

**CORPORATE SOCIAL RESPONSIBILITY IN INDIA: A
STUDY OF DISCLOSURES AND RELEVANCE**

Dissertation

**Submitted to the Punjab Agricultural University
in partial fulfillment of the requirements
for the degree of**

**DOCTOR OF PHILOSOPHY
in
BUSINESS ADMINISTRATION
(Minor Subject: Economics)**

By

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(L-2013-BS-64-D)**

**School of Business Studies
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CERTIFICATE I

This is to certify that the dissertation entitled, “**Corporate Social Responsibility in India: A Study of Disclosures and Relevance**” submitted for the degree of Ph.D., in the Subject of **Business Administration** (Minor subject: **Economics**) of the Punjab Agricultural University, Ludhiana, is a bonafide research work carried out by **Amritjot Kaur (L-2013-BS-64-D)** under my supervision and that no part of this dissertation has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

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ABSTRACT

The present study was undertaken with the objectives to analyze corporate social responsibility disclosures made by selected Indian companies; to study the relationship between corporate social responsibility and financial performance of selected companies; and to develop case studies regarding corporate social responsibility initiatives undertaken by selected companies. First two objectives were achieved by analyzing secondary data from annual reports of 137 companies for a period of ten years from 2007-08 to 2016-17. Companies were selected on the basis of market capitalization from CNX 500 index. For achieving third objective, both primary and secondary data were collected for selected five companies having manufacturing facilities in North India. Content analysis, mean score, standard deviation, trend analysis, analysis of variance and panel data regression were used for analysis. The results highlighted that most of Indian companies made corporate social responsibility disclosures in their annual reports over selected time period. Also, it was observed that disclosures have increased continuously across all sectors and industry groups over the time period. Further, it was found that financial disclosures are gaining popularity over the years but still qualitative disclosures are most favored and preferred by all the companies. It was found that maximum disclosures were in the 'community development' and 'human resource' themes, while least amount of disclosures was made in 'emission of carbon and harmful gases' theme. Further, the relationship between corporate social responsibility and financial performance indicators (return on assets, return on equity and net profit margin) was investigated using panel data regression. The results highlighted that relationship between corporate social responsibility and return on equity as well as net profit margin was significant and negative, while no significant relationship was found between return on assets and corporate social responsibility. However, results on relationship between financial performance indicators and corporate social responsibility with one year, two years and three years lag were significant and negative with only return on equity. It was observed that the selected companies (for case studies) were actively involved in social responsibility initiatives mostly around their manufacturing units. Ambuja Cements Limited and Dabur India Limited were undertaking appreciable CSR initiatives. Based on the findings of the study it is recommended that instead of duplicating similar efforts the companies in India should think innovatively and initiate projects to ensure sustainable development to create a bigger impact on the society. The companies should also widen up their area of intervention by taking up social responsibility projects not only for the communities that live around its manufacturing plants but also for other needy communities living in other parts of the country.

Keywords: Corporate social responsibility; Sustainability; Society; Content analysis; Community development; Disclosures

Signature of Major Advisor

Signature of the student

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ਮੌਜੂਦਾ ਅਧਿਐਨ ਦੇ ਉਦੇਸ਼ ਚੌਣਵੀਆਂ ਭਾਰਤੀ ਕੰਪਨੀਆਂ ਵੱਲੋਂ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਪ੍ਰਤੀ ਕੀਤੇ ਖੁਲਾਸਿਆਂ ਦਾ ਵਿਸ਼ਲੇਸ਼ਣ ਕਰਨਾ: ਇਨ੍ਹਾਂ ਕੰਪਨੀਆਂ ਦੀ ਵਿੱਤੀ ਕਾਰਗੁਜ਼ਾਰੀ ਅਤੇ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਵਿਚਲੇ ਸਬੰਧ ਦਾ ਅਧਿਐਨ ਕਰਨਾ ਅਤੇ ਇਨ੍ਹਾਂ ਕੰਪਨੀਆਂ ਵੱਲੋਂ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਪ੍ਰਤੀ ਕੀਤੀਆਂ ਪਹਿਲਕਦਮੀਆਂ ਦੀ ਕੇਸ ਸਟੱਡੀ ਕਰਨਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਪਹਿਲੇ ਦੋ ਉਦੇਸ਼ਾਂ ਦੀ ਪੂਰਤੀ ਸਾਲ 2007-08 ਤੋਂ ਸਾਲ 2016-17 ਦੇ ਦਸ ਸਾਲ ਦੇ ਅਰਸੇ ਦੌਰਾਨ 137 ਕੰਪਨੀਆਂ ਦੀਆਂ ਸਾਲਾਨਾ ਰਿਪੋਰਟਾਂ ਦੇ ਦੂਜੇ ਡੈਟੇ ਦੇ ਵਿਸ਼ਲੇਸ਼ਣ ਤੋਂ ਕੀਤੀ ਗਈ ਹੈ। ਇਨ੍ਹਾਂ ਕੰਪਨੀਆਂ ਦੀ ਚੋਣ ਸੀ.ਐਨ.ਐਕਸ 500 ਇੰਡੈਕਸ ਤੋਂ ਮੰਡੀ ਪੂੰਜੀਕਰਨ ਦੇ ਆਧਾਰ ਤੇ ਕੀਤੀ ਗਈ ਹੈ। ਤੀਜੇ ਉਦੇਸ਼ ਦੀ ਪੂਰਤੀ ਲਈ ਉੱਤਰੀ ਭਾਰਤ ਵਿਚਲੀਆਂ ਪੰਜ ਚੌਣਵੀਆਂ ਕੰਪਨੀਆਂ ਜਿਨ੍ਹਾਂ ਕੋਲ ਨਿਰਮਾਣ/ਉਤਪਾਦਨ ਦੀ ਸਹੂਲਤ ਹੈ, ਤੋਂ ਮੁੱਢਲਾ ਅਤੇ ਦੂਜੇ ਡੈਟਾ ਇਕੱਤਰ ਕੀਤਾ ਗਿਆ ਹੈ। ਸਮੁੱਚੇ ਵਿਸ਼ਲੇਸ਼ਣ ਲਈ ਔਸਤ ਸਕੋਰ, ਸਟੈਂਡਰਡ ਡੇਵੀਏਸ਼ਨ, ਰੁਝਾਨ ਵਿਸ਼ਲੇਸ਼ਣ, ਵੇਰੀਏਂਸ ਵਿਸ਼ਲੇਸ਼ਣ ਅਤੇ ਪੈਨਲ ਡੈਟਾ ਦੇ ਵਿਘਟਨਾਤਮਕ ਨੂੰ ਲਿਆ ਗਿਆ ਹੈ। ਸਰਵੇਖਣਾਂ ਤੋਂ ਸਪਸ਼ਟ ਹੋਇਆ ਕਿ ਜਿਆਦਾਤਰ ਭਾਰਤੀ ਕੰਪਨੀਆਂ ਨੇ ਚੌਣਵੇਂ ਸਮੇਂ ਦੀਆਂ ਸਲਾਨਾ ਰਿਪੋਰਟਾਂ ਵਿੱਚ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਪ੍ਰਤੀ ਖੁਲਾਸੇ ਕੀਤੇ ਹਨ। ਇਹ ਵੀ ਵੇਖਣ ਨੂੰ ਮਿਲਿਆ ਕਿ ਲਗਭਗ ਸਾਰੇ ਖੇਤਰਾਂ ਅਤੇ ਉਦਯੋਗਿਕ ਸਮੂਹਾਂ ਵਿੱਚ ਇਨ੍ਹਾਂ ਖੁਲਾਸਿਆਂ ਦਾ ਲਗਾਤਾਰ ਵਾਧਾ ਹੋਇਆ ਹੈ। ਇਸ ਦੇ ਨਾਲ ਹੀ ਇਹ ਵੀ ਸਪਸ਼ਟ ਹੋਇਆ ਕਿ ਸਮੇਂ ਦੇ ਬੀਤਣ ਨਾਲ ਵਿੱਤੀ ਖੁਲਾਸੇ ਪਸੰਦੀਦਾ ਬਣਦੇ ਜਾ ਰਹੇ ਹਨ ਪਰ ਮਿਆਰੀ ਖੁਲਾਸਿਆਂ ਨੂੰ ਸਾਰੀਆਂ ਕੰਪਨੀਆਂ ਵੱਲੋਂ ਵੱਧ ਤਰਜੀਹ ਦਿੱਤੀ ਜਾਂਦੀ ਹੈ। ਇਸ ਅਧਿਐਨ ਤੋਂ ਸਪਸ਼ਟ ਹੋਇਆ ਕਿ ਇਨ੍ਹਾਂ ਵਿੱਚੋਂ ਜਿਆਦਾਤਰ ਖੁਲਾਸੇ ਭਾਈਚਾਰਕ ਵਿਕਾਸ ਅਤੇ ਮਾਨਵ ਸਰੋਤ ਵਿਸ਼ਿਆਂ ਵਾਲੇ ਹਨ ਜਦੋਂ ਕਿ ਕਾਰਬਨ ਦੇ ਰਿਸਾਅ ਅਤੇ ਹਾਨੀਕਾਰਕ ਗੈਸਾਂ ਦੇ ਵਿਸ਼ੇ ਵਾਲੇ ਬਹੁਤ ਘੱਟ ਖੁਲਾਸੇ ਹਨ। ਅਧਿਐਨ ਦੌਰਾਨ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਅਤੇ ਵਿੱਤੀ ਕਾਰਗੁਜ਼ਾਰੀ ਨੂੰ ਦਰਸਾਉਂਦੇ ਸੰਕੇਤਾਂ (ਰਿਟਰਨ ਆਨ ਐਸਟ, ਰਿਟਰਨ ਆਨ ਇਕੁਇਟੀ ਅਤੇ ਨੈੱਟ ਪ੍ਰੋਫਿਟ ਮਾਰਜਿਨ) ਵਿਚਲੇ ਸਬੰਧਾਂ ਨੂੰ ਪੈਨਲ ਡੈਟਾ ਵਿਘਟਨਾਤਮਕ ਰਾਹੀਂ ਘੋਖਿਆ ਗਿਆ। ਇਨ੍ਹਾਂ ਨਤੀਜਿਆਂ ਤੋਂ ਸਪਸ਼ਟ ਹੋਇਆ ਕਿ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਨਾਲ ਰਿਟਰਨ ਆਨ ਇਕੁਇਟੀ ਅਤੇ ਨੈੱਟ ਪ੍ਰੋਫਿਟ ਮਾਰਜਿਨ ਦਾ ਆਪੋ ਵਿਚ ਬੜਾ ਮਹੱਤਵਪੂਰਨ ਅਤੇ ਨਾਂਹ ਮੁਖੀ ਰਿਸ਼ਤਾ ਹੈ ਜਦੋਂ ਕਿ ਰਿਟਰਨ ਆਨ ਐਸਟ ਦਾ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਨਾਲ ਕੋਈ ਅਹਿਮ ਸਬੰਧ ਨਹੀਂ ਹੈ। ਇਹ ਵੀ ਸਪਸ਼ਟ ਹੋ ਗਿਆ ਕਿ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਅਤੇ ਰਿਟਰਨ ਆਨ ਇਕੁਇਟੀ ਦਾ ਕ੍ਰਮਵਾਰ ਪਿਛਲੇ ਇੱਕ ਸਾਲ, ਪਿਛਲੇ ਦੂਜੇ ਸਾਲ ਅਤੇ ਪਿਛਲੇ ਤੀਜੇ ਸਾਲ ਦੌਰਾਨ ਅਹਿਮ ਅਤੇ ਨਾਕਾਰਤਮਕ ਸਬੰਧ ਰਿਹਾ ਹੈ। ਇਹ ਵੀ ਵੇਖਣ ਵਿੱਚ ਆਇਆ ਹੈ ਕਿ ਚੌਣਵੀਆਂ ਕੰਪਨੀਆਂ ਆਪਣੇ ਨਿਰਮਾਣੀ/ ਉਤਪਾਦਨ ਇਕਾਈਆਂ ਦੁਆਲੇ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਨਿਭਾਉਣ ਵਿੱਚ ਉਤਸੁਕਤਾ ਨਾਲ ਪਹਿਲਕਦਮੀਆਂ ਕਰਦੀਆਂ ਸਨ। ਅੰਬੂਜਾ ਸੀਮੇਂਟ ਲਿਮਿਟਡ ਅਤੇ ਡਾਬਰ ਇੰਡੀਆ ਲਿਮਿਟਡ ਸਲਾਹੁਣਯੋਗ ਕਾਰਪੋਰੇਟ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਨਿਭਾਅ ਰਹੀਆਂ ਸਨ। ਕੰਪਨੀਆਂ ਨੂੰ ਆਪਣਾ ਘੇਰਾ ਸਿਰਫ ਆਪਣੇ ਨਿਰਮਾਣ ਯੂਨਿਟ ਇਕਾਈ ਦੇ ਪਾਸ ਰਹਿੰਦੇ ਲੋਕਾਂ ਲਈ ਹੀ ਸਮਾਜਿਕ ਜ਼ਿੰਮੇਵਾਰੀ ਪ੍ਰੋਜੈਕਟ ਨਾ ਲਗਾ ਕੇ ਦੇਸ਼ ਦੇ ਹੋਰਨਾਂ ਹਿੱਸਿਆਂ ਵਿੱਚ ਵੀ ਜ਼ਰੂਰਤਮੰਦ ਲੋਕਾਂ ਲਈ ਕੰਮ ਕਰਕੇ ਆਪਣਾ ਘੇਰਾ ਵਿਸ਼ਾਲ ਕਰਨਾ ਚਾਹੀਦਾ ਹੈ।

