CHAPTER 6

METHODOLOGY

6.1. Introduction

In the western world studying CSR through the lens of the annual reports of the companies, has been conducted since annual reports are still considered to be the most relied upon document but from the Indian perspective the study on such grounds has been very limited as discussed at length in Chapter Four on literature survey. Historically, corporations have used the mass media (annual reports) to communicate with their public, but there is a discerning shift toward the internet as a new medium of organizational communication (e.g., Aikat, 2000; Esrock & Leichty, 1998; 1999; Pollach, 2003; Snider, Hill & Martin, 2003). The internet represents a new medium for companies to use in communicating with their publics, both internal and external. It facilitates the rapid provision of much more comprehensive information and makes it possible for companies to solicit more feedback from a range of stakeholders (Antal, Dierkies, MacMillan, & Marz, 2002).Web-based study of CSR has been conducted in the west to a limited extent but from Indian perspective we hardly get reference to such studies. So this study design was required and was important because we tried to generate data not only from the information disclosed in the corporate websites of the companies but also from the annual reports uploaded by such companies for the study period to investigate into the pattern of CSR activities carried on by the public and private sector companies as well as the various features of CSR and its communication.

6.2. Data Sources and Study Design

An empirical and analytical study was undertaken to address the research hypotheses as identified in the earlier chapter (refer to chapter 5). In our study we explored the opportunities of finding a pattern of corporate social responsibility activities undertaken by the public and private sector companies in India grouped on the basis of the following parameters, namely, absolute profit, absolute turnover, growth rate of turnover, growth rate of profit and on sectors. An analytical study was undertaken to identify the attributes for our study. The analytical study of the attributes also helped us in understanding the various characteristics of CSR and its disclosure by the companies. This study treated communication of CSR activity and action as interrelated rather than mutually exclusive functions. We adhered to the following explanation offered by Fukukawa and Moon (2004):

"The communication of CSR does not necessarily denote activity, and the activity levels that lie behind the communication may well vary. By the same token, the absence of communication of CSR does not necessarily indicate non-activity. However, in the light of the assumption that reporting, transparency and accountability are part and parcel of CSR, there is reason to expect increasing congruence between communication and action (p. 48). On similar lines the following explanation has also been given by Chambers, et al. (2003):

“the greater the extent of the reporting the more engaged the company is with CSR and the more seriously it is taken therein” (pg 11) because they do attest to the amount of effort that a company has put in to communicate its commitment.

The study was based on secondary sources, i.e., by analyzing the corporate official websites of the companies along with the annual reports and sustainability reports uploaded on the official websites of the companies. Data with respect to the identified attributes was then generated from such an analysis using Qualitative Document Analysis. Qualitative Document Analysis according to Glaser and Strauss (1967) described the meanings, prominence and the theme of messages and emphasized the understanding of the organization as well as how it was
presented. For the purpose of our research, CSR has been defined as corporate discourse and/or programs that constitute responsibility to the environment and responsibility to community development (Besser, 1999). The array of terminology to be used within the broad CSR realm includes corporate social responsibility, corporate citizenship, stakeholder engagement, community development, social contribution, philanthropy. (Waddock, 2004). Six categories had been identified for the study. Detailed exposition of these categories is provided below.

6.2.1. Structure or Situation of CSR Information Category:

In this category we tried to analyze how the CSR section of the website had been divided. This would be an indication of communication prominence amongst the companies selected for our study. CSR is usually disclosed by the companies either in their home page or sections or subsections in the form of a link. For this category three attributes were identified namely:

- “Primary link” to CSR information on their “corporate homepage”.
- “Primary link” to CSR information in their “sections.” and
- “Primary link” to CSR information in their “subsections”.

We assigned 1 if the primary link to CSR information had been disclosed on their corporate homepage and in its absence we assigned 0, similarly for the other two attributes identified under this category.

6.2.2. Presence of CSR Information Category:

Through this category we tried to observe the presence of CSR information in the company’s corporate websites as well as in their annual reports which would help us to analyze the priority given by the companies to CSR. The attributes identified here are as follows:

- Presence of CSR information in the corporate websites.
- Presence of CSR information in the annual reports.
- Presence of CSR information in both corporate websites as well as in the annual reports.
- Absence of CSR information both in the company’s corporate websites and in their annual reports.

