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Empirical Study on Green Accounting Disclosure Practices in Selected Indian Petroleum Companies: Towards Sustainable Enterprise Development

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Abstract:

Due to environmental concerns and the requirement for long-term company survival, the global petroleum sector must now move toward sustainable business practices. With an emphasis on their contribution to sustainable company growth, this research article offers an extensive empirical analysis into the green accounting disclosure practices of a few Indian petroleum corporations. The research uses a multi-dimensional method, integrating quantitative financial report analysis, business sustainability disclosures, and environmental performance data. To determine the level of green accounting techniques used by these businesses, a broad range of variables, such as carbon emissions, energy efficiency, and environmental spending, are studied. This study assesses the development of green accounting practices and their relationship to financial performance metrics using data collected over a number of years. It also looks at how legal frameworks, global sustainability standards, and activities targeted at certain industries have influenced these disclosure practices. The research's conclusions help to clarify how sustainability is included into the financial reporting of the petroleum business. It illuminates the drivers, difficulties, and advantages of green accounting disclosure for a subset of Indian petroleum businesses and provides insights into the road to sustainable business growth. As they work together to match company operations with environmental and social responsibility objectives, legislators, investors, and sustainability advocates may all benefit from these insights. This empirical research emphasizes the significance of openness, responsibility, and sustainable practices in the petroleum business in the face of global environmental issues. In the end, it emphasizes how important green accounting may be in facilitating the shift to a more robust and sustainable energy industry.

Environmental Accounting:

In order to create their products, industries extensively use a wide variety of natural resources: minerals, water, air, fuel, and other things. Concurrently, industrial activities are to blame for the pollution and destruction of the environment. In the past, companies often disregarded their contribution to environmental contamination, and regulatory policies were not widely used. It was not until pollution in the environment's water, air, noise, and soil reached such a critical level that human life and the lives of other animals and plants were put in jeopardy that environmental consciousness began to develop. At the international, national, and regional levels, laws have been passed on every continent of the world. Numerous environmental issues, such as unchecked urbanization and industrialization, expansion and vast intensification of agriculture, and loss of forests, are currently being experienced in India due to the nation's rapidly growing population and economic development. Numerous natural disasters, including cyclones and yearly monsoon floods, are among India's environmental issues. Additionally, India's natural environment has undergone significant human alteration due to population increase, growing individual demand, industrialization, infrastructure development, subpar farming practices, and resource misallocation. “You must be the change you wish to see in the world.” (Gandhi, 51)

As was said earlier, the rise of environmental consciousness can be traced back to when environmental contamination posed a significant risk to the continued existence of human life. Discussions on this topic have since taken place in various forums on both the national and international levels. The concept of corporate social responsibility was mulled over because industries significantly contribute to this predicament.

Following the advent of globalization, the business sector began to implement environmental accounting and reporting. Nevertheless, this is not taken seriously, and neither private nor public enterprises have made genuine attempts. Neither of these sectors is making any progress. Protection of the natural environment has emerged in recent years as a significant concern on a global scale. Some different influences and circumstances cause the degradation of the environment. Among these, increasing dangerous industrialization is a crucial contributor to the problem. Even if rapid industrialization is a necessary prerequisite for overall economic progress, the fact that it does significant harm to the environment should not be ignored. Environmental contamination from solid and hazardous waste, water pollution, air pollution, and other sources occurs all too frequently in many manufacturing processes. Every company is responsible for utilizing its human and material resources to the fullest extent feasible. Its operations may negatively impact the environment, but this impact should be kept to a minimum. A relatively new subspecialty of accounting is environmental accounting and reporting. Its roots may be found in the debate over environmental accountability and the goal of sustainable industrial development. The accounting field has recently begun to incorporate environmental accounting into its practice. It identifies, measures, and communicates information about an entity's environmental responsibility performance to enable economic decision-making. To phrase this another way, "Environmental accounting is that part of accounting that deals with environmental concerns."