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CHAPTER I

INTRODUCTION

In present era the concept of corporate social responsibility has been grabbing lots of attention all around the world. Extreme climatic alterations and environmental degradation along with rising frequency of scams and frauds have made this management concept even more relevant in the current scenario. World Bank approximated that globally \$158 trillion worth of assets are at risk due to increased natural disasters resulting from the climate change thus causing massive physical destruction, hefty economic costs, and significant loss of life (Winston 2016). So there is mounting concern among masses regarding the impact of business on society and environment. Corporations in today's globalized world have acquired a size bigger than the nations and have become all the more influential. According to Fortune Global 500 report, revenue of top 500 global corporations equates to almost 37 percent of world GDP (Henderson 2018). Hence owing to tremendous impact of business houses on economic policies all around the world there are lot of expectations from business houses to resolve various social issues.

With increasing demands from several stakeholders, there is a persistent rise in companies undertaking socially responsible projects. In an interview with Harvard Business Review (HBR) regarding "The Future Economy Project", Paul Polman who is CEO of Unilever asserted that "The purpose of business is first and foremost to serve society. It is, after all, not possible to have a strong, functioning business in a world of increasing inequality, poverty, and climate change". Very recently Larry Fink the CEO of Black Rock, which is world's largest asset management firm wrote a letter to companies in which his firm makes investment demanding "every company must not only deliver financial performance, but also show how it makes a positive contribution to society" (Serafeim 2018). In 2017 Pablo Isla of Spanish retailer Inditex, was ranked the best performing CEO by HBR owing to his performance on both financial and social parameters. "Measured on financial returns alone, Isla comes 18th in our ranking; his company's performance on environmental, social, and governance (ESG) factors, which count for 20% of a leader's score, propelled him to the top spot"(Harvard Business Review 2017).

1.1 Definitions and Evolution of Corporate Social Responsibility (CSR)

Due to the ever evolving nature of the concept of CSR there is no single definition appropriate enough to explain it. Depending upon political and economic policy of the country, nature of industry, prevalent social issues and other features, CSR means different things to different companies in different economies. Its definition and meaning has been changing and improving over time since its origin depending upon the economic and social scenario of the time period being addressed. Carroll submitted that, Howard R. Bowen who

marked beginning of modern era of CSR by publishing his book *Social Responsibilities of the Businessman* should be called the “Father of Corporate Social Responsibility” (Carroll 1999). Bowen (1953) gave an initial definition of the social responsibilities of businessmen as “It refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society.”

In his book entitled *Business and Society*, McGuire (1963) defined social responsibility as “The idea of social responsibilities supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations.” Another book by Davis and Blomstrom (1966) named *Business and its Environment* defined social responsibility as “Social responsibility, therefore, refers to a person’s obligation to consider the effects of his decisions and actions on the whole social system. Businessmen apply social responsibility when they consider the needs and interest of others who may be affected by business actions. In so doing, they look beyond their firm’s narrow economic and technical interests.”

Later in a book titled *Corporate Social Responsibilities*, Walton (1967) gave a fundamental definition to CSR as “In short, the new concept of social responsibility recognizes the intimacy of the relationships between the corporation and society and realizes that such relationships must be kept in mind by top managers as the corporation and the related groups pursue their respective goals.” Fitch (1976) defined CSR as “Corporate social responsibility is defined as the serious attempt to solve social problems caused wholly or in part by the corporation.” Carroll (1979) gave another famous definition of CSR which even served as a basic component for corporate social performance model “The social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time.”

Another definition contributed by Epstein (1987) states “Corporate social responsibility relates primarily to achieving outcomes from organizational decisions concerning specific issues or problems which (by some normative standard) have beneficial rather than adverse effects on pertinent corporate stakeholders. The normative correctness of the products of corporate action has been the main focus of corporate social responsibility.” World Business Council for Sustainable Development (2000) defined CSR as “The continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.”

As per a widely accepted definition by McWilliams and Siegel (2001), CSR is defined as “Actions that appear to further some social good, beyond the interests of the firm and that which is required by law.” As per Commission of the European Communities (2003),

“CSR is the concept that an enterprise is accountable for its impact on all relevant stakeholders. It is the continuing commitment by business to behave fairly and responsibly and contribute to economic development while improving the quality of life of the work force and their families as well as of the local community and society at large.”

Now a day's individual companies are developing their own CSR vision and mission statements aligning their business goals and societal goals, thus adjusting to the demands of society and community. In India, CSR has been made mandatory by government along with recommending activities on which money should be spent in order to qualify as CSR expenditure. So activities that be counted as a part of CSR by a company in developing country like India may be entirely different from activities followed by subsidiary of same company in a different country. Hence no single universal definition can be attributed to the concept of CSR as a whole as it keeps developing gradually pertaining to existing societal problems in its region of context and need of the hour.

1.2 Development of various dimensions and standards of CSR

Over the last few decades, a number of viewpoints determining various dimensions of CSR have emerged. Carroll has recognized economic, legal, ethical and discretionary responsibilities as major dimensions of CSR (Carroll 1979). Similarly Dahlsurd analyzed 37 definitions of CSR and identified five dimensions of CSR namely, voluntary dimension, stakeholder dimension, economic dimension, social dimension and environmental dimension (Dahlsurd 2008). Also various voluntary regulations have contributed towards development of CSR dimensions and standards all around the globe over time. With a special focus towards economic, social and environmental responsibilities of the companies, a few initiatives at global level which have contributed towards the promotion and standardization of various aspects of companies' social responsibilities are:

International Labour Organization (ILO)¹: The ILO was founded in 1919 and became the first specialized agency of United Nations in 1946. It brings together governments, employers and workers representatives of 187 member states to set labor standards, develop policies and devise programmes to promote decent work for all women and men. The main aim of the ILO is to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues. ILO adopted Declaration on Fundamental Principles and Rights at Work in 1998 to commit member states to promote freedom of association and effective recognition of the rights to collective bargaining, to eliminate forced and compulsory labour, to abolish child labour and to eliminate discrimination in respect of employment and occupation.

¹ <http://www.ilo.org/global/about-the-ilo/mission-and-objectives/lang--en/index.html>

Universal Declaration of Human Rights (UDHR)²: The UDHR is a milestone document in the history of human rights. Drafted by representatives with different legal and cultural backgrounds from all regions of the world, the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 (General Assembly resolution 217 A) as a common standard of achievements for all peoples and all nations. It sets out the fundamental human rights to be protected universally.

United Nations Convention against Corruption (UNCAC)³: The UNCAC is the only legally binding universal anti-corruption instrument which was adopted by United Nations General Assembly on 31 October, 2003. The Convention's far-reaching approach and the mandatory character of many of its provisions make it a unique tool for developing a comprehensive response to the global problems. The vast majority of United Nations member states are parties to this Convention. The Convention covers many different forms of corruption, such as bribery, trading in influence, abuse of functions, and various acts of corruption in the private sector.