We assigned 1 if the CSR information was present in their corporate websites, annual reports or both. Otherwise we assigned 0.

6.2.3. Format of CSR Presentation Category:

With the help of this category we tried to analyze the website design and the manner in which CSR information had been disclosed and communicated to the stakeholders. Under this category we had identified four attributes namely:

- Format of CSR presentation is primarily “text”
- Format of CSR presentation is primarily “visual”,
- Format of CSR presentation is primarily “multimedia” and
- Inclusion of “interactive features” in their CSR presentation (Aikat, 2000).

We assigned 1 if the format of their CSR presentation was textual, visual, multimedia or interactive. Otherwise we assigned 0.
6.2.4. Additional Resource Category:

Through this category we tried to examine if the companies had communicated any other information to the stakeholders pertaining to their CSR activities. The attributes identified were as follows:

- Achievements/accolades
- Press News
- CSR event calendar
- CSR spotlights/news
- Testimonials
- Interviews/speeches
- CSR case studies/newsletters

We assigned 1 if the companies disclosed any additional information with respect to their CSR activities and in its absence we assigned 0.

6.2.5. Content Category:

Through this category we tried to analyze the richness of the content provided by the companies with respect to their CSR involvement. This category was divided into two parts. The first part was dedicated to explore how the companies were carrying on their CSR activities and whether they were providing substantial information about it in their corporate websites. The attributes identified for this part were:

- Disclosure of CSR information by the companies through sustainability or CSR reports.
- Pursuit of CSR activities by the companies through foundations/trusts/NGOs/government partnerships.
- Sharing of financial information by the companies with respect to their CSR activities.
- Disclosure by the companies of the number of beneficiaries that were benefitting from their activities.

We assigned 1 if the companies answered in the affirmative or 0 otherwise.

The second part was exploring the field of activities that they were involved in as a part of their CSR involvement. So the attributes identified under this part were:

- The field of activity/activities engaged in by the companies and disclosed in their corporate websites.
- Whether the companies have communicated their responsiveness to the society and environment in general in the various segments of the annual reports.
- The field of activity/activities engaged in by the companies and disclosed in their annual reports for the above mentioned study period and uploaded in their corporate websites.

With respect to annual reports it was to be noted that we identified six segments were the public and private sector companies can communicate their responsiveness towards CSR to the stakeholders and they were: CSR information disclosed as a separate section in the annual
report, CSR information contained in the Chairman’s/CEO’s message, CSR information given in the Director’s report, CSR information contained in the letter to the shareholders, CSR information contained in the letter from CEO/CFO/President and information about CSR disclosed by the companies in the section called “management discussion and analysis”. We assigned 1 if such disclosures were available, otherwise we assigned 0.

### 6.2.6. Extent of Information Category:

This category enabled us to analyze the extent to which the public and private sector companies have disclosed their proactiveness/responsiveness towards CSR in general as well as in terms of various CSR activities and identify a pattern across the private and public sector companies. Units of analysis under Qualitative Document Analysis may be number of words, phrases, character, lines, sentences, pages or proportion of pages devoted to different categories of social disclosure (Unerman 2000). For this study we used “number of sentences” as the unit for measurement of CSR, since sentences provided complete, meaningful and reliable information for further analysis (Milne and Adler 1999). The measurement in terms of sentences was justified in that: (1) sentences can be counted with more accuracy than words, (2) sentences are used to convey meaning whereas discerning the meaning of individual words in isolation is problematic, (3) sentences overcome the Problem of allocation of portions of pages and remove the need to account for the number of words, (4) in addition, sentences are a more natural unit of written English to count than words (Hackston & Milne, 1996:84-85). Walden & Schwartz, (1997) argued that a sentence consider conventional unit of speech and writing, while portion of pages is not. To analyze this category we divided it into three parts. In the first part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR generally in the various segments of their annual reports. In the second part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR activities in the various segments of their annual reports and in the third part we calculated the numbers of sentences the companies have dedicated to describe about the CSR activities adopted by them and communicated in their corporate websites.

