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Environment Performance of Environmental Sensitive Industries: A Study on Selected Indian Companies

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Abstract

Environmental report communicates an organization's environmental performance to the stake holders and the public at large. Environmental performance can be in the form of a simple public relation statement or a detailed report on environmental performance with future plans. Among the three sectors of Indian industries *i.e.,* primary (agriculture), secondary (manufacture), tertiary (service sector), the secondary sector which is the manufacturing sector contributes adversely to the environment. This adverse impact is due to its bad waste management. This paper has taken into account twelve Environmental Sensitive Industries (ESI) of Nifty. Environmental information's are collected from annual reports and sustainability reports by the help of content analysis. The objective of the paper is to study the impact of environmental reporting on environmental performance.

Keywords: Content analysis • Environmental performance • Environmental information • Environmental report • Environmental sensitive companies

Introduction

In 2020, India was placed 179th out of 180 countries on the Environmental Performance Index (EPI) for air quality. This started an inquiry to learn how the Environmentally Sensitive Industries (ESI) falling under Nifty reports their environmental dimension in the sustainability reports. Reducing emissions is essential to maintain the challenge of making global warming as manageable as possible. Greenhouse Gas (GHG) emissions have raised global temperatures over the past few decades, causing many significant consequences, including fluctuations in temperatures and precipitation, melting of glacier and increase in sea levels [1]. Rapid urbanization and industrialization have created tremendous environmental problems, particularly in terms of energy use and carbon emissions. Their approaches stimulate rapid increase in fossil fuel consumption, resulting in significant amounts of CO_2 and other greenhouse gas emissions. Greenhouse gas emissions from industry are mostly caused by the burning of fossil fuels for energy, as well as some chemical reactions required to make things from raw materials. The growth of industrialization ultimately means the use of more natural resources. Increase industrial activity and focus on production in for the country to become self-sufficient, which affects environment [2].

India has taken many important steps to address this issue. The government of India plans to revise its air quality standards and has recently strengthened its vehicle and industrial emission standards. The government of India's National Clean Air Program (NCAP) is an important step in recognizing and resolving the problem of poor air quality. NCAP has set time limited targets to improve air quality across the country. India's efforts to address air pollution include a major focus on renewable energy, the promotion of electric vehicles, and the provision of LPG cooking fuel to millions of homes. Air quality control is a continuous procedure. It must be integrated into the government's capacities as well as commercial and individual behavior [3].

The India GHG programme, coordinated by the World Resource Institute (WRI) and the Energy and Resource Institute (TERI), is a voluntary framework for measuring and managing greenhouse gas emissions in India. The GHG protocol outlines corporate standards and guidance for preparing GHG emission inventories. The programme aims to create a pool of appropriately qualified and certified GHG practitioners, as well as measurement and management professionals, to help businesses become more competitive, lucrative, and sustainable. The standard divides GHG emissions into three scopes. Companies need to report greenhouse gas emissions in three areas. Scope 1 deal with direct emissions from owned and controlled sources and indirect emissions according to scope 2. However, most Indian companies have adopted the Global Reporting Initiative (GRI) standards for reporting in their sustainability reports. The GRI Standards include disclosures, which give organization's a formal way to report on themselves and their impacts. This method of reporting provides a comprehensive view of a company's most significant economic, environmental, and human

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impacts [4]. This paper considers the GRI reporting criteria as a benchmark for environmental performance and disclosure.

The next section provides an overview of the literature on CSR then this is followed by research methodology. After outlining the research methodology each objective is addressed succeeded by the conclusion, limitation.

Literature Review

Iredele, O.O. made an empirical study to measure the level of performance of environmental reporting in Nigeria and also to determine variation in Corporate Environmental Reporting (CER) with respect to firm characteristic. The statistical tools like descriptive analysis, one-way Analysis Of Variance (ANOVA) and content analysis are used. It was inferred that the environmental reporting is low and the firm size is the significant characteristics that accounts for variation in the level of corporate environment reporting [5].

Shahab, Ntim, Chen, Ullah, Li and Ye Z examined the attributes of Chief Executive Officer (CEO) OF LISTED Chinese firms on sustainability and environmental performance and environmental reporting. It is concluded that the CEOs with research background, financial expertise and foreign exposures focuses on sustainable and environmental performance than others. It is also observed that the young CEO'S focused on the aspect than the others. Descriptive statistics and regression analysis are used as tools to reach with the conclusion.

Jagadish R. Raiyani reviewed the environmental and financial performance of 32 NSE listed companies. The environmental performance was measured by developing a check-list of environmental performance disclosures. Earnings per share were used to measure the financial performance of the companies [6]. The study found no significant association between financial performance and environmental performance.

Hardi and Chairina worked on "the effect of sustainability reporting disclosure and its impact on companies' financial performance". The purpose of the study was to examine empirically the effect of sustainability reporting disclosures on the financial performance of the companies. A sample of 40 observations was derived from companies that consistently became Indonesia Sustainability Reporting Award (ISRA) nominee and were listed in Indonesia Stock Exchange (BEI) during 2016-2017. Multiple linear regressions were used for analysis purpose. It was concluded that economic dimension has impact on financial performance, whereas, environmental dimension and social dimension have no effects.

Yi-Chun, Mingyi, and Yongxiang examined how mandatory disclosure of CSR impacts firm performance and social externalities. It was inferred that CSR disclosure has a positive effect on the pollution level. It was further observed that CSR spending is driven by political and social factors. Similarly, mandatory disclosure puts pressure to increase their commitment to CSR disclosure.

