

CHAPTER-VII

DISCUSSION OF RESEARCH FINDINGS

This chapter sums up and discusses the findings obtained from the research work undertaken on key objectives of the study. The summing up of findings provides a bird's-eye-view of outcomes obtained from analysis of collected data and the outcomes pertaining to various hypotheses so that meaningful conclusions can be drawn and important policy implications can be suggested as presented in the next chapter. The discussion of findings assumes relevance as it correlates the present study with past studies so as to shed light upon the areas in which the present study has contributed and to critically reflect upon agreeing or disagreeing with the past research. Hence, the present research is vital to the overall completion of the study. The chapter begins with the introduction which connects the present chapter with previous chapters and lays down the framework for the current chapter. The introduction will be followed by discussion of major findings. The chapter concludes with a brief summary.

7.1 Introduction

For the purpose of study 'Accountability' formed the inner core around which the study revolved. Primarily, it is construed as a virtue (part of behaviour) present in human nature. However, for the purpose of workability of the concept, the presence of the virtue is guessed from the opinions of the corporate managers towards environmental accountability. It was in agreement with **Bovens (2010)**, which states that Accountability in very broad sense can be studied as an 'evaluative' and not an 'analytical concept'. An Evaluative concept tells whether the state-of-affairs are positive or in other words, whether the person is willing to act positively or not. It is in this sense that the term accountability is used for the purpose of empirical study.

The entire research work was guided by five objectives which complemented the core research problem of understanding the environmental accountability of corporate enterprises in India.

The first objective was framed to examine the 'Transition in perception' of the corporate revolving around the concept of accountability. The second objective was

intertwined with the first objective. It empirically analysed the present status of corporate voluntary adoption of environmental activities relating to disclosure of environmental information. The third objective intended to compare the outside perspective with inside perspective on criteria of information production and presentations, motives and reasons for non performances on voluntary grounds with the basic aim of ironing out any differences in line with stakeholder theory. The fourth objective regarded the assurance building activity of environmental audit and sought outside perspectives (ENGOS) as well to present their demands out of environmental audit structure and assurance provision. The fifth and last objective was an effort to establish an accountability index (formed from literature survey and the responses to various key questions posed in the questionnaire) to provide a comprehensive guide to analysing the presence of accountability in an organisation towards the environmental issues.

The five objectives demanded different handling approaches as follows:

a) Examination of transition:

- (1) Historical analysis – undertaken to understand emergence of various facets of social welfare undertaken by the corporate in general and in particular to understand the change in corporate philosophy of social welfare from philanthropy to environmental accountability. It formed a part of first objective.
- (2) Empirical analysis was undertaken to understand the presence of positive outlook towards topic of environmental accountability. It analysed the presence of positive attitude (transition) as a virtuous behaviour towards the environmental issues in corporate managers. It formed a residual part of first objective to be covered after historical study. It used an inside-out approach. The empirical analysis was further required to conduct of study from two angles. The first being inside-out ie examining the perception of corporate managers, and the second being outside-in ie., examining the perception of ENGOS as independent outside parties interested in corporate environmental information. Hence, the following was included in empirical analysis.

- b) Voluntary adoption of Environmental Standards for information reporting: It formed a part of second objective. The study was carried out on corporate managers hence, an inside-out approach was used. It analysed the perception of corporate managers by analyzing
 - (1) Clarity towards concept: to analyse present understanding of the applicability of the accountability concept.
 - (2) Adoption of Voluntary Environmental Activities: to analyse the voluntary adoption practice in Indian corporate in comparison with mandatory laws, to examine the motives and reasons for such a behaviour. It formed the main part of second objective.
- c) Difference in perception of preparers and users of environmental information: it pertained to the third objective. The preparers were corporate managers who prepare and provide the information and users in the present study are environmental non- governmental organizations (ENGOS). This part of the study demanded the examination of inside party ie corporate managers and outside party i.e., members of ENGOS.
- d) Environmental Audit Assurance Role: It examined the perspectives of both the corporate managers and members of ENGOS regarding different aspects of environmental auditing practices.
- e) The last objective of establishment of corporate environmental accountability disclosure index does not form a part of direct empirical study