### 6. 3. Selection of Companies

#### 6.3.1 Private Sector Companies

Top 500 private sector companies were selected from, the BT 500 list published in Business Today, belonging to the India Today Group, for the years 2006-07 07-08 and 08-09 as per average market capitalization. Market capitalization refers to stock price multiplied by the number of outstanding shares. To arrive at the list of India’s most valuable companies, BT relied on the Center for Monitoring Indian Economy’s (CMIE’s) Corporate Database Prowess for all the years under consideration, for the study. Average market capitalization was chosen to rank the 500 most valuable companies since this parameter gives us an indication of not only the present but future prospects of the company as well. Now from the list of 500 most valuable companies for the years 2006-07, 2007-08 and 2008-09 the common companies which had succeeded in maintaining its rank and position within the list of “500 most valuable companies” for all the three years were selected. The total data set consisted of 329 companies. From this total data set, companies with negative or declining profit and turnover were excluded. After exclusion the comprehensive list (select data set) consisted of 208 companies. The companies (select data set) were grouped and ranked on the basis of the following parameters:-

**Absolute Profit for the year 2008-09:** The 208 companies which constituted the select data set were ranked on the basis of this parameter, in the descending order. They were divided into
decile groups consisting of 21 companies each i.e. 10% of the select data set. The companies under each decile group were analyzed on the basis of the study design specified above.

**Absolute Turnover for the year 2008-09:** The 208 companies which constituted the select data set were ranked on the basis of this parameter, in the descending order. They were divided into decile groups consisting of 21 companies each, i.e., 10% of the select data set. The companies under each decile group were analyzed on the basis of the study design specified above.

**Growth rate of profit:** The rate of growth of profit was calculated as follows: \( \frac{a_3}{a_1} - 1 \), where \( a_3 \) denotes profit for the year 2008-09, \( a_1 \) denotes profit for the year 2006-07. The 208 companies which constituted the select data set were ranked on the basis of the rate of growth of profit, in the descending order. They were then divided into decile groups consisting of 21 companies each i.e. 10% of the select data set. The companies under each decile group were analyzed on the basis of the study design specified above.

**Growth rate of turnover:** The rate of growth of turnover was calculated as follows: \( \frac{b_3}{b_1} - 1 \), where \( b_3 \) denotes turnover for the year 2008-09, \( b_1 \) denotes turnover for the year 2006-07. The 208 companies which constituted the select data set were ranked on the basis of the rate of growth of turnover, in the descending order. They were then divided into decile groups consisting of 21 companies each i.e. 10% of the select data set. The companies under each decile group were analyzed on the basis of the study design specified above.

**Sectoral divisions:** The 208 companies which constituted the select data set were grouped on the basis of their sectors. Each sectoral group was analyzed on the basis of the study design specified above.

### 6.3.2. Public Sector Companies

Similarly Top 50 public sector companies were selected from, the BT 500 list published in Business Today, belonging to the India Today Group, for the years 2006-07 07-08 and 08-09 as per average market capitalization. To arrive at the list of India’s most valuable companies, BT relied on the Center for Monitoring Indian Economy’s (CMIE’s) Corporate Database Prowess for all the years under consideration, for the study. Average market capitalization was chosen to rank the 50 most valuable public sector companies since this parameter gives us an indication of not only the present but future prospects of the company as well. Now from the list of 50 most valuable companies for the years 2006-07, 2007-08 and 2008-09, the common companies’ which had succeeded in maintaining its rank and position within the list of “50 most valuable companies” for all the three years were selected. The total data set consisted of 43 companies. From this total data set, companies with negative or declining profit and turnover were excluded. The comprehensive list (select data set) now consisted of 32 companies. Since the number of public sector companies is very small, the select data set was divided into two groups “Top 50 percent” and “Bottom 50 percent”. Besides the analysis of the public sector companies would be unlike that of the private sector companies, where the analysis was done across deciles. The companies (select data set) were analyzed on the basis of the following parameters:

**Absolute Profit for the year 2008-09:** The 32 companies which constituted the select data set were ranked on the basis of this parameter, in the descending order and divide into two groups “Top 50 percent” and “Bottom 50 percent”. The companies were analyzed on the basis of the study design specified above.

