed with assistance from previous research instrument to enhance the reliability. The sample of the research is 5 companies from the industry of manufacturing and constructing. According to The Colombo stock exchange (CSE) has 30 manufacturing and constructing company registered in Sri Lanka. Using the random sampling, the sample was 30 individuals (stakeholders), whose were drawn from the population.
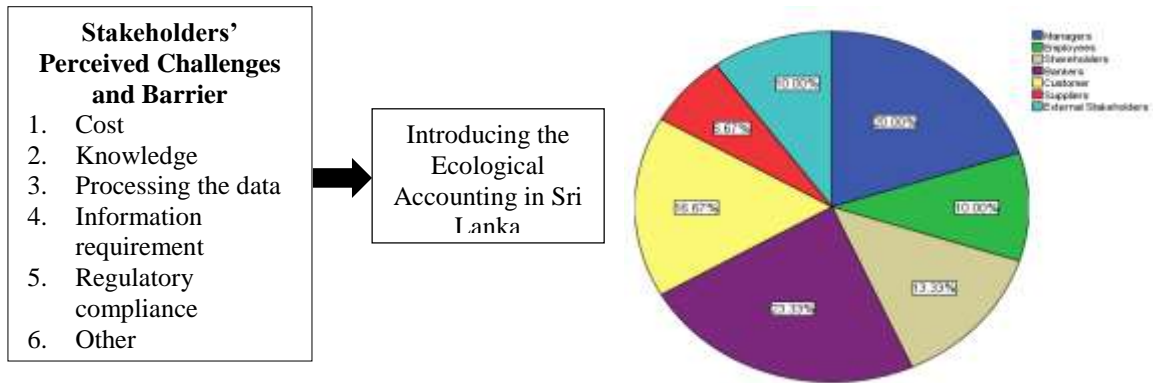
6.1 Conceptual Framework

Stakeholders'
Perceived Challenges
and Barrier
1. Cost
2. Knowledge
3. Processing the data
4. Information requirement
5. Regulatory compliance
6. Other

→ Introducing the Ecological Accounting in Sri Lanka

Figure 1. Type of the Stakeholders are responded

Figure 1. Conceptual Framework.

7. Analysis

7.1. Position of the Respondent

The respondents for the questionnaires mainly were stakeholder to the company. The stakeholders were connected, internal, external stakeholders. The position of the respondents of this study is presented in table 1.

Table 1. Type of the Stakeholders are responded

Responded	Frequency	Percent	Valid Percent	Cumulative Percent
Managers	6	20.0	20.0	20.0
Employees	3	10.0	10.0	30.0
Shareholders	4	13.3	13.3	43.3
Bankers	7	23.3	23.3	66.7
Customer	5	16.7	16.7	83.3
Suppliers	2	6.7	6.7	90.0
External Stakeholders	3	10.0	10.0	100.0
Total	30	100.0	100.0	

As per the table, total respondents were twenty (30) and out of which 6 (20%) respondents were managers, 3 (10%) were employees, 4 (13.3%) were shareholder, 7 (23.3%) were bankers, 5 (16.7%) were customer, and 2 (6.7%) were supplier and 3 (10%) were supplier external stakeholder. Majority respondents are bankers.

7.2. Number of responders (stakeholders) are industry wise

The respondents for the questionnaires mainly were stakeholder to the manufacturing and constructing company. The respondents are categorized into industry wise of this study is presented in table 2.

Table 2. Responders (stakeholders) are industry wise

Industry	Frequency	Percent	Valid Percent	Cumulative Percent
Manufacturing	16	53.3	53.3	53.3
Construction	14	46.7	46.7	100.0
Total	30	100.0	100.0	

Table 2 depicts the classification of respondents based on industry wise. Accordingly majority responders are manufacturing industry (53.3%).
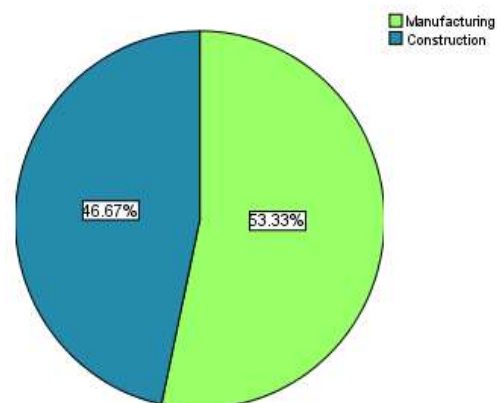

