

**Analyzing the disclosure of Corporate Environmental  
Reporting (CER) among listed companies: An  
Evidence from Sri Lanka**

By

**Hapu Achchige Chandima Jeewanthi**

**A thesis submitted to the University of Sri Jayewardenepura in partial  
fulfillment of the requirement for the Degree of Master of Science in  
Management on 30<sup>th</sup> September 2011.**

**MBA, MPM and M.Sc. Degree Programme 2009**

**Faculty of Graduate Studies**

**University of Sri Jayewardenepura.**

## Declaration by the candidate

The work described in this thesis was carried out by me under the supervision of Professor Kennedy Gunawardana and a report on this has not been submitted in whole or in part to any University or any other institution for another Degree/ Diploma.

  
.....

2011 | 12 | 05  
.....

H.A.Chandima Jeewanthi

Date

(5266 MF 2009050)



## **Declaration by the Supervisor**

I certify that the above statement made by the candidate is true and that this thesis/ research is suitable for submission to the University for the purpose of evaluation.

  
Professor (Dr.) Kennedy D. Gunawardana

Supervisor

5<sup>th</sup> November 2011.

## Table of contents

Title Page .....	i
Declaration by the Candidate.....	ii
Declaration by the Supervisor.....	iii
Table of Content .....	iv
List of Tables .....	vii
List of Figures .....	ix
List of Appendices.....	x
Abbreviations and Acronyms .....	xi
Acknowledgement .....	xii
Abstract.....	xiii
<b>CHAPTER ONE:INTRODUCTION .....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Research Site .....	5
1.3 Research Problem and Problem Justification .....	6
1.3.1 Research Questions.....	7
1.4 Objectives of the Study .....	7
1.4.1 Main Objective.....	7
1.4.2 Sub Objectives .....	7
1.5 Scope of the Study.....	9
1.6 Significance of the Study .....	9
1.7 Methodology in Brief.....	10
1.8 Defining the terms used in the study .....	11
1.9 Limitations.....	12
1.10 Thesis Outline.....	13
<b>CHAPTER TWO:LITERATURE REVIEW.....</b>	<b>15</b>
2.1 Introduction .....	15
2.2 Literature on CER and related aspects .....	16
2.2.1 Brief overview of CSR and CER .....	16
2.2.2 What is Corporate Environmental Reporting.....	19
2.2.3 History and Contemporary development of CER.....	22
2.2.4 International Contribution to development of CER .....	24
2.2.5 Target Audience of CER .....	27
2.2.6 Reporting media .....	28
2.2.7 Different Guidelines for disclosing CEI .....	30
2.2.8 Environmental laws, legislations and standards .....	33
2.2.9 Benefits of CER .....	35
2.2.10 Barriers and Challenges to disclose CER .....	35
2.2.11 Motivational factors for disclosing CER .....	36
2.2.12 Factors influence to the Disclosure of CER.....	37



2.2.13	How to measure the level of CER disclosures .....	42
2.2.14	Content analysis .....	46
2.3	A brief overview of origin and evolution of Annual reports.....	48
2.3.1	Laws, legislations and ordinance .....	50
2.3.2	Provision of Accounting bodies.....	54
2.3.3	Accounting standard, policies and principles .....	55
2.3.4	Sri Lankan accounting and auditing standard .....	55
2.3.5	Other political, economic and social factors.....	55
2.3.6	Evolution of CER in annual reports.....	56

**CHAPTER THREE: METHODOLOGY.....59**

3.1	Introduction .....	59
3.2	Research Approach / Research Strategy .....	59
3.2.1	Quantitative approach .....	60
3.2.2	Qualitative approach .....	60
3.2.3	Mixed / Multi research approach .....	61
3.3	Research design: Survey .....	62
3.4	Population and Sampling procedure .....	64
3.4.1	Population .....	64
3.4.2	Sampling Procedure and the Sample .....	65
3.5	Conceptual Frame work and list of hypotheses .....	67
3.5.1	Conceptual Framework.....	67
3.5.2	List of Hypotheses .....	68
3.6	Operationalization of Variable .....	70
3.7	Measuring the variables.....	73
3.8	Data collection.....	74
3.8.1	Primary data .....	74
3.8.2	Secondary data .....	77
3.9	Data presentation and Analysis .....	78
3.9.1	Reliability analysis.....	79
3.9.2	Analysis of General information .....	79
3.9.3	Testing hypotheses.....	80
3.9.4	Barriers to disclose CEI .....	83
3.9.5	Motivations to disclose CEI.....	83
3.9.6	Respondents willing practice of CED.....	83
3.9.7	Content analysis of the annual reports .....	83