**Absolute Turnover for the year 2008-09:** The 32 companies which constituted the select data set were ranked on the basis of this parameter, in the descending order and divide into two
groups “Top 50 percent” and “Bottom 50 percent”. The companies were analyzed on the basis of the study design specified above.

**Growth rate of profit:** The rate of growth of profit was calculated as follows: \( \sqrt[3]{\frac{a_3}{a_1}} - 1 \), where \( a_3 \) denotes profit for the year 2008-09, \( a_1 \) denotes profit for the year 2006-07. The 32 companies which constituted the select data set were ranked on the basis of the rate of the rate of growth of profit, in the descending order and divide into two groups “Top 50 percent” and “Bottom 50 percent”. The companies were analyzed on the basis of the study design specified above.

**Growth rate of turnover:** The rate of growth of turnover was calculated as follows: \( \sqrt[3]{\frac{b_3}{b_1}} - 1 \), where \( b_3 \) denotes turnover for the year 2008-09, \( b_1 \) denotes turnover for the year 2006-07. The 32 companies which constituted the select data set were ranked on the basis of the rate of the rate of growth of turnover, in the descending order and divide into two groups “Top 50 percent” and “Bottom 50 percent”. The companies were analyzed on the basis of the study design specified above.

**Sectoral divisions:** The 32 companies which constituted the select data were grouped on the basis of their sectors. Each sectoral group was analyzed on the basis of the study design specified above.

6. 4. Methodology

6.4.1. Private Sector Companies

With respect to **Presence Category** we calculated the proportion of companies who had disclosed CSR information in the corporate websites, in the annual reports, in both corporate websites as well as in the annual reports and also with respect to absence of CSR information both in the company’s corporate websites and in their annual reports under all the parameters. For **Situation of CSR Information Category** we calculated the proportion of companies who had a “primary link” to CSR information on their “corporate homepage”, “primary link” to CSR information in their “sections” and “primary link to CSR information in their subsections” under all the parameters. To examine the association between the attributes identified under the Presence Category and Situation Category and also to establish a pattern across deciles, **Pearson’s Correlation Analysis** was performed under each of the five parameters set.

The proportion of companies whose format of CSR presentation was primarily “text”, whose format of CSR presentation was primarily visual, whose format of CSR presentation was primarily multimedia and who had inclusion of interactive features in their CSR presentation were calculated under all the parameters with respect to **Format of CSR Presentation Category**. To examine the relationship between each of the attributes identified under this category and also to establish a pattern which could be upward, downward or random across deciles, **Pearson’s Correlation Analysis** was performed under each of the five parameters set.

Under the **Additional Resource Category**, in order to analyze and identify a pattern across deciles we first calculated the proportion of companies who had communicated information to the stakeholders pertaining to Achievements/accolades, Press News, CSR event calendar, CSR spotlights/news, Testimonials, Interviews/speeches and CSR case studies/newsletters under each of the five parameters set and then applied **Pearson’s Correlation Analysis** under each of the five parameters set.

To analyze the richness of the content provided by the companies with respect to their CSR involvement for each of the attributes identified we calculated the proportion of companies under each of the five parameters set. **Pearson’s Correlation Analysis** was performed under each of the five parameters set to establish a pattern across deciles for private sector companies.
With respect to the field of activity/activities engaged in by the companies and disclosed in their corporate websites, the proportion of companies was calculated under each of the five parameters set. To examine the relationship between each of the attributes identified under this category and also to establish a pattern across deciles, Pearson’s Correlation Analysis was performed under each of the five parameters set. The Rank Correlation was also conducted to measure the strength of association between two decile sets with respect to ranks assigned to each of the CSR activity under all the parameters.

For communication of their responsiveness to the society and environment generally in the various segments of the annual reports proportion of companies was calculated under each of the five parameters set. To examine the relationship between each of the attributes identified under this category and also to establish a pattern across deciles, Pearson’s Correlation Analysis was performed under each of the five parameters set.

With respect to the field of activity/activities engaged in by the companies and disclosed in their annual reports for the above mentioned study period the proportion of companies was calculated under each of the five parameters set. To examine the relationship between each of the attributes identified under this category and also to establish a pattern across deciles, Pearson’s Correlation Analysis was performed under each of the five parameters set.