United Nations Guiding Principles on Business and Human Rights (UNGPs)⁴: The UNGPs are global standards to prevent and address the risk of adverse impacts of human rights linked to business activity. On June 16, 2011, the United Nations Human Rights Council unanimously endorsed the Guiding Principles for Business and Human Rights, making this framework the first corporate human rights responsibility initiative to be endorsed by the United Nations. The UNGPs encompass three pillars i.e. the duty of the state to protect human rights, the corporate responsibility to respect human rights and access to remedy for victims of business-related abuses outlining how states and businesses should implement the framework. The UNGPs have received wide support from states, civil society organizations, and the private sector.

United Nations Global Compact (UNGC)⁵: UNGC is the world's largest corporate sustainability initiative. This sustainability initiative is a call to the companies to align their strategies and operations with the universal principles on human rights, labour, environment and anti corruption and take actions that advance the societal goals. In September 2015, all 193 Member States of the United Nations adopted a plan to end extreme poverty, fight inequality and injustice, and protect our planet over the next 15 years. In order to make a meaningful, positive impact on the interconnected world where we live in and where our futures are inextricably linked 17 goals named Sustainable Development Goals (SDGs) are framed. These closely interlinked global goals are set out with a vision to end poverty,

² <http://www.un.org/en/universal-declaration-human-rights/>

³ <http://www.unodc.org/unodc/en/corruption/uncac.html>

⁴ <https://business-humanrights.org/en/un-guiding-principles>

⁵ <https://www.unglobalcompact.org>

hunger and inequality, and protect the Earth's natural resources by 2030.

Global Reporting Initiatives (GRI)⁶: GRI is an international independent organization formed with a vision to create a future where sustainability is integral to every organization's decision making process. It helps businesses, governments and other organizations to understand and communicate the impact of business on critical sustainability issues such as climate change, human rights, corruption and many others. GRI was founded in 1997 in Boston, USA. With thousands of reporters in over 90 countries, GRI provides the world's most widely used standards on sustainability reporting and disclosure. Sustainability reporting as promoted by GRI standards is an organizations practice of reporting publicly about its economic, environmental and social impacts and hence contributes towards the goal of sustainable development.

United Nations Framework Convention on Climate Change (UNFCCC)⁷: The UNFCCC was entered into force on 21 March 1994 with the aim to prevent "dangerous" human interference with the climate system. The Paris Agreement which is built upon this Convention came into force on 4 November 2016 and it brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. The central aim of this agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise in this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, it aims to strengthen the ability of countries to deal with the impacts of climate change through appropriate financial flows, new technology framework and enhanced capacity building framework, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives.

These global regulatory bodies have modified and influenced the territory of CSR over years. Taking motivation from these voluntary initiatives the scope of CSR has metamorphosed from time to time. These days ensuring environmental sustainability has become one of the major arenas of companies' social responsibility agenda owing to major climatic changes being experienced all around the earth.

1.3 Theories of CSR

After questioning business houses about their social responsibilities by Howard Bowen through his famous publication "Social Responsibilities of the Businessmen", mainly two entirely opposite schools of thought came into existence. These two contradicting theories were namely stockholder theory and social contract theory. However over years of

⁶ <https://www.globalreporting.org/Pages/default.aspx>

⁷ <https://unfccc.int/climate-action/introduction-climate-action>

brainstorming and experience mainly four theories gained attention which are discussed as follows:

Stockholder Theory: One of the major proponents of this line of thought is Milton Friedman who introduced this theory through his classic article “The social responsibility of business is to increase its Profits”. He argued that only responsibility of business is to maximize profits and returns for its stockholders by quoting “there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.” Hence this theory motivates business to pursue only those societal activities which may aid its objective of profit maximization. As expressed by Windsor (2001) “a leitmotif of wealth creation progressively dominates the managerial conception of responsibility”, several studies to understand the relationship between corporate social responsibility and corporate financial performance have been undertaken since years; such studies aim at building a strong business case to support taking up of social welfare activities by business. Hence this instrumental theory confers economic objectives as the motivator for social welfare activities.

Social Contract Theory: The advocates of this theory believe that business operates in a society in accordance to certain ethical and political rules of conduct. This unwritten agreement between business and society assumes that society will allow business to survive and thrive only under the condition that its actions will benefit the society in return. As business is entirely dependent on society for its various resources so it has an obligation to abide by society’s prevalent norms. This theory is controversial in nature because of its broad political elements inviting disagreements from several sections of the society. Donaldson and Dunfee later extended this theory into “Integrative Social Contract Theory” by taking into account the socio-cultural context and integrating empirical and normative aspects of management (Garriga and Mele 2004).

Stakeholder Theory: This theory was described by Richard Edward Freeman in his award-winning book “*Strategic Management: A Stakeholder Approach*”. According to Freeman (2004) stakeholders are “those groups who are vital to the survival and success of the corporation.” It includes employees, customers, suppliers, financial institutions, community, government, political parties, trade associations and trade unions along with shareholders of the company. This theory states that business has a responsibility to create as much value as possible for all its stakeholders by managing their individual interests. Garriga and Mele (2004) mentioned two basic principles presented by Emshoff and Freeman in 1978 underpinning stakeholder management; “The first is that the central goal is to achieve maximum overall cooperation between the entire system of stakeholder groups and the objectives of the corporation. The second states that the most efficient strategies for managing

stakeholder relations involve efforts, which simultaneously deal with issues affecting multiple stakeholders.” Hence it is the duty of company executives to manage the interest of all its stakeholders while aligning it towards a common goal which is central to the company.

Theory of Sustainable Development: This new term came into existence after being mentioned in *Brundtland Report* published by “World Commission on Environment and Development” in 1987. It was defined as “development that meets the needs of the present without compromising the ability of future generation to meet their own needs.” Although this report originally only included the environmental factor, the concept of “sustainable development” has since expanded to include the consideration of the social dimension as being inseparable from development (Garriga and Mele, 2004). According to World Business Council for Sustainable Development, (2000) “Sustainable development requires the integration of social, environmental, and economic considerations to make balanced judgments for the long term.” Hence this theory proposes to measure net profitability of a firm by integrating together its economic, social and environmental performance.

1.4 CSR in India

Giving charity or donation has been stressed by every religion in its holy books be it giving Dasvand⁸ in Sikhism, Zakat⁹ in Islam or Tzedakah¹⁰ in Judaism. Though concept of CSR is considered to be new in India but mentions of business being responsible for welfare of society has been observed in ancient Indian book named Arthashastra by Kautilya. Various big Indian corporate houses like Tata group, Birla group etc. have been involved in several philanthropic activities since incorporation. Apart from conducting social welfare activities at organizational level by various business houses, several reforms undertaken at macro level have shaped the current status of CSR in India. Over the years major initiatives observed in the territory of CSR in India are:

Sachar Committee Report: Sachar Committee in its “Report of the high powered expert committee on Companies and MRTP Act” in the year 1978 gave suggestions regarding social responsibilities of companies. It said that every company along with proving its worth economically will have to prove itself as a socially responsible firm as well. A company’s efforts towards the interests of the public may be judged by studying the efforts it makes in the area of its operation, the welfare of its employees, the spread of adult literacy etc. A company should also present a social report every year showing to what extent it has been able to meet its social obligations. The committee also favored “openness in corporate affairs” i.e. adequate disclosure of information for the benefit of shareholders, creditors,

⁸A Dasvandh means a tenth part and refers to the tradition followed by the Sikhs to donate one-tenth of their earnings for the well being of the society.

⁹Zakat is the compulsory giving of a set proportion of one's wealth to charity. It is the third pillar of Islam and is regarded as a type of worship and of self-purification.

¹⁰It is the Hebrew word for charity.

workers and community, in order to portray a responsible behavior. It also suggested that as majority of the population of the country lives in rural areas and its well-being is essential so a company which consciously establishes its business in such areas will certainly be held to have played a more socially responsible role even though in terms of its returns on investment it is less profitable than other companies.

Presidential Directives on Reservations¹¹: Presidential Directives have been issued by the Government of India from time to time regarding reservation for Schedule Castes, Schedule Tribes, Other Backward Classes, Persons with Disabilities and Ex- Servicemen in various Government departments and sectors in order to provide adequate opportunities for their growth.

National Voluntary guidelines on social, environmental and economic responsibilities of business (NVGs): NVGs were introduced by Ministry of Corporate Affairs, Government of India in July 2011. These NVGs serves as a guidance document for businesses of all size, ownership, sector, and geography to achieve the triple bottom line and are the revised version of the CSR (Corporate Social Responsibility) Voluntary Guidelines 2009, released in December, 2009 by the Honorable President of India at the India Corporate Week organized by the Ministry of Corporate Affairs (MCA). These NVGs are a set of 9 principles framed in order to cover a broad array of social, economic, environmental and governance issues and developmental priorities of the country.

Guidelines on Corporate Social Responsibility and Sustainability for Central Public Sector Enterprises: These were issued by Department of Public Enterprises on April 1, 2013. The earlier guidelines focused mainly on CSR activities for external stakeholders i.e. how social causes and environmental concerns could be addressed through CSR projects. Whereas, in the revised guidelines, CSR and Sustainability agenda is perceived to be equally applicable to internal stakeholders (particularly, the employees of a company), and a company's corporate social responsibility is expected to cover even its routine business operations and activities. In the new guidelines, the thrust of CSR and Sustainability is clearly on capacity building, empowerment of communities, inclusive socio-economic growth, environment protection, promotion of green and energy efficient technologies, development of backward regions, and upliftment of the marginalized and under-privileged sections of the society.

Securities and Exchange Board of India (SEBI)¹²: SEBI has issued a circular vide number SEBI/HO/CFD/CMD/CIR/P/2017/10 dated February 6,2017 making it mandatory for top 500 companies listed on both NSE and BSE to submit a Business Responsibility Report. In order to assist various stakeholders for making investment decisions companies under BRR are required to report information on areas such as environment, governance, stakeholder's

¹¹ dpe.gov.in/dpe-guidelines/reservation-polices

¹² <https://www.sebi.gov.in/>

relationships, etc. The BRR serves as an annual document to describe the efforts made by companies with regard to nine principles related to Environmental, Social and Governance (ESG) performance as framed by NGV's. The principles laid down are related to Ethics, Transparency and Accountability in conduct of business operations, wellbeing of employees, promotion of human rights, protection of environment, supporting inclusive growth and equitable development of the society, providing value to the customers, provision of safe products and protecting the interests of various stakeholders especially those who are disadvantaged, vulnerable and marginalized. Earlier in August, 2012 SEBI made it mandatory only for top 100 companies listed on NSE and BSE to include BRR as a part of their annual report and now this regulation has been extended to top 500 listed companies.