7.2 Results of historical analysis

For understanding the first objective, the historical analysis provided a retrospective understanding of the imperative for transition and formed the base for formation of further objectives. **Historical analysis** elaborated that in the process of human development environment received a setback on one hand in the form of pollution and on the other hand over exploitation of resources much beyond its regenerative capacity. The more economic development translated into more stress on the natural environment system.’ (Sanjoy, M. et.al., 2013) According to World Bank report 2013 (in collaboration with MoEF, India), the total cost of environmental degradation in India is Rs. 3.75 trillion

approx. (US\$80 billion), equivalent to 5.7 percent of GDP in 2009 (the reference year for damage estimates). The World Health Organization found that Acute Respiratory Infections were one of the most common causes of deaths in children under 5 in India,'(news, Yale Centre for Environmental Law and Policy). After India got independence from the colonial rule in 1947, India gave major emphasis to industrialization for achieving high rate of growth due to several reasons. Firstly, the speed of development was necessary because during the British rule, India's was totally in ruins. Secondly, population of India is enormous. Next, in line is the cause of high level of poverty. Our former prime minister, Indira Gandhi, believed that poverty is the cause of environment degradation. Other factors like corruption, uncontrolled and lavish style of consumption of precious natural resources, urbanisation, non judicious application of science and technology etc also played their part in compounding effect of environmental degradation. One can easily quote the words of Gandhiji which state that "there is enough in the nature for everyone's need but not for everyone's greed".

Findings suggest that the corporate entities have to reconsider the paradigm of legitimacy in survival, the salient stakeholders like environment which has been at the receiving end should be given an equal status, as suggested by **Calafell et al. (2006)**, **Carol & Geoffrey (2008)** and the society at large should be benefitted. The goals of all the stakeholders (including ecological environment) should be considered. The main highlights are presented as follows:

1. The historical analysis revealed that the philanthropy is deeply rooted in India in general and Indian business in particular. With changes world over, it was expected that Indian business also changed its attitude from being an indirect provider of social benefits through donations to being actively involved in directed efforts. It was found that the Philanthropical attitude shifted to active management of donations (**Singh, 2010, Mohan, 2001**), yet the business were highly involved in giving donations (**Sindhi & Kumar, 2012**) rather than concentrating on the burning issue of environmental degradation, emphasizing the importance of the topic for the study.
2. Analogy was drawn between the adoption of CSR world over and in India. Corporate Social Responsibility provided a window to the external parties in

which corporate followed a set format for social welfare rather than clandestine donations not visible to outside parties. However, it still was a voluntary affair. Where outside India studies indicate that CSR originated around 1953 (**Valor, 2005**) to meet unmet public needs on voluntary basis. It was found that Corporate Social Responsibility was adopted as a means of family charity in India in 1960s and 1970s (**Muniapan & Dass, 2008**). A host of studies tried to draw different stages of CSR practice beginning with philanthropy to the practice of triple bottom line. It suggested the negligence of environmental issues either totally or involvement at a low degree so that its importance is shrouded by other issues. A particular study titled 'Corporate Social and Environmental Responsibility in India', **Chahoud et al. (2007)**, claimed that Indian corporate is characterized partly by traditional philanthropic activities and integration of CSR into a sustainable business strategy but a full-fledged attention to environment has not been provided.

3. The practice of Philanthropy and CSR were found to be inadequate to fully satisfy the requirements of environmental degradation issues. Research worldwide echo the same pressing needs. For instance, **Kakabadse et al. (2005)** indicate that though philanthropy is most required by underprivileged society still it is absolutely '*voluntary in nature and is not undertaken with a goal to diminish any impact on the community in a planned manner*'. Similarly, **DesJardins (1998)** study on CSR suggests that CSR, has its limitation on environmental front as it does not put an imperative on the business. In the context of India, **Chahoud et al. (2007)** identified lack of transparency and proper standards; hidden motives of window dressing, advancing business interests and weak community capacity building as the top sides of Indian CSR. The study by **Sindhi & Kumar (2012)** also remarked the weak social change much feeble to demand an improvement in voluntary environmental standards by large corporations.