**CHAPTER FOUR: RESULTS AND DISCUSSION.....85**

4.1	Introduction .....	86
4.2	Reliability analysis of questionnaire .....	87
4.3	Analysis of General information .....	88
4.3.1	Analyzing responding sample based on industry.....	88
4.3.2	Analyzing the final sample companies .....	90
4.3.3	Gender on the Respondents .....	92

4.4	Investigating the relationship between variables.....	93
4.4.1	Univariate analysis of Independent variables .....	93
4.5	Testing hypotheses .....	105
4.5.1	Testing hypotheses without a control variable.....	105
4.5.2	Testing hypotheses with a control variable.....	120
4.6	Major barriers to disclose CER .....	130
4.7	Major motivational factors to disclose CEI.....	131
4.8	Respondents willingness of the CER .....	133
4.9	Content analysis of annual reports .....	135
4.9.1	CER disclosing and non-disclosing companies .....	136
4.9.2	Analyzing the total disclosure based on CED item.....	138
4.9.3	Disclosure of number of sentences based on sector.....	140
<b>CHAPTER FIVE: RESULTS AND CONCLUSION .....</b>		<b>148</b>
6.1	Introduction .....	148
6.2	Findings for the sub objectives of the study.....	149
6.2.1	What factors affect managers DDCEI .....	149
6.2.2	Main barriers to disclose CEI within annual reports.....	155
6.2.3	Motivational factors to disclose CEI.....	156
6.2.4	Respondents willingness CER practice .....	157
6.2.5	Results of content analysis.....	158
6.3	Conclusion of the study .....	159
6.4	Recommendations .....	160
6.4.1	Short term recommendations for improving CED.....	160
6.4.2	Long term recommendations for improving CED .....	160
6.5	Suggestion for future research.....	161
<b>Bibliography .....</b>		<b>163</b>
 <i>Appendix</i>		
1.	2006 GRI guidelines (G3.1) –Environmental performance indicators.....	33
2.	A copy of self-administered questionnaire .....	75
3.	Places visited to collect data about the history & evolution of CER in AR ...	77
4.	Sample listed companies of Colombo Stock Exchange.....	90

## List of Tables

Table 2.1: Corporate environmental reporting shift in focus.....	57
Table 3.1: Sampling Procedure.....	65
Table 3.2: Operationalization of variables.....	72
Table 4.1: Cronbach's Alpha Coefficients.....	88
Table 4.2: Different modes of Questionnaire distribution among the sample.....	89
Table 4.3: Reception of Filled questionnaire from the respondents.....	89
Table 4.4: Final sample based on the industry sector.....	91
Table 4.5: Gender Distribution among the responding sample.....	92
Table 4.6: Descriptive statistics of the Independent variables.....	94
Table 4.7: Descriptive Statistics of DDCEI.....	103
Table 4.8: ANOVA test with MP and DDCEI.....	107
Table 4.9: ANOVA test with SHID and DDCEI.....	108
Table 4.10: ANOVA test with CP and DDCEI.....	110
Table 4.11: ANOVA test with PFM and DDCEI.....	111
Table 4.12: ANOVA with EP and DDCEI.....	112
Table 4.13: ANOVA test with EGP and DDCEI.....	113
Table 4.14: Correlation Matrix of dependent and independent variables.....	116
Table 4.15: Partial correlation of the variables with a control variable.....	121
Table 4.16: Model summary of the regression analysis.....	126
Table 4.17: Coefficients of two models.....	126
Table 4.18 Descriptive Statistics on Barriers to disclose CEI.....	130
Table 4.19 Descriptive statistics on motivational factors to disclose CEI.....	132