Companies Act, 2013: The Ministry of Corporate Affairs has notified in Section 135, subsections (1) and (2) of Section 469 and Schedule VII of the Companies Act, 2013 some rules related to corporate social responsibility called Companies (Corporate Social Responsibility Policy) Rules, 2014 which came into force on April 1, 2014. As per Act every company, private limited or public limited, which either has a net worth of INR 500 crore or more or a turnover of INR 1,000 crore or more or a net profit of INR 5 crore or more, needs to spend at least 2 percent of its average net profit for the immediately preceding three financial years on CSR activities. The CSR activities should not be undertaken in the normal course of business and must be with respect to any of the activities mentioned in Schedule VII of the 2013 Act. Contribution to any political party is not considered to be a CSR activity and only activities carried out in India would be considered for computing CSR expenditure. The net worth, turnover and net profits are to be computed in terms of Section 198 of the 2013 Act as per the profit and loss statement prepared by the company in terms of Section 381 (1) (a) and Section 198 of the 2013 Act.

The activities that can be undertaken by a company to fulfill its CSR obligations include eradicating hunger, poverty and malnutrition, promoting preventive healthcare, promoting education and promoting gender equality, setting up homes for women, orphans and the senior citizens, measures for reducing inequalities faced by socially and economically backward groups, ensuring environmental sustainability and ecological balance, animal welfare, protection of national heritage and art and culture, measures for the benefit of armed forces veterans, war widows and their dependents, training to promote rural, nationally recognized, Paralympics or Olympic sports, contribution to the prime minister's national relief fund or any other fund set up by the central government for socio economic development and relief and welfare of SC, ST, OBCs, minorities and women, contributions or funds provided to technology incubators located within academic institutions approved by the central government and rural development projects.

With above amendments introduced in Companies Act, 2013, India became first

country in the world to make CSR mandatory. As India in spite of being one of the fastest growing economies in the world was facing a plethora of social problems. Hence in order to address the developmental needs of country, Government made it compulsory for business houses to deliver social value.

1.5 Knowledge Gaps

Under the revised CSR guidelines there are not many research studies available examining the compliance of CSR practices by companies in India as per mandated rules and regulations by government. This study will fulfil the knowledge gap and provide new insights into the compliance by selected companies with regard to new CSR guidelines by Companies Act, 2013 and several other national and international guidelines of CSR. Also this study would analyze the relationship between CSR and financial performance by firms in India. Although there are some studies (Tsoutsoura, 2004; Choi *et al*, 2010; Saleh *et al*, 2011; Nkomani, 2013; Ferrero and Aceituno, 2015) available exploring the causal relationship between corporate social responsibility and financial performance in other countries of the world but with extensive review of literature, it was found that there is a dearth of such studies in India. This study will also document the CSR initiatives undertaken by several large companies in India while understanding the perception of stakeholders of selected companies regarding the companies' social responsibility activities. It would also help in bridging the knowledge gap on disclosure practices followed by companies in India by analyzing the content, amount and quality of CSR disclosures made by selected companies in their annual reports.

1.6 Objectives

Keeping in mind the existing gaps in literature the following objectives had been framed for conducting the research:

- To analyze corporate social responsibility disclosures made by selected Indian companies
- To study the relationship between corporate social responsibility and financial performance of selected Indian companies
- To develop case studies regarding corporate social responsibility initiatives undertaken by selected companies

CHAPTER II

REVIEW OF LITERATURE

The present study aims to analyze the corporate social responsibility disclosures made by Indian companies in their annual reports along with offering insights into the relationship between corporate social responsibility disclosures by Indian companies and their financial performance. Also it intends to explore the corporate social responsibility initiatives undertaken by companies and their implications on society and general public by developing various case studies. In this section the literature pertinent to this study has been extensively reviewed and thus presented below under the following heads:

2.1 Understanding Corporate Social Responsibility and its practices

2.2 Corporate Social Responsibility Disclosures

2.3 Relationship between Corporate Social Responsibility and Financial Performance

2.4 Case studies exploring Corporate Social Responsibility initiatives

2.1 Understanding Corporate Social Responsibility and its practices

Corporate Social Responsibility (CSR) as a concept has evolved over times with massive amount of writings and publications focussing on its various aspects. Carroll (1999) documents the history affiliated with the evolution of the concept and definition of CSR. It describes the progression in the thought of CSR from 1950s till advancements made in the construct in 1990s. Moir (2001) undertook study to develop an understanding about the meaning of CSR. It also mentioned the emerging methods of assessing corporate social performance while discussing the means and reasons for pursuing socially responsible behaviour by companies. Garriga and Mele (2004) discussed and classified various theories of CSR into four broad categories namely instrumental, political, integrative and ethical dimensions. Further the necessity to develop a new theory by integrating all four identified dimensions was emphasized.

Jamali and Mirshak (2006) explored the CSR theory practiced in developing countries by critically examining the social programmes undertaken by eight companies which are considered highly active in Lebanon. The study found non existence of clear targets, rigorous metrics and diligence in pursuing CSR among selected companies. Campbell (2007) developed an institutional theory which comprises of a number of propositions that specify the various institutional conditions under which corporations are likely to behave in a socially responsible way. Dahlsrud (2008) developed five dimensions of CSR by analyzing 37 already existing definitions of the same concept. It was found that challenge for business is not to define CSR but to understand its social construction in a specific context. Lee (2008) analyzed the conceptual evolution of theories of CSR. The study found that in future more research efforts should be made towards conceptual and theoretical reasons for changing

organizational behaviour with respect to societal orientation than on current trend of analyzing effect of CSR on profits.

Gupta and Gupta (2008) conducted a study to examine Indian corporates working in accordance with the guidelines of the Global Compact. The study found that there should be a realization that the real CSR leadership is not just putting one's own house in order, but advocating the right conditions to reward responsible practices. Das (2009) explored the contribution of center and state governments in social sector development in India. The study concluded that the social sector remained a neglected area. Carroll and Shabana (2010) described the bottom-line financial reasons guiding businesses to pursue CSR while summarizing the historical development of this perspective and discussing traditional arguments made in favour of and against this rationale. Arevalo and Aravind (2011) examined how corporations in India interpret CSR. The study found that the CSR approach that is most favored by Indian firms is the stakeholder approach and that the caring or the moral motive, followed by the strategic or profit motive, are important drivers for Indian firms to pursue CSR.

Aguinis and Glavas (2012) reviewed CSR publications extensively using 588 journal articles and 102 books and book chapters. Thus by integrating literature at institutional, organizational and individual levels a multilevel and multidisciplinary theoretical framework of CSR is developed. Nalband and Al-Amri (2013) conducted a study aimed at identifying perceptions of managers, company practices and performance of companies concerning CSR practices of listed companies in Saudi Arabia. The study supports the applicability of Carroll's Pyramid of CSR constructs and Lawrence *et al's* charity and stewardship principles. Gon and Mititelu (2016) explored the conceptual framework of CSR with a particular focus on the policy diffusion and integration in the corporate banking sector in India. The findings revealed increasing attention among the banks towards the adoption of social banking regulations and it also proved that the new CSR core values and guidelines at international level have often had little effect on CSR practices in the banking sector at the country level.

As evident from above discussion that literature on CSR is mixed exploring different aspects of the concept at different points of time. Some studies focussed on deriving a meaning of the concept, others explored practices being followed to be considered as social responsibility activities with description of their impact on communities and some more worked towards developing theories of the concept. Also certain studies tried examining social responsibilities according to international standards. Hence, various efforts have been made till date to develop a theoretical and conceptual framework to explain the concept of CSR.

2.2 Corporate Social Responsibility Disclosures

Earlier companies used to make voluntary corporate social responsibility disclosures

either out of will or to prove their worth to the community. But nowadays with growing importance of the concept of CSR, its disclosure has been mandated in certain countries. A thorough review of literature summarizes the research studies conducted till date to study the disclosure practices followed by various companies throughout the world. Tsang (1998) studied corporate social responsibility practices in banking, food and beverages and hotel industries of Singapore. The study found an increase in amount of disclosures in annual reports over time with human resources and community involvement as major themes. Belal (2001) analyzed the extent and volume of corporate social responsibility disclosures by companies in Bangladesh. It also explored the socio-political and economic context of these disclosures. It was found that companies made mandatory as well as non-mandatory disclosures and most of voluntary disclosures were either included in the director's report or in the chairman's statement. Another observation made was that although companies were making social disclosures, the quantity of information disclosed was very low and the nature of disclosure was mainly descriptive.

Baker and Naser (2000) evaluated the corporate social disclosure (CSD) practices followed by companies chosen from four different industry groupings in Jordan. It was observed that the themes most commonly disclosed were human resources and community involvement, though environmental disclosures needed more attention. Also significant differences were found among various industry groupings with respect to the amounts, methods and locations of CSD in the annual reports of the sampled companies. Hall (2002) selected five large companies from New Zealand to study their disclosure practices. The study provided valuable empirical evidences while explaining the ambiguities in corporate social responsibility practices. The study also concluded that a single theoretical perspective cannot explain the corporate social disclosures by companies. Ahmad *et al* (2003) focused on corporate social responsibility disclosures made in the annual reports of the listed companies selected across industries. The study suggested that the disclosures were biased towards making and presenting only good news disclosures and consistent with prior studies in other developing countries, quantitative or monetary and bad news disclosures were minimal.

Snider *et al* (2003) investigated the content of communications made by world's most successful firms with various stakeholders about their commitment towards socially responsible behaviour. The study using stakeholder theory analyzed the legal, ethical and moral statements made by top 50 U.S and top 50 MNCs of non - U.S. origin on their websites. Raman (2006) identified the extent and nature of social reporting in India. Empirically it analyzed the annual reports of top Indian companies using content analysis and theoretically it explored the perception of top management in this context. The qualitative and quantitative evidence suggested the seriousness of organizations in context of social reporting with most focus on product/service improvement and development of human resources.

Holder-Webb *et al* (2007) studied corporate social responsibility disclosures by using content analysis on the complete identifiable public information portfolio provided by selected firms and found that areas of particular emphasis were community matters, health and safety, diversity and human resources (HR) matters, and environmental programs. The primary venues of disclosure were mass media releases such as corporate websites and press releases, followed closely by disclosures contained in mandatory filings.

