Research Outline

on

A Study of Environmental Accounting Practices in selected Indian Companies

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Submitted to Kuvempu University, Jnana Sahyadri, Shankaraghatta -577451 for registration for Ph.D Programme in Commerce

December 2013
Introduction

Environmental Accounting is an important tool for understanding the role played by the business enterprises in the economy towards the environmental safety and welfare. It provides data highlighting both the contribution of business enterprises to economic well-being and the costs imposed in the form of pollution or resource degradation.

Every business has an overriding responsibility to make the fullest possible use of its resources - both human and material. An enterprise is a corporate citizen. Like a citizen, it is judged by its actions in relation to the environment and society of which it is a member as well as by its economic performance. As far as Indian corporate sector is concerned, it is sad but true that it has not been performing as a good citizen. There are many laws that have been enacted and amended from time to time to make the corporate sector to fulfill its social responsibility for better development of Indian environment and economy. Therefore, recent years have witnessed rising concern for environmental degradation which is taking place due to increasing industrial activities. It may be noted here that the environmental degradation and pollution spoil human health, reduce economic productivity and lead to loss of amenities.

Manufacturing companies all over the world have realized the significance of energy conservation - utilization and measurement of cost and benefit pertaining to total energy of all forms such as electricity, fuel, gas, lubricant oil, conventional and non-conventional energy purchased, consumed and stored. The mitigation of energy resource use without impairing the quality and functions of the organization rendered the multi-national companies to stay competitive. The energy conservation in the firms brought cost reduction, cost leadership and market leadership. The western developed countries including USA, UK, France, Germany, Australia, Japan and New Zealand have recognized the concept of calculated energy consumption in their manufacturing and service sectors. The International Accounting Standards Board (IASB) identified and recognized the measurement of energy conservation under the name and style of Environmental Accounting.

The developing countries like India are facing twin problems of protecting the environment and promoting economic development. A trade-off between environmental protection and development is required. A careful assessment of the benefits and costs of
environmental damages is necessary to find the safe limits of environmental degradation and the required level of development.

It is known that there are limited resources available for the use of all species on the earth and the enormous damage is done to the environment due to the activities of the business enterprises. In fact, the industrial and business activities are directly and indirectly responsible for birth of incidences like the Bhopal Chemical Leak (1984), Tsunami in India (2004), etc.

The issue of corporate social responsibility and the sustainable industrial development has given birth to a new branch of accounting viz., Environmental Accounting. It is relatively a recent entrant in the domains of Accounting. Environmental Accounting was first adopted in Norway in 1970s and in India, it is followed only in industries like cement, oil and petroleum, power and electronics, steel, engineering and textile industries, etc.

**Factors inhibiting the Development of Environmental Accounting**

Improving the environment for sustainable development is possible and necessary. Environmental aspects of sustainable development add another dimension as to how to share the benefits and costs among and between current generation and future generation. This makes more sense to identify and measure environmental costs.

Accounting information system is a critical component of management information systems. It plays an important role in helping to protect the environment by making polluting production companies to take responsibility for the environmental protection - how the companies reflect in their accounts or how they might expose issues, etc. However, necessary rules and regulations are necessary to protect the environment. Further, well established accounting guidelines are required.

**Forms of Environmental Accounting**

01. **Environmental Management Accounting**: Management Accounting focuses on material and energy flow information and environmental cost information. This type of accounting can be further classified into three sub-systems as presented below.

a. Segment Environmental Accounting: This is an internal environment accounting tool to select an investment activity or project related to environmental effects for a certain period.
b. Eco-Balance Environmental Accounting: This is also an internal Environmental Accounting tool to support sustainable environmental management activities.

c. Corporate Environmental Accounting: This is a tool to inform the public of relevant information compiled in accordance with the Environmental Accounting. It should be called Corporate Environmental Reporting. For this purpose, cost and effect (in quantity and monetary value) of its environmental conservation activities are used.

02. Environmental Financial Accounting: Financial Accounting focuses on reporting environmental liability costs and other significant environmental costs.

03. Environmental National Accounting: National Level Accounting focuses on natural resources, stocks and flows, environmental cost and externality cost, etc.