Key Outcome: The study thus yields enough evidence to point towards the immediate need for the practice of environmental accountability paradigm of corporate operations. It suggests that though a beginning has been made through CSR efforts of corporate, yet Indian business should open up to the claims of stakeholders for a holistic treatment of

environmental issues. It strongly recommends that the main paradigm for corporate legitimate existence should be environmental accountability. Environment should assume the lead role as an umbrella term while the other social responsibilities can be accommodated under it and not obverse where CSR becomes an umbrella term and environment is just a part of overall social responsibility.

7.3 Results of empirical analysis examining corporate transition

The previous section presented the historical analysis of transition of corporate from philanthropy to environmental accountability so that lacunae can be identified. Next, it needed to be tested whether the corporate understands the criticality of environmental impacts of their operations and how far they feel accountable for the same. Hence, empirical analysis through the instrument of questionnaire was devised to understand the change in the mindset and practice of Indian corporate. Perception of managers was captured because it is strongly reflected in the past studies, (for instance, Aarts et al., 1998; Ajzen, 1991; Fishbein & Ajzen, 1975; Sharma, 2000; Aragon-Correa et al., 2004; Ajzen, 1991) which suggest the importance of executives/managers as a medium of change.

For the evaluation of perception of managers, the Indian study of **Bhattacharya (2011)** was adapted and perception of managers was captured on four dimensions (as elaborated in sections 7.3.1, 7.3.2, 7.3.3 & 7.3.4). The results relating to the analysis and testing of hypothesis under the four dimensions are presented as under:

7.3.1 Presence of environmental concerns in PVS

The present dimension evaluated adherence to environmental accountability due to presence of environmental concerns in Personal Value System of corporate managers. The hypothesis relating to the first dimension is presented as under:

H_{01} = There is no significant transition in corporate perception towards environment in Personal Value System

The responses of Indian corporate managers were gathered over nine variables on a Likert-scale measuring attitude from Strongly Agree to Strongly Disagree. The scoring was done from 5 to 1 (where 5 represented Strongly Agree and 1 represented Strongly

Disagree). For testing the above formulated hypothesis, first the descriptive statistics were calculated and the results are presented as under.

The percentage distribution of respondents indicated that 86% approx. (Mean 4.32, SD .823) of respondents scored various variables above the neutral; while 10.37% of respondents preferred to remain neutral and only 3.95% disagreed. This shows a considerably higher proportion of positive responses to variables. To test the statistical significance of the positive responses obtained on various variables, one sample t-test was applied. It tested whether a significant difference exist in the personal variables mean scores and assumed mean score of 2.8. The results are presented as under:

$$H_{01}: \mu = 2.8$$

$$H_{11}: \mu \neq 2.8$$

t-test Result = $t(44)=20.284$, $p=0.000$ – null hypothesis is rejected

The overall t-statistics results of $t(44)=20.284$, $p<0.05$, and the associated p-values <0.05 suggests that the null hypothesis is rejected and alternate hypothesis is accepted. This suggests that environmental concerns are present in the corporate managers' personal value system in a significant measure. The results are important because they reveal not only that the environmental issues are gaining popularity as a business buzzword, but also that the future of environmental conservation is optimistic because the personal values held by persons become a part of their behaviour with time.

7.3.2 Corporate perception towards EID

The second dimension wanted to examine whether the corporate exhibits a positive attitude towards disclosure because communication of environmental information has been identified as an essential prerequisite of accountability. The hypothesis relating to the second dimension is presented as under:

H_{02} = There is no significant transition in the corporate perception towards disclosure of environmental information

The responses of Indian corporate managers were gathered over eight variables for the second dimension on a Likert-scale similar to the first dimension. For testing the above formulated hypothesis a similar procedure was followed as used for testing the first

dimension i.e., first the descriptive statistics were calculated, the results of which are presented as under.