Hossain and Reaz (2007) reported the extent of voluntary disclosures by banking companies in India. The study revealed that Indian banks were disclosing a considerable amount of voluntary information and level of disclosures were significantly explained by size of firm and assets in place. Other variables like age, diversification, board composition, multiple exchange listing and complexity of business were insignificant in explaining the level of disclosure. Narwal (2007) highlighted the CSR initiatives undertaken by the Indian banking industry. The findings suggested that banks had an objective view-point and were concentrating mainly on education, balanced growth (different strata of society), health, environmental marketing and customer satisfaction as their core CSR activities while adopting an integrated approach by combining CSR with the ultimate customer satisfaction. Chatterjee and Mir (2008) explored the state of environmental reporting by Indian companies on their web sites and annual reports. It was found that despite of no regulations enforcing the disclosure of environmental information, most of the companies had disclosed environmental information and these companies had provided more environmental information on their web sites as compared to their annual reports.

Murthy and Abeysekera (2008) examined the corporate social responsibility practices and frequency of disclosures by using content analysis from annual reports of top Indian firms. The study found that firms used dual strategies in reporting their human resource and social relations to legitimize their activities to stakeholders. Azim *et al* (2009) explored the corporate social responsibility practices of firms in Bangladesh where it is a voluntary practice. It was found that companies in banking sector reported most disclosures with three-fourth of disclosures as generalized qualitative statements and more than half of them were located in director's report. Said *et al* (2009) examined the relationship between corporate governance characteristics, namely the board size, board independence, duality, audit committee, ten largest shareholders, managerial ownership, foreign ownership and government ownership and the extent of corporate social responsibility disclosure. Results indicated that only two variables were associated with the extent of disclosures, namely government ownership and audit committee.

Saleh (2009) observed in his longitudinal study to analyze the corporate social responsibility disclosure practices followed by Malaysian firms that employee relations dimension received the highest disclosure followed by product, community involvement and

environmental dimensions. It was also signified that companies should include CSRD in their annual reports because even though certain companies have been involved in social activities they did not expose such activities in their annual reports. Sobhani *et al* (2009) attempted to revisit corporate social and environmental disclosure of companies listed in Bangladesh. The study revealed that the level of disclosure in the country had improved over the last 10 years however from a global perspective the level and the extent of disclosure were meager. Most disclosures were related to human resource dimension followed by community involvement, consumers and environment.

Mio (2010) investigated the terms and conditions that facilitate the quality of sustainability, environmental and social reports of listed multi-utility companies in Italy by taking into account the emerging link between the quality of such reports and some variables namely turnover, employees, complexity, etc. This paper also highlighted the different maturity levels of companies in the application of the principles required by the main reporting models used in the world. Kansal and Singh (2012) measured the social performance of top Indian companies while also investigating the variations in corporate social responsibility disclosures practices followed by them. The study found that disclosures were mainly narrative in nature with very low social performance. Also it was observed that important global issues like water conservation, energy conservation, product safety and innovation were not addressed properly. Hamid and Atan (2011) examined the relationship between level of social responsibility disclosures and nature of ownership of Malaysian Telecommunication companies. The study found that level of disclosures increased over time and on the basis of different themes of CSR and the amount CSR disclosures by firm were highly related to the firm's ownership structure.

Branco and Delgado (2011) reviewed specifically targeted international journals to develop insights into the nature and extent of research being undertaken by Portuguese authors on corporate social responsibility disclosure. It concluded that the volume of published research in international journals was very low and in most papers with focus on CSR, the research was overwhelmingly empirical in orientation with main focus on Portugal. Hence, there is great scope for expanding the amount of such research in Portugal, as well as improving the diversity of its content and its geographical coverage. Omar and Simon (2011) investigated the disclosure behavior of listed companies in Jordan after important changes in economic and accounting regulations. The study revealed that there was a significant increase in the level of aggregate disclosure as compared to previous studies in Jordan. The extent of mandatory and voluntary disclosures was 83% and 34% respectively.

Rahman *et al* (2011) assessed the level of corporate social responsibility (CSR) disclosure of 44 government-linked companies (GLCs) listed on Bursa Malaysia and ascertained the relationship of certain company characteristic namely size, age, profitability

and leverage on the total CSR disclosure. It was found that company size was positively and significantly associated with the total disclosure whereas remaining variables were found to be insignificant in explaining the total disclosure. Rouf (2011) examined the relationship between corporate attributes and firm-specific factors and corporate social responsibility disclosures. The study found a positive relationship of level of corporate social responsibility disclosure with a higher proportion of independent non-executive directors on a board and a negative relationship with firm's size. Sen *et al* (2011) identified the existing status of environmental disclosure practices in Indian core sector companies by evaluating voluntary environmental disclosures made by them in their annual report. The study showed that the level of disclosure of environmental information varied across industries as well as companies and the information revealed in the annual reports was found to be more qualitative than quantitative.

Valmohammadi (2011) explored the degree of involvement of Iranian organizations in the concepts and domain of CSR and determined the drivers and barriers of CSR implementation in Iran. The study proved that major reasons for CSR implementation of these organizations was the increase of corporate identity and general reputation and the main barrier was general lack of knowledge or awareness of CSR. Also most of the company's efforts and activities are limited to philanthropic or sponsorship actions. Hence it was concluded that CSR is a concept that is yet to be fully understood and appreciated among these organizations. Vurro and Perrini (2011) examined the disclosure experience of Fortune 100 global companies to propose and test a model that relates the structure of CSR disclosure to corporate social performance. The paper found evidence that the level of disclosure do not improve firm's ability to manage stakeholders. However it showed that better social performers were those who increased the breadth of their disclosure to stakeholders and uniformly distributed disclosure across stakeholders.

Zakimi *et al* (2011) examined how companies' ownership structure was related to their corporate social responsibility disclosure. An increase in amount of disclosures over period of study was found and there was found to be a significant relationship between the two variables under study. Dam and Scholtens (2012) examined how different types of owners relate to CSR. The study provided empirical support for the relationship between ownership type and CSR policies in Europe. It was found that ownership by employees, individuals, and firms was associated with relatively poor corporate social policies of the firms they invested in. In contrast, the holdings by banks and institutional investors as well as those by the state appeared to be neutral in this respect.

Haji (2013) examined the corporate social responsibility disclosures made by Malaysian companies at the time of financial crises and regulatory changes and studied the factors influencing the CSR disclosures before and after the aforementioned changes. The

study found a significant increasing trend in CSR disclosures following changes in the market place. In terms of factors influencing the CSR disclosures, director ownership, government ownership and company size were found to be significant in explaining both the extent and quality of CSR disclosures. Khasharmeh and Desoky (2013) evaluated the level of on-line corporate social responsibility disclosures of companies listed in the stock markets of the Gulf cooperation council. The findings of the study indicated that industrial companies were more involved in the on-line CSR. Narwal and Singh (2013) explored the CSR practices of Indian companies followed by performing an analysis to compare the practices of companies having Indian origin with multinationals carrying out operations in India. With companies in India practicing CSR activities related to environmental marketing, sustainable development, local community support, transparency and accountability only minor difference was found between practices by Indian companies and MNCs.

Alkababji (2014) designed a study to investigate the nature of social and environmental disclosures in annual reports of corporate listed on Palestine exchange. The study found that level of disclosures was fairly low in Palestine corporations and there was a correlation between corporate social responsibility disclosures and size of firm. Bhatia and Chander (2014) studied the extent of CSR disclosure made by leading companies constituting BSE SENSEX in India. It was observed that majority of the SENSEX companies mentioned CSR in their vision and mission statements and the most disclosed categories of CSR by the Indian companies were community involvement and environment which are the real CSR issues, which should get the attention of the corporate sector. Kansal *et al* (2014) explored the relationship between a number of financial and non-financial corporate characteristics and the level of social responsibility disclosures based on an extensive sample of top Indian companies. Corporate size and industry category were found to correlate with the corporate social disclosures and the corporate reputation as recognized through awards and social ratings has also been observed to be a significant factor that influences the social disclosures made by the Indian companies.

Weber *et al* (2014) conducted an analysis to study the corporate social responsibility and sustainability performance of companies in financial sector. It was found that very less disclosures regarding CSR, business ethics, product responsibility and labor issues were made by companies in financial sector. However disclosures related to community relations were found to be significant. Singhania and Gandhi (2015) constructed a social and environmental disclosure index for Indian companies in order to examine the relationship between social and environmental disclosure and selected corporate attributes. The results indicated that location (place where the registered office of company is located); number of operations of company, turnover, sales and administration expenses, age of company, employee cost and interest paid by company were significant in determining the disclosure index of the company disclosures.

Krasodomska (2015) presented an overview of the concepts of corporate social responsibility in banks and integrated reporting. It also identified information on CSR included in the management commentaries of selected banks operating in Poland and evaluated the disclosures with regard to their quality, diversity and the ways they change over time. It was observed that banks tend to include CSR disclosures in the management commentary and they present CSR information in a diverse manner, focusing mainly on community involvement.

Vourvachis and Woodward (2015) reviewed the use of content analysis in social and environmental reporting (SER) research. It explored how the relevant literature had evolved over time. Potential explanations were developed and methodological refinements that could enhance the usefulness of content analysis methods in SER research were subsequently proposed in the study. Paredes-Gazquez *et al* (2016) identified the key challenges faced in constructing a composite index for measuring corporate social responsibility. The findings suggested that unavailability of information about corporate social responsibility, particular characteristics of this information and the weighting of indicators was the main obstacles when constructing the composite index. It highlighted that an effective composite index should have a clear objective, a solid theoretical background and a robust structure.

Based on above discussion, it has been observed that mostly companies all around the globe have made disclosures through their annual reports, which are their main source of communication with investors and other stakeholders. The disclosure practices are not same throughout the world and vary among countries. Hence, the present study intends to analyze the corporate social responsibility disclosures made by selected companies in Indian subcontinent in the light of new regulations introduced by Government of India. It also aims to study the changes experienced by Indian companies with regard to type of disclosure, amount of disclosures and nature of disclosures over a period of last ten years.