Review of Earlier Works

Many studies focused on the environmental issues in the past. For example, P. Caggti D. Viaggi G. Zanni has analyzed the problems relating to environmental protection involving a growing number of economic and social factors. The present environment requires not only innovations concerning policy instrument but also an evolution of tools such as those for environmental accounting and assessment. Similarly, another study focused on the growth in environmental accounting research and interest in the last few years (Rob Gray and Kan Bebbington). This study seeks to provide a review of current state of the art in environmental accounting research and illustrates the essence of the problem through the reporting of a new analysis of data from an international study of accounting, sustainability and transnational corporations. The authors conclude with a call for more explicit accounting research. Another study by Teoh and Thong (1984) investigates corporate social responsibility accounting and reporting from the point of view of a developing country. Their study was based on an interview with chief executive officers across 100 companies operating in Malaysia. Findings indicate that social reporting lags behind corporate social involvement and those corporate attentions are largely focused on activities relating to employees and products. Similarly, in another study using secondary data, Belal (2001) examines the social and environmental disclosure practices of a small number of publicly traded companies operating in Bangladesh. 30 annual corporate reports over a year were collected for analysis from companies listed on the country’s stock exchange. The study reveal that, on average, 13 lines were used by the
companies to make social and environmental disclosures, which represents only 0.5 per cent of the average total number of lines contained in the annual reports of sample companies. A further contribution is offered by De Villiers and Van Staden (2006) who utilize annual report content analysis to investigate the environmental disclosure practice of companies operating in South Africa. They made an analysis of more than 140 corporate annual reports over a 9-year period in order to identify the trends in environmental disclosure by South Africa companies. A further contribution by Bhate (2002) investigated the extent to which consumers of India are aware of environmental issues and it was found that Indians are most involved with environmental issues.

However, in India, very few corporations provide some information regarding environmental issues. If, as per requirement of applicable law, they have to prepare and submit information relevant to environment they have to make necessary preparation. The Environment Ministry has issued instructions in this regard to prepare environmental statement. It can be observed through their accounts that mainly the following types of information are given.

a. What type of devices installed for pollution control
b. Steps taken for energy conservation.
c. Steps taken for raw material conservation
d. Step taken for waste water and production process waste
e. Step taken for improvement of quality of product and services, process of production, etc.

A study of 80 executives of different industries was carried out by Dr. B. B. Padhan and Dr. R. K. Bal which revealed that corporate world is fully aware of the requirements of environmental reporting. They are also aware of the environmental issues. The corporate executives have also expressed their views in favour of environmental reporting by the industries. Despite their awareness and consent over environmental reporting, the result is very poor. It is so inadequate that very little information is found in the annual reports.
In the words of Jond Seo Choi, research studies have examined the extent to which companies produce social information, of which environmental information would be part. A general theme that emerges from this include the following.

a. The proportion of companies disclosing the extent of that disclosure is small and the quantity is low.
b. There is some variety in disclosure over time between countries and between industries.
c. There is a very definite size effects in those larger companies are more likely to disclose than smaller companies.
d. Very little disclosure would qualify as information under any normal criteria and very little of it indeed will contain numbers, financial or otherwise.

Environmental Reports as contained in the Directors Report of three Indian companies are as under.

a. Asian Paints (India) ltd, (1993-94): Samples of treated effluents are periodically checked for compliance with standards.
c. Maruti Udyog Limited (1993-94): Modification of the existing effluent treatment plant was undertaken to take care of additional effluents generated due to capacity expansion.

It was also revealed that most of the companies disclose the environment information in descriptive manner rather than to financial type \textit{i.e.,} no account is made for the degradation of natural capital when calculating corporate profits.

Like this, many studies have been undertaken and completed in the past by the researchers. However, this initial survey of available literature revealed that no work focused on the evaluation of Environmental Accounting Practices by Indian Companies.

\textbf{Importance of the Study}

Environmental Accounting needs to work as a tool to measure the economic efficiency of environmental conservation activities and the environmental efficiency of business
activities of companies as a whole. Management seldom tries to make proper arrangement to save the environment unless it is required by law as there is no direct relationship between investment and benefits. In many contexts, environmental accounting is taken to mean the identification and reporting of accounting for any costs and benefits that arise from change to a firm's products and processes where the change also involves environmental impact.

Business enterprises are facing the challenge of determining their true profits which are environmentally sustainable ones. It may be noted here that this requires companies to account for the environment. They should take account of most significant external environmental impacts to determine what profit level would be left if they attempted to leave the planet in the same at the end of the accounting period as it was in the beginning.

The benefits of undertaking an environmental accounting initiative include the identification and greater awareness of environment related costs providing the opportunity to find ways to reduce or avoid these costs, whilst also improving environmental performance. More elaborately, environmental accounting is an effective tool for placing environmental issues firmly on top management’s agenda, providing useful data to inform environmental and financial managers’ decision making, and concretely demonstrating environmental and financial managers’ decision making, and concretely demonstrating environmental commitment to stakeholders.

Need for the Study

There is no consensus as to the constituents of environmental costs and benefits and their measurement. This poses a challenge in the form of quantification of environmental costs and benefits. Hence, there is a need to evaluate the procedure followed by the selected companies as to how they quantify the environmental costs and benefits and report the same to the stakeholders.
Scope of the Study

The scope of environmental accounting is very wide. It includes corporate level, national and international level. The following aspects are included in Environmental Accounting

01. **Internal Point of View**: Investment made by the corporate sector for minimization of losses to environment. It includes investment made into the environment saving equipment. This type of accounting is easy as money measurement is possible.