The percentage distribution of response indicates that 55% (Mean 3.48, S.D. 1.215) of respondents agreed to various statements whereas 27% disagreed. Interestingly, a high percentage (18%) chose to remain neutral towards the variables.

Next, to test whether a significant difference exist in mean scores of corporate attitude towards disclosure from the assumed mean score of 2.8, one sample t-test was applied and the results are as follows:

$$H_{02}: \mu = 2.8$$

$$H_{12}: \mu \neq 2.8$$

t-test results = $t(44) = 7.175$, $p = 0.000$ – null hypothesis is rejected

The overall t statistics results of $t(44) = 7.175$, $p = 0.000$, and the associated p-values < 0.05 points out that the null hypothesis of no significant transition in corporate perception is rejected and the alternate hypothesis is accepted that there exists a significant transition in corporate attitude towards the importance of disclosure. This is an important result because disclosure or reporting is one of the significant means to communicate to the society or the target stakeholders about the activities undertaken by an organization.

7.3.3 Corporate perception of EAI

The third dimension intended to assess corporate perception on an important issue. The issue was whether the adoption of voluntary environmental activities and disclosure forming part of environmental accountability would affect the corporate image, share prices etc. The hypothesis relating to the third dimension is presented as under:

H_{03} = There is no significant transition in corporate perception towards interrelationships/impacts of adoption of environmental accountability on corporate image, share prices etc.

The responses of corporate managers were solicited on four variables on a 5-point Likert scale measuring perception from Strongly Agree(5) to Strongly Disagree(1). Overall distribution of responses was observed. It revealed that 73% respondents agreed to various variables, 14% of respondents remained neutral, whereas 13% of respondents disagreed (Mean 3.98, S.D. 1.080).

To test whether there exist a significant difference in mean scores of corporate attitude towards impacts of disclosure from the assumed mean score of 2.8, one sample t-test was applied and the results are as follows:

$$H_{03}: \mu = 2.8$$

$$H_{13}: \mu \neq 2.8$$

t-test results = $t(44) = 10.032$, $p = 0.000$ – null hypothesis is rejected

The overall t-statistics results and associated $p < 0.05$ indicate that null hypothesis is rejected and alternative hypothesis is accepted. Therefore, it can be concluded that there is a significant positive perception of the corporate that undertaking environmental related activities does have an impact on the organization. The results are in agreement with study by **Sinkin. et al. (2008)** which tested that firm value was in fact determined by the adoption of business practices that strived for efficiency on ecological front.

7.3.4 Corporate perception towards importance of ENGOs

The Fourth dimension measured corporate perception towards relative importance of stakeholders representing environment concerns (ENGOs). This dimension evaluated corporate perception towards the external pressure. The hypothesis relating to the fourth dimension is presented as under:

H_{04} = There is no significant transition in the perceptions towards role of Environmental NGOs

The opinions of the corporate managers were gathered over four variables on 5-point Likert scale measuring attitude from Strongly Agree (5) to Strongly Disagree (1). Overall descriptive statistics results indicated that 53% of corporate respondents agreed to various statements suggesting the importance of ENGOs, 24% of respondents disagreed and 23% of respondents chose to remain neutral (Mean 3.44, S.D. 1.164).

To test whether there exist a significant difference in mean scores of corporate perception of the role of ENGOs from the assumed mean score of 2.8, one sample t-test was applied and the results are as follows:

$$H_{04}: \mu = 2.8$$

$$H_{14}: \mu \neq 2.8$$

t-test result = $t(44) = 6.651$, $p = 0.000$ – null hypothesis is rejected

The overall t-statistics results of $t(44)=20.284$, $p<0.05$, and the associated p-values <0.05 suggests that the null hypothesis is rejected and alternate hypothesis is accepted. This suggests that corporate managers regard ENGOS as playing an important role in influencing their organisation. This suggests a rise in the power of stakeholders (ENGOS), particularly those representing environmental issues in the eyes of corporate which could lead to corporate being more responsive to their demands for undertaking pro-environmental activities.