Because it makes measuring the economic impact of an organization's ecological efforts simpler, environmental accounting is essential for every business putting the concept of sustainable development into practice. Because of this, environmental accounting is crucial to sustainable development. Environmental harm might occur if environmental issues are not considered part of the economic growth process. This puts future generations' lives in jeopardy, as well as those of the current generation. The term "environment" refers to the state or situation around us and affects human beings, animals, and plants' ability to survive, directly or indirectly. The word "environment" refers to anything close to us. A Native American saying states that society will not learn that money is infinitely renewable unless all trees are cut down, all rivers are polluted, and all fish are caught. There is also a clause that nobody will get anything until the final fish is caught. The first environmental accounting system was created in Norway in the 1970s, and other countries initially only occasionally copied it. Even though environmental accounting and reporting are optional in India, businesses that include environmental issues in their financial statements benefit in various ways, including improving how the general public views the service or the company.

Objectives of the Study:

Some research objectives must lead the research efforts in a specific direction. Because of this, the researcher wants to conduct the Research. The objectives of the Research are mentioned below.

- To analyze and evaluate the existence of environmental factors and their disclosure in selected companies of the petroleum industry of India.
- To briefly review accounting regulations and government rules relating to environmental accounting.
- To analyze corporate strategies towards environmental safety and protection.
- To evaluate selected companies' environmental accounting practices, including disclosure practices.
- To offer suggestions for the improvement of the quantification and reporting system.
- To help negotiate the environmental concept and determine the companies' relationship with society in general and environmental pressure groups in particular.

Scope of the Present Research Work:

Environmental accounting is a broad field that includes many topics. Along with the national and international levels, it also encompasses the corporate level. Environmental accounting takes into consideration the following factors.

From an internal perspective, investments made by the business sector to reduce impacts on the natural environment. It incorporates the investment in the equipment that helps save the environment. This method of accounting is straightforward because monetary values may be quantified.

From an outsider's perspective, all different kinds of losses are created indirectly as a result of the operations and activities of a corporation. In addition to other things, they include the following:

1. Degradation and destruction, including solid waste, coastal waste, marine pollution, soil erosion, biodiversity loss, and poor air, water, and noise quality.

2. The loss that resulted from the overuse of non-renewable natural resources, including minerals, water, gas, and other resources, is sometimes referred to as the depletion of non-renewable natural resources.

3. The cutting down of trees.

The information presented above makes it abundantly evident that the field of environmental accounting study will have a significant amount of room to grow within the setting of developing countries. According to academics in wealthy and developing nations, Research should concentrate on some of the most significant social and environmental concerns of our day, such as climate change and greenhouse gas emissions. People throughout the world are affected by these problems. The suggested Research, on the other hand, would look at company environmental accounting methods with an emphasis on internal and external perspectives. The study also intends to assess the methodologies used to monitor and report environmental costs and benefits associated with economic operations.

Hypothesis:

The hypothesis for the study was developed with the assistance of the theoretical framework and the literature review. Following is a descriptive hypothesis that was developed based on the Research that is now available:

H0: There is no existence of an Environmental Accounting system in selected companies of the petroleum industry of India

H1: There is the existence of an environmental accounting system in selected companies of the petroleum industry of India to some extent

Data Collection:

Secondary data, which are obtained for the most part from the Sustainability reports and websites of the chosen samples during the seven-year research period, are used as the foundation for this analysis. The Research considered the data obtained from 40 firms and 50 different characteristics.

Significance of the Study:

Accounting for the environment must serve as a tool for measuring the economic viability of various environmental endeavours and the ecological soundness of the operations of businesses. Because there is no clear correlation between financial investment and the resulting benefits, management seldom makes any effort to put in the effort necessary to rescue the environment unless it is mandated by law.

When improvements to a company's products and operations also have an impact on the environment, the phrase "environment accounting" is used to identify and report accounting for any costs and benefits associated with those changes. Identifying and reporting environmental accounting is what is meant by "environment accounting," in other words.

Today's business companies struggle with determining what proportion of their revenue comes from environmentally friendly initiatives. Remembering that this requires corporations to act responsibly toward the environment is crucial. In order to determine what degree of profit would remain if they aimed to leave the world in the same state it was in at the beginning of the accounting period, they should consider the most significant external environmental repercussions.

The possibility to identify and become more aware of expenditures that are connected to the environment is one of the benefits of launching an environmental accounting program. Another advantage is the ability to track down potential environmental hazards. Researchers can use the knowledge to identify strategies that can minimize or eliminate these costs while also increasing environmental performance with the use of this information.