Regarding the Extent of Information Category we divided it into three parts. In the first part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR in the various segments of their annual reports. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR in the various segments of their annual reports under each of the five parameters set. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR activities in the various segments of their annual reports under each of the five parameters set. Co-efficient of Variance was also calculated with respect to the sentences spent in the various segments of their annual reports to study the level of consistency or dispersion under each of the five parameters set. Pearson’s Correlation Analysis was conducted to establish a pattern with respect to the average number of sentences spent to describe about their responsiveness towards CSR in the various segments of their annual reports under each of the five parameters set. Similarly Pearson’s Correlation Analysis was also conducted to establish a pattern with respect to the coefficient of variance regarding the extent of information disclosed and communicated in the various segments of their annual reports under each of the five parameters set.

In the second part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR activities in the various segments of their annual reports. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR activities in the various segments of their annual reports under each of the five parameters set. Co-efficient of Variance was also calculated with respect to the sentences spent in the various segments of their annual reports to study the level of consistency or dispersion under each of the five parameters set. Pearson’s Correlation Analysis was conducted to establish a pattern with respect to the average number of sentences spent to describe about their responsiveness towards CSR activities in the various segments of their annual reports under each of the five parameters set. Similarly Pearson’s Correlation Analysis was also conducted to establish a pattern with respect to the coefficient of variance regarding the extent of information disclosed and communicated in the various segments of their annual reports regarding the CSR activities under each of the five parameters set.
the extent of information disclosed and communicated in the various segments of their annual reports regarding the CSR activities under each of the five parameters set.

In the third part we calculated the numbers of sentences the companies have dedicated to describe about the CSR activities adopted by them and communicated in their corporate websites. We calculated the average sentences (mean) spent on the various fields of CSR activities disclosed by the companies in their corporate websites with respect to all decile groups. Co-efficient of Variance was also calculated with respect to the sentences spent on various fields of activities to study the level of consistency or dispersion. Pearson’s Correlation Analysis was conducted to establish a pattern with respect to the average number of sentences spent on the various CSR activities by the companies across deciles. Similarly Pearson’s Correlation Analysis was also conducted to establish a pattern with respect to the coefficient of variance regarding the extent of information disclosed and communicated by the companies in their corporate websites about the various field of CSR activities undertaken by them across deciles. A Multiple Regression Analysis was conducted to identify those attributes in the form of CSR activities that had a significant impact on the deciles, and the levels at which they had a significant impact on the deciles where Level 1 indicated (Very high level), Level 2 (High level), Level 3 (Medium Level) and Level 4 (Low Level). For conducting the regression analysis, we re-calculated the average sentences (mean) spent by the companies on various CSR activities that they were responsive to for all the deciles under the parameters specified above by removing the outliers. The general model which is used in this Conjoint Analysis is specified as under:

$$\text{rank} = \alpha_0 + \alpha_1 \text{ED}_1 + \alpha_2 \text{ED}_2 + \alpha_3 \text{ED}_3 + \alpha_4 \text{H}_1 + \alpha_5 \text{H}_2 + \alpha_6 \text{H}_3 + \alpha_7 \text{EN}_1 + \alpha_8 \text{EN}_2 + \alpha_9 \text{EN}_3 + \alpha_{10} \text{DR}_1 + \alpha_{11} \text{DR}_2 + \alpha_{12} \text{DR}_3 + \alpha_{13} \text{EM}_1 + \alpha_{14} \text{EM}_2 + \alpha_{15} \text{EM}_3 + \alpha_{16} \text{DW}_1 + \alpha_{17} \text{DW}_2 + \alpha_{18} \text{DW}_3 + \alpha_{19} \text{RU}_1 + \alpha_{20} \text{RU}_2 + \alpha_{21} \text{RU}_3 + \alpha_{22} \text{EMP}_1 + \alpha_{23} \text{EMP}_2 + \alpha_{24} \text{EMP}_3 + \alpha_{25} \text{UU}_1 + \alpha_{26} \text{UU}_2 + \alpha_{27} \text{UU}_3 + \alpha_{28} \text{O}_1 + \alpha_{29} \text{O}_2 + \alpha_{30} \text{O}_3 + \text{error}$$