In a nutshell, the four t-test results indicate that the above four null hypothesis are rejected and alternate hypothesis are accepted which point towards the presence of significant transition in corporate perception towards personal value system, disclosure, impacts of voluntary adoption and role of ENGOS. However, the largest significance is demonstrated in the corporate perception of transition in personal values, followed by understanding of impacts of voluntary adoption. The least significant t-value belongs to positive perception of the role of ENGOS.

This suggests a relatively lackadaisical attitude towards environmental NGOs importance as stakeholder, yet the positive results are significant enough to indicate that hopefully, the state of affairs would change with ENGOS assuming more and more confrontational role and demanding an equal status for environment.

7.4 Knowledge of environmental accountability

The knowledge and understanding of environmental accountability in the minds of corporate managers was an important part of the study. The knowledge of accountability meant that 'an organisation operates in a sustainable manner and reports its environmental activities to its stakeholder'. Hence, the researcher wanted to examine whether the presence of environmental concerns in Personal Value System of managers leads to greater knowledge (clarity of the concept) of environmental accountability. The relevant hypothesis formulated was:

H₀₅ = There is no significant relationship between corporate Personal Value system and Knowledge of the concept

The response was gathered on a 5-point scale ranging from Strongly Agree (5) to Strongly Disagree (1). First, the descriptive statistics were calculated. It revealed that

64.4% of respondents agreed, 26.7% remained neutral and 8.9% of respondents disagreed (Mean 3.84, SD 1.021) to the statement that accountability denotes conducting operations in environmentally sound manner and explaining or reporting the results.

Next, to determine whether higher perception in personal value factors leads to higher conceptual clarity or knowledge of the concept, paired t test was conducted on the responses of personal value factors and knowledge of accountability. The results are as follows:

$H_{05}: (\text{Personal Value System})u_1 = (\text{Knowledge of concept})u_2$

$H_{15}: \mu_1 \neq \mu_2$

Paired t-test result= $t(44)= 2.743, p=0.009$ – null hypothesis is

~~The results~~ indicate a significant difference between the mean scores of ‘Personal Value System’ (Mean 4.32, S.D. .501) and ‘Knowledge of Accountability’ (Mean 3.84, S.D. 1.021); $t(44)=2.743, p=.009, d=(\text{mean difference}/\text{std dev}) = .4$. Since, $p\text{-value}<0.05$ the null hypothesis stands rejected. The effect size is measured by ‘d’ (Cohen’s d) which tells us about the magnitude of difference. The effect size is moderate as it lies at .4 which is below 0.6 but above 0.3 (a value between 0 and 0.3 is a small effect size, if it is between 0.3 and 0.6 it is a moderate effect size and an effect size bigger than 0.6 is a large effect size).

The results mean that higher personal values do not translate into higher knowledge of the concept of environmental accountability. The results, though not positive, were in agreement with the study of **Kempton et al. (1995)** (as cited in Kollmuss and Agyeman, 2002) who found that knowledge about environmental issues to be low whether the respondents are environmentalists or non environmentalists. It remains still to be explored whether it is a prerequisite for pro-environmental behavior or not.

7.5 Voluntary adoption

This section presents the response of corporate towards current status of voluntary adoption i.e., what the corporate perceive the prime motive of disclosures, reasons of disclosures, readership of environmental information etc. The response of corporate suggested that they strongly believe that current environmental information produced is sufficient (supported by 57.8% of respondents). The study of voluntary adoption of

environmental standards and disclosure was guided by following queries. The results are as follows:

Table 56: Corporate Views on Voluntary Adoption and Disclosures

Variables	Responses
Present Reasons of Disclosure	Regulatory compliance was considered as topmost reason of disclosure by 80% of respondents, followed by 62% of respondents who believed that organisations follow industry norms rather than personal criteria (11%).
Potential of Voluntary vs Mandatory disclosures	Regulatory force was also reckoned as wielding more potential than voluntary actions (73% vis a vis 20%). To enhance the current status of disclosures, ‘mandatory regulations’ were desired by about 57.8% of respondents. This is in agreement with study by Banerjee (2002) who examined managerial perceptions and found that stricter legislative and public concern leads to greater environmental focus in high environmental impact industries.
Motive of Disclosures	‘Regulation compliance’ variable received the highest score in terms of possible motive of disclosure by about 78% of respondents as compared with ‘stakeholder’ variable which received the least score in enforcing voluntary compliance (about 29% of respondents agreed).
External Remedies to facilitate Voluntary adoption and disclosures	Major emphasis was received by Governmental Schemes like tax rebate, subsidies, exemption from 98% of respondents. Next in importance was ‘Punitive action by environmental agencies’ cited by 78% approx. of respondents; quite interestingly, Stronger ENGOs received the lowest response of 53% approx.
Internal Remedies to facilitate voluntary adoption and disclosures	Among internal factors, ‘top management support’ acquired the first and foremost choice of 98% approx. of respondents. Next in importance was ‘written environmental policy statement’ preferred by 78% approx of respondents. Largest disagreement was received for involvement of ‘Environmental NGOs’ in decision making (17.78%).
Expected Readership of Environmental Information	About 22% approx. of respondents are neutral on the supposed readership of environmental information and a high response of 11% approx. consider it as the least read section. This finding is in line with Waddock (2004) study stated that question lingers in managers’ mind regarding whether information disclosed on voluntary standards are being read or not.
Expected Place and Type of Environmental information disclosures	A great density of respondents (60%) cited that environmental information should form part of Annual report. Equally important was their response on ‘Type of disclosure’ where the corporate were unanimous in addressing the issue by citing ‘Comparative monetary facts with previous years’ (62.2%) which a great and welcome feature for Indian corporate.

7.6 Expectations gap

The handling of Environmental Information requests received from the stakeholders (ENGOS) and time variability in their response was examined to understand further the value accorded to stakeholders (ENGOS) by the corporate. The significant results are presented as under:

Table 57: Corporate and Environmental NGOs views on Handling of Request for Environmental Information

Corporate Views	ENGOS Views
Request for Environmental information	
‘Occasional’ or ‘No’ requests are received from ENGOS (44%, 49% resp.)	Occasional requests are sent to corporate (74%)
Sending or Receiving of Information	
Majority of respondents feel that when Information is requested, it is sent within a few days (56.52%)	Majority of respondents feel that Information requested is received after a month (44.44%)
Support received (given) in case of environmental violation	
About 53% of respondents felt that they do not receive support from ENGOS	About 89% of respondents feel that they do lend support to disclosing companies and follow a lenient approach
Whether NGOs should be involved in decision making	
About 58% of corporate respondents agreed to the statement	About 91% of the respondents agreed that they should be involved

Relevancy and sufficiency of environmental information disclosed

A comparison of the perception of members of ENGOS and corporate managers was undertaken on the criteria of relevance and sufficiency of major items of disclosure gathered and analysed from review of GRI, Annual reports and literature survey. The idea was to highlight the possible areas of discrepancy so as to suggest thrust areas for policy formation to minimize gap.

Analysis of individual heads of disclosure suggested that on the factor of ‘Relevancy’, significant gaps (suggesting key areas for improvement for communication between the ENGOS and corporate) were found in case of written environmental policy, status of emergency management, environmental expenditure, details of energy sources and statistics of each department. On the factor of sufficiency, significant gaps were found in the case of all the variables except a few namely, breaches of environmental

standards, media reports, green strategies, EMS installed, research expenses, information on stakeholders, efficiency achieved in inputs.

The observations clearly indicate the specific areas relating to environmental information disclosure which need to be improved for ironing out any gaps in the perception of ENGOs and corporate regarding the relevancy and sufficiency of environmental information disclosed. Removal of 'Relevancy' gaps will enable the corporate managers to ensure that information provided is pertinent to the needs of the users. Again, removal of 'Sufficiency' gaps will ensure the attainment of satisfaction of users. Hence, the utility of information provided will be enhanced which is a corner stone of modern accountable existence.