2.3 Relationship between Corporate Social Responsibility and Financial Performance

With increasing importance of CSR agenda, the literature on establishing a relationship between CSR and financial performance has been growing. With an aim to find the interrelationship between these two essential parameters various studies have been conducted till date, Abbott and Monsen (1979) developed a corporate social involvement disclosure scale based on a content analysis of the annual reports of the Fortune 500 companies. It explored the change over time of these corporations social involvement, the direction and scope of this involvement and the effect that corporate social involvement appeared to have on corporate profitability. Cochran and Wood (1984) explored the relationship between corporate social responsibility and financial performance. The average age of corporate assets was found to be highly correlated with social responsibility ranking and after controlling for this factor, there still was some correlation between corporate social responsibility and financial performance. Aupperle *et al* (1985) studied the relationship

between corporate social responsibilities and financial performance by collecting primary data using questionnaire from corporate CEOs and found that there exists no relationship between social responsibility and profitability. Specifically it was concluded that varying levels of social orientation had no correlation with performance differences.

McGuire *et al* (1988) analyzed the relationships between perceptions of firms' corporate social responsibility and measures of their financial performance. Results showed that a firm's prior performance, assessed by both stock-market returns and accounting-based measures, was more closely related to corporate social responsibility than its subsequent performance. Results also showed that measures of risk were more closely associated with social responsibility than previous studies had suggested. Clarkson (1995) developed an article to analyze the corporate social performance by firms by developing its own framework and methodology. Hackston and Milne (1996) studied the relationship of social and environmental disclosures by New Zealand companies with their profitability. It was found that size and industry of the firm were significantly associated with the disclosures where there was no relationship between disclosures and profitability. Klassen and McLaughlin (1996) conducted an empirical study to measure environmental management against financial performance by developing a theoretical model.

Preston and O'Bannon (1997) analyzed the relationship between corporate social responsibility and financial performance of U.S. firms. It was found that no significant negative social financial relationships existed and strong positive correlations were observed in both contemporaneous and lead lag formulations. Waddock and Graves (1997) conducted an empirical study and found a positive association between corporate social performance and previous financial performance of the companies. Also a positive linkage was found between corporate social performance and future financial performance of the firms. Balabanis *et al* (1998) investigated the relationship between corporate social responsibility (CSR) and the economic performance of corporations. The results supported the conclusion that (past, concurrent and subsequent) economic performance was related to both CSR performance and disclosures; however the relationships were weak and lacked an overall consistency.

Stanwick and Stanwick (1998) examined the relationship of corporate social performance of an organization and three variables namely its organizational size, financial performance and environmental performance. The results showed that firm's corporate social performance was indeed impacted by the size of the firm, its level of profitability and amount of pollution emissions released by it. Roman *et al* (1999) examined the relationship between firm's social and financial performance by assessing the validity and relevance of 51 studies. Though most of the studies reviewed showed positive relation between CSP and CFP but it was still implied that there is a lot to be explored in this field of study. Alnajjar (2000) investigated the patterns of social responsibility disclosures (SRDs) by the U.S.

Fortune 500 firms by measuring the extent of monetary, quantitative, and narrative disclosures in the areas of community, human resources, environment, and product safety. This study found a high significant effect of profitability on total disclosures and that total disclosure were a function of corporate size. Roberts and Dowling (2002) confirmed that there is a positive relationship between reputation and financial performance. This study analyzed the relationship between corporate reputation and the dynamics of financial performance using two complementary dynamic models and confirmed that the firms with relatively good reputations were better able to sustain superior profit outcomes over time.

Al-Tuwaijri *et al* (2003) performed an integrated analysis of the interrelations among environmental disclosure, environmental performance, and economic performance based on the argument that management's (unobservable) overall strategy affected each of these corporate responsibilities. After endogenizing these corporate functions in simultaneous equations models it was observed that good environmental performance was significantly associated with good economic performance, and also with more extensive quantifiable environmental disclosures of specific pollution measures and occurrences. Orlitzky *et al* (2003) conducted a meta-analysis of 52 studies on the relationship between corporate social/environmental performance (CSP) and corporate financial performance (CFP). A positive relationship was found between CSP and CFP. This meta-analysis established a greater degree of certainty with respect to the CSP–CFP relationship than was currently assumed to exist by many business scholars. Tsoutsoura (2004) explored the relationship between corporate social responsibility and financial performance by using empirical methods. The results indicated that the relationship was positive and statistically significant supporting the view that socially responsible corporate performance can be associated with a series of bottom-line benefits.

Seifert (2004) investigated the financial correlates of corporate philanthropy in Fortune 1000 companies using structural equation modeling. The results suggested that cash flow has a significant impact on a firm's cash donations to charitable causes, but monetary donations do not affect firm's financial performance. Allouche and Laroche (2005) conducted a meta-analysis based on a larger sample of published studies allowing better estimation of the population value for the relationship between CSP and CFP by cumulating the research findings for US and UK. The results showed conclusively that CSP had a positive impact on corporate financial performance and that this was strongest in the UK context. Velde *et al* (2005) investigated the interaction between sustainability and financial performance and indicated that portfolios with high sustainability rating were performing better than the ones with low rating. Neville *et al* (2005) evaluated the role of reputation in the corporate social performance (CSP) and financial performance (FP) relationship, including contingencies. It was found that CSP was affected by stakeholders' resource allocation to the organization

based on stakeholders' assessment of the organization's reputation relative to stakeholders' particular expectations. Hence reputation played a key role in the CSP-FP relationship.

Barnett and Salomon (2006) studied the relationship between financial and social performance by measuring the financial-social performance link within mutual funds that practiced socially responsible investing (SRI). The results showed that as the number of social screens used by an SRI fund increased, financial returns declined at first, but then rebound as the number of screens reached a maximum. The study found a curvilinear relationship, suggesting that two long competing viewpoints may be complementary. Furthermore it was observed that financial performance varied with the types of social screens used as community relations screening increased financial performance while the environmental and labor relations screening decreased financial performance. Brammer *et al* (2006) examined the relationship between corporate social performance and stock returns in the UK using a set of disaggregated social performance indicators for environment, employment and community activities. The scores on a composite social performance indicator displayed a significantly negative relationship with stock returns; however it was found that considerable abnormal returns became available by holding a portfolio of the socially least desirable stocks.

Mackey *et al* (2007) addressed the debate about whether firms should engage in socially responsible behavior by proposing a theoretical model in which the supply of and demand for socially responsible investment opportunities determined whether these activities will improve, reduce, or have no impact on a firm's market value. The theory showed that the managers in publicly traded firms might fund socially responsible activities that do not maximize the present value of their firm's future cash flows yet still maximize the market value of the firm. Mahoney and Roberts (2007) examined the relationship of corporate social performance (CSP) to financial performance (FP) and institutional ownership. It was found that there was no significant relationship between a composite measure of firms' CSP and FP. However a significant relationship between individual measures of firms' CSP regarding environmental and international activities and FP was found. These findings, while subject to the limitations inherent in the use of specific CSP measures, provide mixed support for the business case for CSP.

Fiori *et al* (2007) investigated the impact of the voluntary disclosure about corporate social responsibility on firm's stock prices of Italian listed companies in order to analyze if it can somehow contribute to increase the stock market prices. It was found that CSR being a relatively new issue in Italy, and most investors had a low degree of perception of the matter and the quality of disclosure for CSR was not easily measurable. Also it showed that most investors were short-term oriented while CSR's impact was mostly in the medium-long term. Barnett (2007) developed a construct of stakeholder influence capacity to explain why the effects of corporate social responsibility on corporate financial performance varied across

firms and time. Bebbington *et al* (2008) explored the proposition that corporate social responsibility reporting could be viewed as both an outcome of, and as a part of reputation risk management processes. The study found that the concept of reputation risk management could assist in the understanding of corporate social responsibility reporting practice by introducing an image restoration framework.

Becchetti *et al* (2008) investigated the relationship between corporate social responsibility (CSR) and corporate performance of US listed companies by taking a sample of 1000 firms over 13 year period. The findings of the study were consistent with the hypothesis that CSR is expected, in principle, to redirect the focus of corporate activity from the maximization of shareholders to that of stakeholder's interests. Brammer and Millington (2008) explored the relationship between corporate social performance (CSP) and corporate financial performance (CFP) within the context of a specific component of CSP called corporate charitable giving. It was found that firms with both unusually high and low CSP had higher financial performance than other firms, with unusually poor social performers doing best in the short run and unusually good social performers doing best over longer time horizons. Makni *et al* (2008) studied the relationship between corporate social responsibility (CSR) and financial performance. The findings suggested non existence of significant relationship between CSR and financial performance.

Mittal *et al* (2008) explored the link between good financial performance measures and other indicators of corporate responsibility. It also evaluated the trend of disclosure of CSR reporting by Indian companies. The results indicated a positive relationship between corporate social responsibility and company's reputation; and found that there was an increase in amount of disclosures and number of participating firms. Becchetti and Ciciretti (2009) studied the effect of corporate social responsibility on shareholders' value. It analyzed the performance of a large sample of Socially Responsible (SR) stocks relative to a Control Sample (CS) of equivalent size for 14 years. It was found that individual SR stocks had on an average significantly lower returns and unconditional variance than CS stocks when controlling for industry effects. Lee *et al* (2009) reinvestigated the CSP/CFP association and suggested that the negative market CSP/CFP relation should not be interpreted as CSP having no value. Rather it suggested that leading CSP firms trade at a price premium (i.e. returns discount) relative to lagging CSP firms, thereby indicating that financial markets value CSP and are prepared to realize lower returns. For firms, this signals an ability to obtain a lower cost of equity capital when they proactively manage their CSP profiles.

Aras *et al* (2010) investigated the relationship between corporate social responsibility and firm financial performance in the developing country named Istanbul. It was found there was a relationship between firm size and corporate social responsibility. However no significant relationship was found between corporate social responsibility and financial

profitability. Mishra and Suar (2010) examined whether corporate social responsibility towards primary stakeholders' influenced the financial and non financial performance of Indian firms. The findings of the study suggested that responsible business practices towards primary stakeholders can be profitable and beneficial to Indian firms. Moneva and Ortas (2010) evaluated the significance of the link between corporate environmental and financial performance by using a sample 230 European companies in order to show managers how an adequate management of environmental factors could contribute to the financial success of the firm. The results supported the idea that enterprises which obtained higher rates of environmental performance showed better financial performance levels in the future.