02. **External Point of View**: All types of losses are caused indirectly due to business operation/ activities. They include, among others, the following.
   a. Degradation and destruction like soil erosion, loss of bio-diversity, air pollution, water pollution, voice pollution, problem of solid waste, coastal and marine pollution.
   b. Depletion of non-renewable natural resources *i.e.*, loss emerged due to over-exploitation of non-renewable natural resources like minerals, water, gas, *etc*.
   c. Deforestation, *etc*.

From the above, it clear that there is a great deal of scope to environmental accounting research within the context of developing countries. Some of the contemporary social and environmental issues such as climate change and green-house gas emissions affecting the global community are also believed to be key issues of research to the scholars in both developed and developing countries.

However, the proposed study plans to analyze from the point of view of corporate level environmental accounting practices laying emphasis on both the internal and external points of view. Further, it is intended to evaluate the corporate activities that result in environmental costs and benefits, how they are quantified and reported. Besides, the entire evaluation will be made in the light of applicable rules, regulations, standards, *etc*. For this purpose, it is proposed to select 25 companies in the country giving weightage to different sectors, ownership, *etc*. In addition, relevant data are proposed to be collected for a period of five years to identify the changes in the procedure.
Objectives of the Study

The primary objective of the proposed study is to evaluate the corporate practices relating to measurement, recognition and disclosure of environmental costs and benefits. This primary objective is supported by the following.

01. To make a brief review of accounting regulations and government rules relating to Environmental Accounting.
02. To analyze the corporate strategies towards environmental safety and protection.
03. To evaluate the corporate practices relating to the quantification of environmental costs and benefits.
04. To analyze the recognition procedure – i.e., recognition of environmental costs and benefits in the books of account – either in the financial statements and/or in the annual reports.
05. To make an evaluation of environmental accounting practices, including disclosure practices, of selected Indian companies
06. To offer suggestions for the improvement of quantification and reporting system.

Methodology

Few important aspects pertaining to the methodology proposed to be adopted for the successful completion of the work are presented below.

01. For the proposed study, it is intended to collect the required details from both secondary and primary sources.

02. Sampling: After giving due weightage to different variable such as size, nature of production activities, etc, the proposed study intends to select 25 units in India for the purpose of comprehensive evaluation of environmental accounting practices.

Chapter Scheme

The report of the proposed study is intended to be presented in six chapters as presented below.

01. Chapter - I: Introduction: In this chapter, the Researcher plans to present the both the theoretical framework of, and developments in, Environmental Accounting chronologically – history of Environmental Accounting.
02. Chapter - II: Research Design: Technical aspects of Research Report such as review of earlier works, statement of the problems, scope of the study, objectives of the study, methodology, etc., will be presented in this chapter.

03. Chapter - III: A Brief Profile of Selected Companies: A brief profile of units to be selected for the study will be presented in this chapter.

04. Chapter - IV: Review of Environmental Accounting Regulations - Regulatory Framework: A review of Accounting Regulations relating to Environmental Accounting, Government Rules, etc., will be made in this chapter as the base for the evaluation of corporate practices.

05. Chapter - V: Corporate Environmental Accounting Practices – An Evaluation: A comprehensive study and evaluation of Environmental Accounting Practices in the units to be selected for the Study will be made in this chapter.

06. Chapter - VI: Summary of Major Findings, Suggestions and Conclusion will be presented in this chapter.

Limitations of the Study

Due to nature of the topic, this study is subject to certain limitations. The important are presented here. There are no generally accepted Accounting Standards, Regulations, Rules, etc., against which the performance of organizations can be compared and evaluated. Further, comparison of two firms or countries is difficult as the method of accounting differs. Even the very quantification process is diverse among companies and countries. Further, cost and benefits relevant to the environment are not easily measurable. Environmental Accounting is a long term process and therefore, to draw a conclusion with help of it is not easy. Inputs for Environmental Accounting are not easily available as costs and benefits relevant to the environment are not easily measurable. Still, the researcher will make honest attempt to do justice to the topic selected for the study.
References


6. Dr Anita Shukla, Nidhi Vyas., Environmental Accounting and Reporting in India (A comparative Study of Bharat Petroleum Company Limited, and Oil and Natural Gas Company Limited).

7. Alok Kumar Pramanik and Nikhil Chandra Shil and Bhagaban Das (2007), Environmental Accounting and Reporting with special reference to India.

8. Surya Bhushan Tiwari, Dr. M. Nasir Zameer., Environmental Accounting and Reporting in Indian Public and Private Sector Companies since Liberalization.


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