Table 4.20: Respondents willing practice to disclose CEI.....	134
Table 4.21: CER disclosing and non-disclosing companies based on the industry.....	137
Table 4.22: Number of sentences of each category of CED.....	139
Table 4.23: Number of sentences of CED of Bank, finance and insurance.....	141
Table 4.24: Number of sentences of CED of chemicals and pharmaceuticals.....	141
Table 4.25: Number of sentences of CED of beverage, food and tobacco.....	142
Table 4.26: Number of sentences of CED of construction and engineering.....	142
Table 4.27: Number of sentences of CED of diversified holdings.....	143
Table 4.28: Number of sentences of CED of health care.....	143
Table 4.29: Number of sentences of CED of hotels and travels.....	144
Table 4.30: Number of sentences of CED of telecommunication.....	144
Table 4.31: Number of sentences of CED of manufacturing.....	145
Table 4.32: Number of sentences of CED of motors.....	145
Table 4.33: Number of sentences of CED of trading.....	146
Table 4.34: Number of sentences of CED of plantation.....	146
Table 5.1: Summary of One-way-ANOVA test and correlation analysis .....	150
Table 5.2: Summary of Partial correlation.....	152
Table 5.3: Summary of regression analysis.....	153



## List of Figures

Figure 3.1: Conceptual Framework.....	67
Figure 4.1: Final sample based on the industry sector.....	92
Figure 4.2: Gender distribution among the responding sample.....	93
Figure 4.4: Bar chart of MP.....	96
Figure 4.5: Histogram of MP.....	96
Figure 4.6: Bar chart of SHID.....	98
Figure 4.7: Histogram of SHID.....	98
Figure 4.8: Bar chart of CP.....	99
Figure 4.9: Histogram of CP.....	99
Figure 4.10: Bar chart of EGP.....	100
Figure 4.11: Histogram of EGP.....	100
Figure 4.12: Bar chart of PFM.....	101
Figure 4.13: Histogram of PFM.....	101
Figure 4.14: Bar chart of EP.....	102
Figure 4.15: Histogram of EP.....	102
Figure 4.16: Bar chart of DDCEI.....	104
Figure 4.17: Histogram of DDCEI.....	104
Figure 4.18: Barriers to disclose CEI in annual reports.....	131
Figure 4.19: Motivations to disclose CEI.....	132
Figure 4.20: Respondents willing practice to disclose CEI.....	134

## **List of Appendices**

Appendix 1: 2006 GRI guidelines (G3.1) – Environmental performance indicators.....	33
Appendix 2: A copy of self-administered questionnaire.....	75
Appendix 3: Places visited to collect data about the history & evolution of CER in AR...77	
Appendix 4: Sample companies listed on Colombo Stock Exchange.....	90

## Abbreviations and Acronyms

AR	Annual Report
CE	Corporate Environment
CEI	Corporate environmental information
CED	Corporate Environmental Disclosure
CERD	Corporate Environmental Reporting Disclosure
CER	Corporate Environmental Reporting
CP/PFC	Consumer pressure
CSE	Colombo Stock Exchange
CSR	Corporate Social Responsibility
DDCEI	Decision to Disclose Corporate Environmental Information
EP/PFE	Employee Pressure
EGP	Environmental Group Pressure
GRI	Global Reporting Initiative
IS	Industry Sector
MP	Managerial Perception
PFM	Pressure From Media
SHID	Share Holders Information Demand

## **Acknowledgement**

This task is my dream and was not a simple and easy work. Many persons helped to make my dream successful and a reality. I take this opportunity to pay my gratitude those who rendered their full support for my task.

Very first, my sincere gratitude goes to my research supervisor, Prof. Kennedy Gunawardana for giving me invaluable guidance and encouragements for making my dream a reality. His continuous direction and advices helped me to make my work more successful. And It is very pleasure to say that Prof. Kennedy Gunawardana welcome us all the time allocating his precious time for giving us guidance in spite of his enormous work load and tough schedule.