He and Loftus tried to establish relationship between environmental reporting and environmental performance by large Environmental Sensitive Industries (ESI). For the study a sample of 100 companies based on the market capitalization of China were taken into consideration. The corporate environmental disclosures are obtained from annual report and sustainability report. Tools used for the analysis are content analysis, regression analysis and ordinary list square. It was concluded that there is a positive association between corporate environmental reporting and corporate environmental performance. Further it was reflected that the firm size with better environmental performance provide a greater proportion of objective and verifiable environmental disclosure [7].

Agarwal made a study on "sustainability reporting and impact on corporate financial performance a literature review." The objective of this study was:

- To provide an overview of the concept of sustainability reporting and GRI framework.
- To study the impact of sustainability reporting on financial performance of companies. The findings show various indicators of sustainability (environment, community, and employment) have varying impact on different measures of financial performance.

Clarkson, et al. tried to resolve the relationship between environmental performance and environmental disclosure. A GRI index was developed basing on which 191 firms belonging to five sectors that have high impact on environment were evaluated. Actual pollution data and total toxic waste recycled. In order to arrive at a conclusion, descriptive statistics, Pearson correlation, regression analysis, and sensitivity analysis were used. It was concluded that there is a link between environmental performance and discretionary disclosures in environmental and social reports or associated web disclosures [8].

Acar and Temiz investigated the association between environmental performance of firms and the level of voluntary environmental disclosure in emerging markets. 133 publicly traded Turkish companies were evaluated based on Wiseman index. Toxic Release Inventory (TRI) data was considered as the proxy for environmental performance. To reach at the conclusion descriptive statistics, Pearson correlation, regression analysis and sensitivity analysis was conducted. It was concluded that there is a positive relationship between environmental disclosure and environmental performance.

Methodology

Research problem: Whether environmental disclosure has an impact on environmental performance or is only a sort of social pressure.

Data collection: Data relating to environmental disclosure and environmental performance are collected from the sustainability reports. Financial data are collected from the annual reports.

Data size: The study relates to twelve Environmental Sensitive Industries (ESI) belonging to six industries. The six industries are petroleum, power, oil and gas, ferrous metal, non-ferrous metal and mining. These industries also fall under the NIFTY index of NSE.

Period of the study: The period of the study relates to six years *i.e.,* 2015-2016 to 2020-2021.

Research tools: Data were analysed using content analysis, descriptive, scatter plot, correlation and regression analysis.

Objectives of the study

- To investigate the effect of environmental disclosure on ESI firms' environmental performance.
- To study the impact of environmental disclosure on financial performance of ESI companies.

Hypothesis of the study

H_{01}: Environmental transparency in sustainability reports improves environmental performance.

H_{02}: The financial performance of a company is influenced by its environmental disclosure in the sustainability report.

Discussion

Empirical variables and analysis

The GRI 300 that deals with environmental dimension is considered as the yardstick to assess the environmental disclosure of ESI companies. GRI 300 standard has total eight standards with thirty disclosures. Each disclosure is allotted with one point. Companies who declare any disclosure in their sustainability report receive one point throughout the period of the study. Then it is added to reach at the GRI disclosure score. For environmental performance purpose GHG intensity was selected as variable. The intensity is computed by dividing the absolute emissions with the organization's specific metric. GHG emissions intensity, when combined with an organization's absolute GHG emissions, helps to contextualise the organization's efficiency, including in comparison to other organisations. The units of GHG intensity were found to differ from sector to sector. Even within the same industry, the units differ from one organisation to the next. So, if the companies have reported GHG intensity in quantitative figures, one point is awarded for understanding. As a result, each ESI company's total score is calculated.

Financial performance refers to a company's overall financial health. When you hear a company's financial performance is good, it usually indicates it has expanding sales, manageable debt, and plenty of free cash flow. The organization's ability to align people and resources to strategic tasks for achieving organisational performance in a moral and ethical manner that results in long-term competitive advantage. For long term competitive advantages, the paper has considered the last year's financial ratios like Return on Asset (ROA), Leverage (LEV) and Capital Intensity (CAPINTEN).

ROA assesses how well a corporation can manage its assets to generate profits over time. This ratio aids managers and investors in determining how well a company can transform its assets into profits. The ratio is determined by net income by total asset. A higher ratio is more appealing to investors since it indicates that the company is better managing its assets to generate more net income. The ROA of twelve ESI companies were positive which indicates there is an upward profit trend.

Leverage is an investment strategy that uses borrowing, specifically various financial products and borrowed capital, to increase the potential return on investment. The ratio of liabilities to assets is commonly used by creditors to determine the level of a company's liabilities, its ability to repay its liabilities, and whether the company has access to additional borrowing. Investors, on the other hand, use this ratio to enable companies to be affordable, fulfill their current and future obligations, and get a return on their investment. Therefore, leverage is calculated here by dividing total liabilities by total assets. It was observed that leverage ratios of all ESI companies were less than one that means the companies owns more assets than liabilities.

Conclusion

The next section provides an overview of the literature on CSR then this is followed by research methodology. After outlining the research methodology each objective is addressed succeeded by the conclusion, limitation. It is also observed that the young CEO'S focused on the aspect than the others. Descriptive statistics and regression analysis are used as tools to reach with the conclusion. To reach at the conclusion descriptive statistics, Pearson correlation, regression analysis and sensitivity analysis was conducted.

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