Surroca *et al* (2010) examined the effects of a firm's intangible resources in mediating the relationship between corporate responsibility and financial performance. The results of the study indicated that there is no direct relationship between corporate responsibility and financial performance but merely an indirect relationship that relies on the mediating effect of a firm's intangible resources. Kang *et al* (2010) explored the relationship between CSR activities and financial performance in the hospitality industry by examining different impacts of positive and negative CSR activities on financial performance of hotel, casino, restaurant and airline companies. The findings suggested mixed results across different industries and contributed to companies' appropriate strategic decision-making for CSR activities by providing more precise information regarding the impacts of each directional CSR activity on financial performance.

Karagiorgos (2010) analyzed the impact of CSR performance on stock returns, using voluntary disclosures, based on a sample of Greek listed companies. The findings showed that there was a positive correlation among stock returns and CSR performance in Greek companies. At operational level, these results aimed at persuading managers to implement CSR actions in a greater extent in order to enhance firm market efficiency. Scholtens (2010) studied the interaction between financial and social performance using a sample of 289 firms. Evidently the direction of the causation predominantly ran from financial to social performance. However, the specific interaction patterns varied along the different dimensions. Choi *et al* (2010) studied the relation between corporate social responsibility (CSR) and corporate financial performance (CFP) in Korea by measuring CFP both as an equal-weighted CSR index and a stakeholder-weighted CSR index. A positive and significant relationship between corporate financial performance and the stakeholder-weighted CSR index was found, but not with the equal-weighted CSR index.

Chen and Wang (2011) found that companies' social responsibility activity improved their financial performance of the current year, having significant effects on their financial performances of the next year, and vice versa. The variation of corporate social responsibility and financial performance also significantly influenced each other. Oeyono *et al* (2011)

conducted a study to investigate whether Indonesian corporations were aware of CSR and analyzed its relationship with profitability. This study showed that Indonesian corporations were already aware of its increasing demands and provided CSR information to stakeholders in the emerging economy. It also revealed that there was a positive relationship between CSR and profitability, although it was weak. Crisostomo *et al* (2011) examined the relationship between corporate social responsibility (CSR) and firm performance, taking into account firm value and financial accounting performance, in Brazil. The results indicated that CSR was value destroying in Brazil since a significant negative correlation between CSR and firm value was found. Additionally, a neutral relationship characterized the mutual effect between CSR and financial accounting performance.

Inoue and Lee (2011) disaggregated CSR into five dimensions namely employee relations, product quality, community relations, environmental issues, and diversity issues, and examined the effect of each dimension on financial performance among firms within four tourism-related industries namely airline, casino, hotel, and restaurant. While all CSR dimensions were proposed to have positive financial effects, results revealed that each dimension had a differential effect on both short-term and future profitability and that such financial impacts varied across the four industries. Saleh *et al* (2011) examined the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP) of public listed companies (PLCs) in Malaysia which is an emerging market. The findings suggested that Malaysian PLCs should be involved consistently in their CSR practices because it had a significant impact on improving their financial performance; however there was limited evidence of their relationship in the long term.

Uwuigbe and Egbide (2012) investigated the relationship between corporate financial performance and the level of corporate social responsibility disclosures among selected firms in Nigeria along with examining the relationship between firm's financial leverage and the level of corporate social responsibility disclosures. The paper revealed that firms' corporate financial performance and the size of audit firm had a significant positive relationship with the level of corporate social responsibility disclosures. Also it was observed that a significant negative relationship existed between firm's financial leverage and the level of corporate social responsibility disclosures. Luethge and Han (2012) studied corporate social responsibility disclosures in China and examined the extent to which firm size and financial performance impacted social disclosures. The results indicated a positive relationship between firm size and disclosures but no relationship between firm profitability and disclosures.

Tang *et al* (2012) proposed that firm profits were shaped by how firms engage in corporate social responsibility. With longitudinal data collected from 130 firms over 12 years, the study concluded that firms benefit more when they adopt a CSR engagement strategy that is consistent, involves related dimensions of CSR, and begins with aspects of CSR that are

more internal to the firm. The pace of the CSR engagement strategy, however, does not moderate the CSR–CFP relationship. Uadiale and Fagbemi (2012) studied the relationship between corporate social responsibility (CSR) and financial performance measured with return on equity (ROE) and return on assets (ROA) in Nigeria. The study showed that CSR had a significant and positive influence on financial performance. Nkomani (2013) studied the relationship between corporate social responsibility and financial performance of companies on Johannesburg stock exchange. The study found that in some cases relationship was established while in other cases there was no significant relationship between corporate social responsibility and financial performance.

Michelon *et al* (2013) examined whether CSR initiatives had a greater impact on company performance (CP) if the company prioritizes the CSR issues that matter most to it and approaches CSR initiatives in a strategic way, than if it approaches them based on generic rationale unrelated to the company's strategy. The results proved that when a company pursues CSR initiatives that were linked to stakeholder preferences and allocated resources to such initiatives in a strategic way, the positive effect of its CSR initiatives on CP strengthened in terms of both market-based and accounting-based measures of performance. Also it showed that the companies need to link their CSR initiatives to the likely preferences of their stakeholders and undertake the corporate social actions that are relevant to the company's strategy. Mallin *et al* (2014) examined the relationship between corporate social responsibility (CSR) and financial performance in Islamic banks. Using a comprehensive CSR index covering ten dimensions the CSR disclosures in a sample of 90 Islamic banks across 13 countries were analyzed. It was found that banks showed more commitment to the vision and mission, the board and top management, and the financial product/services dimensions, while least attention was paid to the environment dimension. The empirical analysis highlighted a positive association between CSR disclosure and financial performance and CSR disclosure was determined by the financial performance.

Martinez-Ferrero and Fraix-Aceituno (2015) clarified the relationship between companies' sustainable behavior and their financial performance by using a sample of 1960 companies from across 25 countries. The study found a positive bidirectional relationship between corporate social responsibility and financial performance evidencing the existence of a synergistic circle. Usman and Amran (2015) examined the nature and trend of corporate social responsibility (CSR) practices in Nigeria and examined the relationship between the dimensions of CSR disclosures and corporate financial performance (CFP) among Nigerian listed companies. It was found that community involvement disclosure, products and customer disclosures and human resource disclosures enhanced CFP and there was a negative relationship between environmental disclosure and CFP, which indicated that disclosure of environmental impact information could be value destroying in Nigeria. Alnajjar (2015)

investigated the patterns of social responsibility disclosures (SRDs) by the U.S. Fortune 500 firms. The relationship between a number of corporate characteristics and these areas and types of SRDs was tested. The research found evidence of a highly significant effect of profitability on total disclosure and that total disclosure was a function of corporate size which was also found to correlate with major areas and types of disclosures.

Malik and Kanwal (2016) examined the impact of corporate social responsibility disclosure on financial performance of listed Pharmaceutical firms in Pakistan. The results revealed that GSK Pakistan laboratories were involved in greater level of disclosure as compared to other pharmaceutical firms and the average rate of disclosure of listed pharmaceutical firms was increasing annually. Among four themes namely environment, community involvement, human resources and product the pharmaceutical firms disclosed most information regarding community involvement. Rodriguez-Fernandez (2016) conducted a theoretical-empirical study to investigate the bidirectional relationship between Corporate Social Responsibility and Financial Performance in Spanish listed companies. A complete theoretical framework based on agency, stewardship, dependency resources, and stakeholder theories provided the basis for the conceptual model. The conclusions thus drew demonstrated positive relationships in both directions, indicating that the social is profitable and that the profitable is social, thereby originating a positive feedback virtuous circle.

Existing literature suggests that the relationship between CSR and financial performance is ambiguous. Some studies show that there is a positive relationship, a few others indicate a negative relationship and a handful others demonstrate non existence of any relationship between these two parameters. Also most of the empirical studies to explore this relationship have been undertaken in developed countries with very few studies conducted in India. Hence, the present study will try analyzing the relationship between CSR disclosures and financial performance in India. It will also explore the relationship of individual dimensions of CSR which are community development, human resources, energy, environment, product safety, customers and emissions with financial performance of selected Indian companies.

2.4 Case studies exploring Corporate Social Responsibility initiatives

Over years various case studies have been developed to explore the CSR initiatives undertaken by individual companies and understand the impact of such initiatives undertaken on various stakeholders of the company including society. Barsoux *et al* (2004) described the unmatched level of compassion provided by Tata Steel in its country. It described how global competition has sparked a serious debate on the role, level and the sustainability of social spending at Tata Steel. It elaborated how increasing emphasis on EVA and such novel concepts negatively influenced the company's century-old commitment to CSR.

DeTienne and Lewis (2005) developed a case study of Nike Corporation to present a

fresh analysis of the numerous pragmatic consequences and legal and ethical complications inherent in CSR reporting. It also discussed the theoretical viewpoints surrounding the ethics of CSR disclosure and the complications encountered by Nike while advertising its CSR information. The study concluded with an analysis of CSR auditing as a possible solution to companies seeking to improve the method and transparency of social responsibility reporting. Perez and Gonzalez (2006) developed a case study to verify that one of the most active organizations in Spain in terms of adoption of CSR is basically using it as a marketing instrument. It has verified that Endesa Group is using its least formal compliance with institutional rules so as to increase its legitimacy in front of its main stakeholders.

Story and Watson (2006) documented the use of CSR as a strategic tool in global competition by MAS Holdings which is a family-owned manufacturer of women's apparel, whose clients include the biggest brands in lingerie and sportswear. It elaborated the tough challenges faced by MAS Holdings in the global markets, as China takes up the market share in textiles and the big brands become concerned about compliance with the UN millennium goals. McFarlan *et al* (2007) identified the wide variety of social responsibility initiatives undertaken by Esquel group which is China's largest shirt manufacturer. It also described the management of various aspects of government relations in China by the company.

Yu (2008) examined the social impacts of labor-related CSR policies or corporate codes of conduct on upholding labor standards through a case study of CSR discourses and codes implementation of Reebok which is a leading branded company enjoying a high-profiled image for its human rights achievement in a large Taiwanese-invested athletic footwear factory located in South China. It was found that effectiveness of Reebok labor related codes was constrained not only by unsolved tension between Reebok's impetus for profit maximization and commitment to workers' human rights, but also by hardnosed competition realities at marketplace, and Chinese government's insufficient protection of labor rights. Lindgreen *et al* (2009) investigated actual CSR practices in US organizations. It was found CSR is not the result of episodic and unrelated activities but rather that many organizations systematically monitor and address different stakeholder groups' demands. It also suggested that managers have a relatively positive perception of CSR practices as improving, or at least not harming, business performance.