The hypothesis formed for testing overall difference between responses of two groups (ENGOs and Corporate) over the issue of '*Relevancy*' of Environmental information disclosed is presented as follows:

H₀₆ = There is no significant difference in corporate managers and members of ENGOs perception of 'Relevancy' of environmental disclosure variables

In order to find out whether there is any significant difference in the opinion of corporate managers and expectations of members of ENGOs about overall relevancy of various variables considered important for disclosures, t-test (in relation to two independent groups) was applied (group 1 belonged to ENGOs response and group 2 belonged to Corporate).

Where,

H₀₆: μ_1 (Mean score of members of ENGOs) = μ_2 (Mean score of Corporate Managers)

H₁₆: $\mu_1 \neq \mu_2$

t-test results: $t(89) = -1.709$, $p=.091$, $d=.4$ – null hypothesis is accepted

An observation of t test results indicate that null hypothesis is accepted due to associated p-value >0.05. It means that both the response of the groups do not show any significant difference in opinions. In other words, both the groups of respondents agree on various heads of disclosure presented to them. The negative sign of t test indicate that managers consider the information provided under various heads as more relevant than members of ENGOs.

Another hypothesis was formulated to test whether there exists difference in opinion of managers and members of ENGOs regarding '*sufficiency*' of information disclosed under various heads formed from review of GRI, corporate Annual reports and review of literature. The hypothesis is presented as follows:

H₀₇ = There is no significant difference in corporate managers and members of ENGOs perception of 'Sufficiency' of environmental disclosure variables

Two independent sample t-test was conducted between two groups (group 1 belonged to members of ENGOs and group 2 belonged to Corporate Managers). The results are presented as follows:

Where,

H₀₇: μ_1 (Mean score of members of ENGOs) = μ_2 (Mean score of Corporate Managers)

H₁₇: $\mu_1 \neq \mu_2$

t-test results: $t(89) = -3.719$, $p=.000$, $d=.8$ – null hypothesis is rejected

t-test results indicate that null hypothesis is rejected because associated p-value < 0.05. It means that there is significant difference in the opinion of both the groups of respondents. In other words, members of ENGOs and corporate managers do not hold similar opinion on sufficiency of information provided under various heads of disclosure provided to them. The negative sign of t test indicate that corporate consider the information provided as more sufficient than ENGOs who feels it to be insufficient. The effect size was also found to be considerably high at .8.

The results are supported by study of **Azzone et al. (1997)**, which highlighted the inability of vast majority of environmental reports to satisfy the information requirement of target groups and suggested the production of general report and specialized environmental report. The results are also in agreement with another study by **Deegan and Rankin (1999)** survey of attitude of senior executives and multiple category of annual report users. The study found significant differences in views of users and preparers.

Results shed important light on the perceived difference in the opinions of two stakeholders, one being the provider of information and the other being the reader of

information. The observations clearly indicate the areas which need to be improved for ironing out any gaps in the fulfilment of information requirements of ENGOs.

7.7 Corporate environmental auditing role

Responses towards role of corporate environmental auditing were solicited from corporate managers and members of ENGOs over diverse factors like importance of environmental audit, type of assurances needed and frequency of audit etc.

The results indicated that only 14% of the corporate respondents suggested that they conduct environmental related auditing more than once a year, while around half of the respondents suggested that they conduct it 'sometimes'. Observations revealed that mostly it is the 'Internal Person' who conducts the audit. While it is in the case of 'Compliance with environmental law and reporting' (42.22%) that both internal and external person are roped in.

The views of ENGOs regarding what they expect of environmental audit revealed that they desire highly 'Environmental Audit to be made mandatory' (Mean 4.37, S.D. 0.826). Larger agreement to the tune of 93% approx was visible for variable of need for 'Independent Verification' (Mean 4.33, SD 0.944). This response was in agreement with the **Soh and Martinov-Bennie (2015)** that the role of auditing has enhanced with need for accountability and transparency. Overall the results indicated that ENGOs are more in favor of having an urgent requirement of mandatory auditing program and independent verification than merely commenting on the adequacy of existing disclosure.