where, where, rank = ordinal scaling of the parameters( parameters defined by absolute profit, absolute turnover, growth rate of profit and growth rate of turnover) with highest integer corresponding to lowest values of the parameters, next highest integer for the next lowest value of the parameters and so on, $\alpha_0 =$ Constant term, $\text{ED}_i =$ the level of education, $\text{H}_i =$ the level of health, $\text{EN}_i =$ the level of environment, $\text{DR}_i =$ the level of disaster relief, $\text{EM}_i =$ the level of employability, $\text{DW}_i =$ the level of drinking water and sanitation, $\text{RU}_i =$ the level of rural upliftment, $\text{EMP}_i =$ the level of empowerment, $\text{UU}_i =$ the level of urban upliftment, $\text{O}_i =$ the level of other activities and Epsilon ($\epsilon$) = error or random term . (correction done)

It is to be noted here that only three levels (out of four as specified above ) have been considered so as to avoid the problem of multicollinearity and in all cases coefficients associated with the fourth level of CSR activities is calculated as sum total of the coefficients associated with all the other three levels of other CSR activities.

Once the significant activities were identified, conjoint analysis was performed to:

- To estimate the relative importance attached to the significant CSR activities by the deciles, deciles characterized on the basis of absolute profit, absolute turnover, growth rate of turnover and growth rate of profit.
- To estimate the relative importance attached to different levels of the CSR activities by the deciles, deciles characterized on the basis of absolute profit, absolute turnover, growth rate of turnover and growth rate of profit.
2. Divided the arrays into 4 parts (Quartile division) and define the 1st Quartile as Level 1 (Very high level), 2nd as Level 2 (High level), 3rd as Level 3 (Medium Level) and 4th as Level 4 (Low Level). In this way, Values are transformed into a new data set which was in terms of 1, 2, 3, and 4.

3. Ranked the companies according to Turnover / Profit / Growth rate of Turnover / Growth rate of Profit.

4. The final data set appeared as follows:

<table>
<thead>
<tr>
<th>Name of the Organisation</th>
<th>1. Rank (w.r.t. parameters specified above)</th>
<th>Level of Attribute (in terms of 1, 2, 3, 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>..............</td>
</tr>
<tr>
<td></td>
<td></td>
<td>..............</td>
</tr>
</tbody>
</table>

Ai : ith Attribute

5. This analysis was repeated for each of the deciles under the above specified parameters.

6.4.2. Public Sector Companies

With respect to *Presence Category* we calculated the proportion of companies, who had disclosed CSR information in the corporate websites, in the annual reports, in both corporate websites as well as in the annual reports and also with respect to absence of CSR information both in the company’s corporate websites and in their annual reports under all the parameters.

For *Situation of CSR information category* we calculated the proportion of companies, who had a “primary link” to CSR information on their “corporate homepage”, “primary link” to CSR information in their “sections” and “primary link to CSR information in their subsections” under all the parameters.

We calculated the proportion of companies, whose format of CSR presentation was primarily “text”, whose format of CSR presentation was primarily visual, whose format of CSR presentation was primarily multimedia and who had inclusion of interactive features in their CSR presentation under all the parameters with respect to *Format of CSR Presentation Category*.

Regarding *Additional Resource Category* we calculated the proportion of companies who had communicated information to the stakeholders pertaining to Achievements/accolades, Press News, CSR event calendar, CSR spotlights/news, Testimonials, Interviews/speeches and CSR case studies/newsletters under each of the five parameters set.

To analyze the richness of the content provided by the companies with respect to their CSR involvement for each of the attributes identified we calculated the proportion of companies under each of the five parameters set.

With respect to the field of activity/activities engaged in by the companies and disclosed in their corporate websites, the proportion of companies was calculated under each of the five parameters set.
With respect to the field of activity/activities engaged in by the companies and disclosed in their corporate websites, the proportion of companies was calculated under each of the five parameters set.

For communication of their responsiveness to the society and environment in general in the various segments of the annual reports proportion of companies was calculated under each of the five parameters set.

With respect to the field of activity/activities engaged in by the companies and disclosed in their annual reports for the above mentioned study period the proportion of companies was calculated under each of the five parameters set.