Figure 2: Responders are industry wise

8. Descriptive Analysis

Descriptive statistics represents the calculated means and standard deviations of the variables for describe the perceived level challenges and barrier on introducing EA. The perceived levels are identified by calculating the values of sample mean of each variable. Based on mean value decision made by following rules:

Table: 3. Decision rule for assessing level of influence

Mean value	Decision rules
Less than 2	Perceived level have very low impact on introducing EA.
2-3	Perceived level have low impact on introducing EA.
3-4	Perceived level have moderate impact on introducing EA.
4-5	Perceived level have higher impact on introducing EA.

Main six shareholders' perceived challenges and barriers are cost, knowledge, processing the data, information requirement, regulatory compliance and other. Each of the variables are discussed in below.

8.1. Descriptive analysis of cost on introducing EA.

Perceived level of challenges and barrier aspect of the Cost of the EA are grouped into four questions, such as initial investment cost, control cost, compliance cost and volatility of earnings. The analysis of these factors are shown in the following table 4.

Table 4. Descriptive Statistics for cost

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
Cost of Initial investment	30	3	5	4.53	.629
Cost of internal control and review	30	3	5	4.10	.712
Cost of external audit & compliance	30	1	5	2.87	1.408
Cost volatility earning	30	1	5	2.57	1.251
Average	30	3	5	3.67	.547

According to Table 4 each challenges and barrier aspect of the cost has different influence on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the cost on EA system. Mean value of initial investment cost (4.53) is the highest challenges and barrier on introducing EA system. Mean value of volatility of earning cost (2.57) is the lowest that is also lower challenges and barrier on introducing EA system. Average mean of challenges and barrier aspect of the cost is 3.67 Therefore, overall challenges and barrier aspect of the cost has moderate influence on introducing EA system perceived by the stakeholders.

8.2. Descriptive analysis of knowledge on introducing EA.

Perceived level of challenges and barrier aspect of the knowledge of the EA are grouped into three questions, such as availability technical assistant, training material, and competent employees. The analysis of these factors are shown in the following table 5.

Table 5. Descriptive Statistics for Knowledge

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
Lack of implementation guidance	30	3	5	4.40	.675
Lack of training material	30	2	5	4.20	.805
Lack of competent employee	30	2	5	4.23	.774
Average	30	3	5	4.27	.640

According to Table 5 each challenges and barrier aspect of the knowledge has different influence on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the knowledge on EA system. Mean value of implementation guidance (4.40) is the highest challenges and barrier on introducing EA system. Mean value of Training material unavailability (4.20) is the lowest that is also higher challenges and barrier on introducing EA system. Average mean of challenges and barrier aspect of the average is 4.27 Therefore, overall challenges and barrier aspect of the knowledge has higher influence

on introducing EA system perceived by the stakeholders.

8.3 Descriptive analysis of data processing on introducing EA.

Perceived level of challenges and barrier aspect of the processing the data of the EA are grouped into three questions, such as technique or tool to facilitate to process the data. The analysis of these factors are shown in the following table 6.

Table 4.6. Descriptive Statistics for process the data

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
No clear technique facilitate to traditional accounting	30	3	5	3.93	.740
Data transit into IT & ERP system	30	1	5	3.53	1.106
No clear framework process the data	30	1	5	1.87	1.196
Average	30	2	4	3.10	.607

According to Table 6 each challenges and barrier aspect of the data processing has different influence on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the data processing on EA system. Mean value of no clear technique facilitate to traditional (3.93) is the moderate challenges and barrier on introducing EA system. Mean value of no clear framework process the data (1.87) is the lowest that is also very low challenges and barrier on introducing EA system. Average mean of challenges and barrier aspect of the cost is 3.10 Therefore, overall challenges and barrier aspect of the cost has moderate influence on introducing EA system perceived by the stakeholders.

8.4 Descriptive analysis of Information Requirement on introducing EA.

Perceived level of challenges and barrier aspect of the Information requirement of the EA are grouped into three questions, such as challenges faced in facilitate to control, performance evaluation and reporting. The analysis of these factors are shown in the following table 7.