7.8 Disclosure Index to assess environmental accountability

The last objective of the study was to assess presence of accountability through verification of various dimensions that together compose an environmental accountability index. The index measures the extent of presence of variable under study. more than 50% of corporate-annual-reports of sample companies (50 in number) indicate that they produce environmental information relating to risk management, green initiatives, stakeholders policy, awards; while information relating to complaints (penalties or fines), value chain, ISO 14000 compliance is produced by 30% -50% of sampled companies. However, for rest of variables like appearance in any kind of index, usage of clean

development mechanism, life cycle analysis etc. the related information is produced by less than 30% of companies.

Again the conduct of 'internal audit' and disclosure of 'Technology absorption' was evident in more than 80% of companies. Noticeably, the other variables relatively appeared on a low scale. Most importantly, 'environmental audit' was cited by a low percentage of only 2% of companies.

However, promising was the fact that 38% of companies produced 'Sustainability Reports'. The table reveals that as on 2012-13, only 20% of companies shared their information about GHG emissions, only 18% companies produced reports based on GRI framework, National Voluntary Guidelines were followed by only 4% of companies. Production of Business responsibility report is a recent initiative of the government and as per the analysis, only 6% of companies in the sample produced the said report.

A compilation of fourteen accountability predictor dimensions is produced to comprise the index satisfy this objective. The value of index is said to vary between 0 and 1 where zero denotes total absence of all predictors and value one denotes total presence of all predictors. Value close to one indicates presence of high accountability. In a nutshell, Environmental Accountability Disclosure index, measures the extent to which environment concerns are present or absent in an organization and accountability assumed for environmental actions or inactions.

A checklist demonstrating the lacunae in current reporting was also produced.

7.9 An overview of key findings relating to environmental NGOs

The present study was aimed to analyze empirically the perception of ENGOs working for an environmental cause on various dimensions. Overall findings suggest an ever dynamic role of NGOs vis- a- vis the corporate. Majorly, the study revealed that NGOs prefer persuasive means than an upfront encounter posture for presenting their demands to the corporate for making available any information or requiring the implementation of any pro-environmental activity, agreeing with the findings of **Danastas and Gadenne (2005)**. The results of respondents' perception of current disclosure level to be lying near insufficiency were also in conformity with the opinion of **Azzone et al. (1997)** that environmental reports are not considered as credible instrument of corporate

environmental information but are perceived to be disguising real information behind the façade of positive statements. According to **O'Dwyer et al. (2005)**, NGOs perceived a lack of information disclosure and cited an overall demand for improved disclosure.

The present study revealed that Indian NGOs prefer the auditor to reveal the concealed information than offer comments on the errors and inadequacy in reported information. Regarding the reasons for lack of disclosure, ENGOS considered that it is due to 'Lack of general interest on industry side', while 'lack of proper scrutiny' assumed second most important reason. Interestingly, the reasons of 'lack in training' and 'lack of incentives for adoption' were relatively unimportant hurdles in disclosure. The study also revealed that ENGOS occasionally desire additional environmental information but feel that it is not received early.

Overall, the results yield important implications for corporate. Efforts should be made to find out more ways of involving the stakeholders as the response suggested that they are eager to lend support which can facilitate a much needed cooperative role. Again ENGOS consider CSR as rendering limited support for their environmental vision. This lends credibility to the fact that CSR has not been able to handle environmental issues properly and in the right earnest. Hence, corporate need to shoulder additional environmental responsibilities voluntarily much more than what CSR suggests. Further, it is also required that corporate should enhance the quality of report as ENGOS need non technical information (Azzone et al., 1997).

7.10 Summary

The present chapter provided a brief overview of overall research work along with outcome relating to various hypotheses. The chapter also linked the literature review with the results achieved. This is important aspect of research as it ensures reliability of the research findings. Besides, this chapter also lays groundwork for providing key recommendations, specific policy implications as well as suggesting future areas of study which are covered in the next chapter.

7.11 References

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