Environmental accounting is a vital instrument that may be used to put environmental problems firmly on top of top management's agenda, provide relevant data to assist environmental and financial managers in making decisions, and convincingly demonstrate environmental commitment to stakeholders. To further clarify, environmental accounting is a fantastic tool for bringing environmental issues to the forefront of top management's minds.

Limitations of the Study:

This Research is constrained in specific ways by the characteristics of the subject matter being investigated. The crucial aspects are discussed in this section.

- No accounting standards, regulations, rules, or other guidelines are commonly acknowledged. Therefore, comparing and assessing an organization's performance against any of these is impossible.
- In addition, because of the differences in their accounting methods, it is not easy to compare two companies or nations to one another. The quantifying procedure will vary greatly from company to company and country to country.
- Measuring the costs and benefits directly related to the environment will not be simple.
- As a result of the difficulty in accurately measuring costs and benefits associated with the environment, inputs for environmental accounting will not be readily available.
- However, the researcher will sincerely try to complete the study in a manner that does justice to the subject of the study.

Tools and Techniques:

The researcher uses statistical methods to analyze the data that was obtained. In the statistical method, the researchers employed a test called the Chi-square, and they also utilized charts to help them better grasp the data. The chi-square statistic was applied to the data of all forty firms and all seven years by the researcher. Based on the findings, the researcher has reached a conclusion on whether or not the chosen firms disclose environmental parameters appropriately.

SR NO	COMPANY NAME	NULL HYPOTHESIS	ALTERNATIVE HYPOTHESIS
1	Indian Oil Corporation	Accepted	Rejected
2	SledgeHammer Oil Tools Private Limited	Accepted	Rejected
3	Bharat Petroleum	Accepted	Rejected
4	Oil and Natural Gas Corporation	Accepted	Rejected
5	Reliance Petroleum Limited	Rejected	Accepted
6	Essar Oil Limited	Rejected	Accepted
7	Gas Authority of India	Accepted	Rejected
8	Hindustan Petroleum Corporation	Accepted	Rejected
9	Aban	Rejected	Accepted
10	Oil India Limited	Rejected	Accepted
11	Tata Petrodyne	Rejected	Accepted
12	Bongaigaon Refinery	Accepted	Rejected
13	Gas Projects (India) Private Limited	Accepted	Rejected

14	Hindustan Oil Exploration Company Limited	Accepted	Rejected
15	India LPG	Rejected	Accepted
16	IBP Co. Limited	Rejected	Accepted
17	Lubricants India	Rejected	Accepted
18	Oil Gas India	Accepted	Rejected
19	Petrosil Group	Accepted	Rejected
20	Shiv-Vani Universal	Accepted	Rejected
21	Kochi Refineries Limited	Accepted	Rejected
22	Niko Resources Limited	Accepted	Rejected
23	Assam Oil Company Limited	Accepted	Rejected
24	Mangalore Refinery and Petrochemicals	Rejected	Accepted
25	Gujarat Oleo Chem Limited	Accepted	Rejected
26	Cairn Energy	Rejected	
27	Gujarat Gas Company Limited	Accepted	Rejected
28	Gujarat State Petroleum Corporation	Accepted	Rejected
29	Gumpro Chem Drilling Fluids	Accepted	Rejected
30	Hardy Oil and Gas Limited	Accepted	Rejected
31	Apar Industries Ltd	Accepted	Rejected

32	BGR Energy Systems Ltd	Rejected	Accepted
33	Castrol India Ltd	Accepted	Rejected
34	Chennai Petroleum Corp. Ltd	Accepted	Rejected
35	Indraprastha Gas Ltd (IGL)	Accepted	Rejected
36	Panama Petrochem Ltd	Accepted	Rejected
37	Supreme Petrochem Ltd	Accepted	Rejected
38	Bharat Oman Refineries Ltd	Accepted	Rejected
39	Manali Petrochemical Ltd	Accepted	Rejected
40	CARL BECHEM Lubricants India Pvt Ltd	Accepted	Rejected

Conclusion:

Environmental problems are not only a challenge for the petroleum sector but a concern for the entire planet. These are important matters, and we cannot treat them lightly. Some recommendations based on the findings are presented below; these recommendations are not only relevant to the petroleum sector but also applicable to the entire business world. Particularly concerning environmental concerns is the primary challenge faced by emerging countries. Every firm should implement a clear environmental policy to contribute to sustainable growth.

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