In thanking to the persons those who supported me to complete this task, I cannot forget Dr. P.D.Nimal, who provided me required all information and support. His friendly manner made us more enthusiastic to the work and to produce something worth.

My indebtedness goes to my husband Mr. W.A.K.Wickramarachch who supported me in many ways and my family members for helping me in different ways providing me required advices, ideas and facilities to complete this work.

Finally I like to extend my thanks to all others who assisted my work those I named and not named.



**Analyzing the disclosure of Corporate Environmental Reporting (CER)  
among listed companies: An Evidence from Sri Lanka**

**By**

**Hapu Achchige Chandima Jeewanthi**

**ABSTRACT**

Environment is a precious gift for us received by the nature. Therefore the protection of environment is our duty since it is highly tied with living beings. However, most of the activities done by people and the organizations harm to the environment and its sustainability. Therefore organizations and people should be accountable for the harms that they are doing to the environment. Among all, organizations make the biggest harm to the environment due to its operational and industrial works. Hence there is an emerging need to make the organizations accountable to the protection of the environment and report on it. Therefore this study was conducted in the field of corporate environmental reporting (CER), which is a voluntary reporting of companies on their environmental activities in Sri Lanka and impacts with the aim of identifying the nature of CER in Sri Lanka.

The study was conducted as a mixed research and the design was basically a survey to identify the factors affecting to the decision of disclosure of corporate environmental information within annual reports and other related aspects of CER. In addition, a content analysis also employed for identifying the actual level of environmental information disclosure. Data for the study was collected from both primary and secondary sources.

Primary data was collected from a self-administered questionnaire and discussions. The secondary data was collected from annual reports and literature. The collected data was analyzed qualitatively and quantitatively to achieve the objectives of the study. Thus researcher found that managerial perception, environmental group pressure and shareholders information demand have relationship with managers' decision to disclose Corporate Environmental Information (CEI). However the managerial perception and shareholders information demand were highly influential factors to the decision to disclose CEI within annual reports. Further lack policies and consistency are the main barriers to disclose CER and ethical duty and contribute to the sustainability are main motivations to disclose CEI. Respondents are highly willing to have mandatory disclosure practices rather than voluntary with some code or guidelines. The results of content analysis showed that CEI within annual reports are in a preliminary stage and a very few of companies have disclosed CEI within the annual reports. Most of the disclosures are qualitative in nature and among them a handful of companies have disclosed monetary and quantitative data. Further there is a growing attention to disclose CEI within annual reports by non-environmentally sensitive industries like Bank, finance and insurance, telecommunication, trading and health care than environmentally sensitive industries. However based on the findings it can be concluded that CER disclosure is minimal in Sri Lanka and in its infancy. It needs to be developed suitable code or guideline with a standard applicable to Sri Lankan context while making the stakeholders, public and government responsible in Sri Lanka to protect the environment for future with the sustainable development.

**Key words:** Corporate Environmental Reporting, Sustainability, Environment, Voluntary Reporting

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter comprises nine sections. The first section provides a brief outline about the importance of the environment for business organizations, Corporate Environmental Reporting (CER) and its necessity in modern day context. The second section presents the study area; Listed companies on Colombo Stock Exchange, Sri Lanka, where the researcher conducted this study to examine the issues related to the CER disclosures in annual reports among business organizations. Third and fourth sections state research problem & research questions and objectives respectively. Fifth section is about the scope of the study. Next section presents the significance of the study specially for the managers, shareholders, community and the government policy makers. Seventh and eighth sections present methodology in brief and definitions of terminology used in the study. The last two sections present limitations of the study and thesis outline.

#### **1.1 Background of the study**

Siddique (2009) states that organizations cannot work independently and have to work interacting with its environment within which it operates. There is a strong relationship between the organizations and the environment because organizations get all the required raw materials, inputs and other natural resources such as land, water, air, wood, trees so on for their operations from the environment. After producing goods and services, organizations return them to the people and the organizations in the environment (Defra, 2006). Further, due to the business operations of producing goods and services, a lot of impairments and damages can be taken place in the environment