Regarding the Extent of Information Category we divided it into three parts. In the first part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR generally in the various segments of their annual reports. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR in the various segments of their annual reports under each of the five parameters set. Co-efficient of Variance was also calculated with respect to the sentences spent in the various segments of their annual reports to study the level of consistency or dispersion under each of the five parameters set.

In the second part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR activities in the various segments of their annual reports. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR activities in the various segments of their annual reports under each of the five parameters set. Co-efficient of Variance was also calculated with respect to the sentences spent in the various segments of their annual reports to study the level of consistency or dispersion under each of the five parameters set.

In the third part we calculated the numbers of sentences the companies have dedicated to describe about their responsiveness towards CSR activities disclosed by the companies in their corporate websites. We calculated the average sentences (mean) spent to describe about their responsiveness towards CSR activities disclosed by the companies in their corporate websites. Co-efficient of Variance was also calculated with respect to the sentences spent in various fields of activities to study the level of consistency or dispersion.

A Multiple Regression Analysis was conducted to identify those attributes in the form of CSR activities that had a significant impact on the “Top 50 percent” and the “Bottom 50 percent” companies and the levels at which they had a significant impact on the two groups where Level 1 indicated (Very high level), Level 2 (High level), Level 3 (Medium Level) and Level 4 (Low Level). For conducting the regression analysis, we re-calculated the average sentences (mean) spent by the companies on various CSR activities that they were responsive to for all the deciles under the parameters specified above by removing the outliers. The general model which is used in this Conjoint Analysis is specified as under:

\[
\text{rank} = \alpha_0 + \alpha_1 \text{ED} + \alpha_2 \text{ED}_1 + \alpha_3 \text{ED}_2 + \alpha_4 \text{H}_1 + \alpha_5 \text{H}_2 + \alpha_6 \text{H}_3 + \alpha_7 \text{EN} + \alpha_8 \text{EN}_1 + \alpha_9 \text{EN}_2 + \alpha_{10} \text{DR}_1 + \alpha_{11} \text{DR}_2 + \alpha_{12} \text{DR}_3 + \alpha_{13} \text{EMP}_1 + \alpha_{14} \text{EMP}_2 + \alpha_{15} \text{EMP}_3 + \alpha_{16} \text{UU}_1 + \alpha_{17} \text{UU}_2 + \alpha_{18} \text{UU}_3 + \alpha_{19} \text{O}_1 + \alpha_{20} \text{O}_2 + \alpha_{21} \text{O}_3 + \text{error}, \text{corrections done}
\]

where, \( \text{rank} \) = ordinal scaling of the parameters( parameters defined by absolute profit, absolute turnover, growth rate of profit and growth rate of turnover) with highest integer corresponding to lowest values of the parameters, next highest integer for the next lowest value of the parameters and so on, \( \alpha_0 \) = Constant term, \( \text{ED}_i \) the level of education, \( \text{H}_i \)
the level of health, \( EN_i \), the level of environment, \( DR_i \), the level of disaster relief, \( EM_i \), the level of employability, \( DW_i \), the level of drinking water and sanitation, \( RU_i \), the level of rural upliftment, \( EMP_i \), the level of empowerment, \( UU_i \), the level of urban upliftment, \( O_i \), the level of other activities and Epsilon \((\varepsilon) = \text{error or random term}. \)

It is to be noted here that only three levels (out of four as specified above) have been considered so as to avoid the problem of multicollinearity and in all cases coefficients associated with the fourth level of CSR activities is calculated as sum total of the coefficients associated with all the other three levels of other CSR activities.

Once the significant activities were identified, *conjoint analysis* was performed on similar grounds like private sector companies (refer to section 6.4.1) to:

- To estimate the relative importance attached to the significant CSR activities by the “Top50 percent” and the “Bottom 50 percent” companies.
- To estimate the relative importance attached to different levels of the CSR activities by the “Top50 percent” and the “Bottom 50 percent” companies. Like the private sector companies the same steps were followed with respect to public sector companies regarding *Conjoint analysis*.

With the framing of the Data Sources, Study Design, Sample Frame and selection of the statistical tools to conduct our study the next step was to analysis the Private Sector Companies. So findings and analysis of the Private Sector Companies would be the focal point of the next chapter.