Table 7. Descriptive Statistics for information requirement

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
Incompatibility with information required to stakeholders	30	3	5	4.03	.809
Incompatibility with required to managerial activity	30	3	5	4.40	.724
Incompatibility with current financial reporting	30	2	5	3.63	.964
Average	30	2	5	4.03	.718

According to Table 7 each challenges and barrier aspect of the information requirement of stakeholders have different influence on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the information requirement to stakeholders on EA system. Mean value of incompatibility with information required to stakeholders (4.40) is the highest challenges and barrier on introducing EA system. Mean value of incompatibility with current financial reporting (3.63) is the lowest that is also moderate challenges and barrier on introducing EA system. Average mean of challenges and barrier aspect of the information requirement is 4.03 Therefore, overall challenges and barrier aspect of the information requirement has higher influence on introducing EA system perceived by the stakeholders.

8.5 Descriptive analysis of regulatory requirement on introducing EA.

Perceived level of challenges and barrier aspect of the regulatory requirement of the EA are grouped into three questions, such as challenges faced in facilitate to control, performance evaluation and reporting. The analysis of these factors are shown in the following table 8.

Table 8. Descriptive Statistics for regulatory requirement

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
Lack of proper instruction from professional body	30	1	5	4.07	.907
No mandatory law and regulation	30	2	5	3.37	.718
Incomputable with inland revenue	30	1	5	3.03	1.245
Average	30	3	5	3.60	.563

According to Table 8 each challenges and barrier aspect of the regulatory requirement to stakeholders have different influence on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the regulatory requirement to stakeholder on EA system. Mean value of Lack of proper instruction from professional body (4.07) is the highest challenges and barrier on introducing EA system. Mean value of Incomputable with Inland Revenue Average (3.03) is the lowest that is also moderate challenges and barrier on introducing EA system. Average mean of incomputable with regulators t is 3.60 Therefore, overall challenges and barrier aspect of the regulatory requirement has moderate influence on introducing EA system perceived by the stakeholders.

8.6. Descriptive analysis of other challenges on introducing EA.

Perceived level of challenges and barrier aspect of the other challenges of the EA are grouped into four questions. The analysis of these factors are shown in the following table 9.

Table 9. Descriptive Statistics for other challenges

Challenges and Barrier	N	Min.	Max.	Mean	Std. Deviation
Lenders not concerns ecological number	30	1	5	1.87	1.196
Investors concern on economic number	30	2	5	3.60	.968
Management and employees' resistant to change	30	2	5	4.20	.805
Customer not concern environmental Policy	30	1	5	3.70	.952
Average	30	3	4	3.47	.507

According to Table 9 each challenges and barrier aspect of the other category to stakeholders have different view on introducing EA system perceived by the stakeholders. Therefore, the researcher try to identify what are the highly influencing challenges and barrier aspect of the other category to stakeholders on EA system. Mean value of Management and employees' resistant to change numbers (4.20) is the highest challenges and barrier on introducing EA system. Mean value of Investors concerned on economic numbers (1.87) is the lowest that is also lower challenges and barrier on introducing EA system. Average mean of challenges and barrier aspect of other category is 3.47 Therefore, overall challenges and barrier aspect of the other category has moderate influence on introducing EA system perceived by the stakeholders.

9. Conclusion

The study concludes that "perceived challenges and barriers in term of knowledge and information requirement are higher influence on introducing ecological accounting in Sri Lanka, and also other four aspect are moderately influence on introducing ecological accounting in Sri Lanka". The researcher confirmed that perceived challenges and barriers of introducing on ecological accounting are higher cost involved and lack of knowledge availability. According to the findings of this study, higher cost and lack of knowledge availability are stakeholders' perceived as highest influenced challenges and barrier on introducing EA in Sri Lanka. The findings about cost, processing data, regulatory requirement are consistency with finding of (Yan & Xiaoxiao, 2010). The findings about lack of knowledge availability consistency with finding of (Gernon &

Wallace, 1995) they are argued that lower competent people barrier to introduce EA.

10. Directions for Future Research

This study is limited to industry of manufacturing and constructing company. Future Researches would be able to cover different sectors. Also future researchers better to consider more factors that effect to introducing ecological accounting.

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