Kim and Ahn (2009) illustrated how Korea's one of the large hypermarkets, Samsung Tesco Homeplus (STH) developed its social contribution activities. Also it discussed the long-term impacts that social contribution activities had on STH which was viewed by customers as not just a discount store that simply sell products, but as a "value store." This case also presented the points of contention and issues faced by the company in practicing CSR. Marquis *et al* (2010) highlighted the perspectives of various stakeholders within Dannon Company including members of the marketing, human resources and corporate

affairs departments on the company's consideration of pro actively communicating its CSR efforts to its consumers. Some stakeholders believed that communicating the strong connection between Dannon's production of health foods and its commitment to health and nutrition-based CSR activities may enhance the company's success, but may be perceived as a marketing ploy by the consumers.

Veleva (2010) carried out a comprehensive assessment of New Balance the fourth largest footwear manufacturer in world, to identify the key areas where the company can focus and demonstrate industry leadership while supporting the bottom line. It also provided guidance around building an integrated CSR strategy for New Balance, considering its culture, structure and present level of corporate citizenship management. Deshmukh and Adhikari (2010) developed a case describing the strategic dilemma involved in making a decision on the method of operation of the CSR department for Tata Power Company (TPC). TPC for decades had undertaken the CSR activities as a voluntary initiative by the employees reflecting the company's commitment towards sustainable energy generation. The study elaborated the dilemma of the decision manager either to create a separate CSR department or continue with the existing set up.

Kapoor and Sandhu (2010) conducted a secondary data study to explore the CSR initiatives undertaken by Infosys Technologies Ltd which is an IT major in India. It was found that company was actively involved in different areas of social responsibility and through Infosys Foundation it contributed towards the improvement of health, education, rural development, art and culture. Also it was observed to be fulfilling its responsibilities towards shareholders and consumers. Adewuyi and Olowookere (2010) analyzed the contributions of WAPCO a major cement company to the sustainable development of its host communities in Africa. It was found that company had gone beyond assistance and its efforts in promoting health, safety and sustainable management of environment were in the right direction.

Kanchan (2010) documented the journey of a medium-sized family business named South India Paper Mills towards becoming a responsible leader by integrating CSR activities in its business strategy at an early stage. The company undertook initiatives like generating own power with biomass, provision of free treated water to local farmers, disposing wastewater and so on. The case study described how size of a firm is not a deterrent to its CSR investment. Shah and Bhaskar (2010) attempted to highlight the CSR initiatives undertaken by BPCL. It was seen that company took lot of novel CSR initiatives in and around the area of its functioning in association with various NGOs and SHGs. It undertook measures useful to its employees and secondary stakeholders such as truck drivers and villagers staying in areas surrounding its manufacturing plants.

Das and Halder (2011) highlighted the social responsibility initiatives undertaken by ONGC a leading oil and natural gas unit in Assam. This study showcased how ONGC created

trust and confidence among its people through initiatives like infrastructure building, creating employment through training and education, market accessibility of needs, emphasis on improving health and by empowering the weaker section of the people. Gupta and Joseph (2012) documented the choices and decisions made by Baldota group which is the owner of MSPL Limited regarding its numerous CSR and sustainability initiatives. Many of the initiatives at MSPL predated government legislation related to environmental, employee, and community issues.

Svensson and Wagner (2012) highlighted the advantages and challenges faced by a small to medium-sized enterprise (SME) tasked with implementing a sustainable business cycle for a commodity product in a highly competitive market, dominated by powerful retailers. The study was based on a SME which is a regional producer of dairy products in Sweden to present a rare detailed case study of a sustainable and organic milk supply chain. Knudsen and Nielsen (2013) documented the case of Kiva which is the world's first and largest digital microloan facilitator, to provide insight into how global social responsibility is performed through economic, mental and even physical investment and engagement by consumers and organizations. Sharma and Kiran (2012) attempted to understand the status, progress and initiatives made by large firms of India in context to CSR policy framing and implementation. It was observed that IT and Auto industry in India are taking up more CSR initiatives while FMCG sector is lagging behind in social responsibility activities.

Srivastava *et al* (2012) devised a case study of Tata group so as to understand the concept and scope of corporate social responsibility along with identifying how and which activities Tata group has pursued in order to fulfill its responsibility towards all stakeholders. It was concluded that companies need to think deeply and act wisely about CSR so as to maintain a balance in the economic and social arena. Also it was observed that Tata group had gone a long way in fulfilling its duty and responsibility towards society and the nation. GD *et al* (2013) documented the selection of the panel of civil society organizations, funding them, and monitoring of their activities by Shipping Corporation of India (SCI) so as to carry out their CSR activities. It also discussed the interventions by Non Governmental Organizations (NGOs), supported by SCI's CSR in M-East Ward of Mumbai Municipal Corporation which is very poor, showing the least human development index (HDI) and the highest infant mortality rate according to Mumbai Human Development Report (2009).

Manohar (2013) described the initiatives undertaken by public sector units, private firms and Government of India in and around Visakhapatnam for development of the society. It also discussed the role of public libraries in augmenting the welfare schemes of the working communities and bridging the 'digital divide' among the various sections of the society. Chaklader and Gautam (2013) examined the CSR initiatives of Coca-Cola India towards Water Management in Kaladera region by involving the government and the local

community. The company took measures like implementation of traditional water storage systems and awareness on efficient usage of water in farming using drip irrigation in the area thus gaining the local favor and boosting up the confidence level of villagers.

Jayakumar (2013) examined how HUL operating in Doom Dooma a conflict zone in Assam employed CSR to create value both for themselves and for the local community. This study enunciated that despite significant risks how a company can use CSR to create value for its key stakeholders. This case also showcased how both company and conflict area have largely benefitted from such CSR. Bartlett (2014) discussed the strategies to be followed to revitalize the sagging market performance of Lifebuoy soap while simultaneously impacting the health of one billion people all around the world. It also discussed the impact of introducing the Unilever Sustainable Living Program (USLP), a set of bold environmental and social objectives which had been integrated into the heart of the company's global strategy. This USLP Programme had objectives which were clearly defined, tightly specified, independently audited and managers were held strictly accountable for their achievement.

Hunter and Wassenhove (2014) explored the specific aspects of Hindustan Construction Company a major Indian construction firm which sought to use CSR as a strategic tool in its quest for rapid growth at home and abroad. As a source material it used on-site interviews of the firm's executives, line managers and workers in Delhi, Mumbai, Lavasa, and also utilized corporate reports, scholarly articles, and domestic and international press articles. Christina and Fort (2014) developed a case study identifying the typical CSR efforts of pharmaceutical companies. On being dissatisfied with the scope of these current efforts it proposed a stronger model of corporate ethics based on scholarly literature which claimed that optimum instrumental benefits accrue to corporate CSR actions when they are undertaken for sincere aims rather than for instrumental ones.

Curry and Donnellan (2014) examined how Intel transformed its operations with sustainable Information Technology (IT) by involving responsible management of both IT and non-IT resources encompassing environmental, economic, and social dimensions which resulted in the avoidance of significant carbon dioxide emissions and cost savings. Singh *et al* (2014) conducted a study on ICICI Bank which is one of the big players of private sector banking in India. The study tried throwing light on different CSR initiatives carried out by ICICI Bank in the recent time. Dobele *et al* (2014) explored the efforts made by a company in mining sector to act in a socially responsible manner while trying to establish a presence in the regional market. It also examined the management of stakeholder relationships while identifying the challenges associated with implementing CSR initiatives in Australian mining industry. The study also highlighted the externality of stakeholder networks and their non-centric relationship with the company.

Ghasemi *et al* (2014) explained the CSR practices in Mobarakeh Steel Company

through document reviews, observations, and discussions with managers and employees. Also it examined its transformation process from practicing corporate social responsibility to creating shared value. Hamid *et al* (2014) developed the case study of a Malaysian Government Link Company (GLC) to investigate its CSR practices. As a GLC it had to balance its profit with social responsibility to the state and society. The study showed that the business CSR initiative of the company had changed from altruistic to its core competency and its revised CSR agenda had contributed to the state socio-economic development. Shah (2014) studied the innovative initiatives undertaken by Tata companies for the society and local community by interviewing top executives of the group and by collecting their responses to the executive perception survey. It was seen that company had interlinked business practices and community wellbeing very neatly and was living the essence of the concept of CSR by following the noble values of its founding fathers.

Stewart and Gapp (2014) developed a qualitative case study to document the key learning and developmental factors associated with behavioral outcomes that led to successful implementation of CSR initiatives of a small- medium enterprise (SME) that had achieved national recognition for its sustainable management practices. It was evident that continual learning through reflective uptake and cyclical practice of CSR behaviors benefitted the SME for attainment of sustainability. Rahman and Rahman (2016) explored the IMCL leader's path of discharging company's CSR initiatives in a non-traditional way by carrying out various social development projects programmes and by organizing programmes for Road traffic injury research project in collaboration with the specialized health and engineering institutions.

Cycyota *et al* (2016) reviewed the publicly available documents of Fortune's 100 Best Companies to gain insight into their employee volunteerism practice. It was found that these companies specifically linked employee volunteerism to their CSR strategy and utilized similar practices in order to encourage this practice. So this study highlighted the practices that managers of other companies could consider to support their CSR efforts in future. Unruh *et al* (2016) conducted a global executive survey which showcased that more than 70 percent investors made sustainability central to their investment decisions. By quoting examples from various companies like GE, Volkswagen, Mitsubishi and so on this case study described the course of action followed by leading companies to pursue this goal. Kiron *et al* (2017) examined how corporations relate to sustainability issues for eight years by drawing upon the database of more than 60,000 survey respondents from companies all around the world. This study identified eight evidence-based factors that drove sustainable business practices and helped executives accelerate their company's contribution to world's common future.

Majmudar and Rana (2017) documented the water conservation initiatives undertaken by Ambuja Cements towards becoming one of the first cement companies in the world to be

certified as water positive. As company wanted to account for both the social and economic value its water conservation efforts generated. This case study elaborated the hindrances faced by company while valuing water which is a very complex task involving many considerations, such as water sources and uses, the social value of water, water scarcity, and exchange rates. Majmudar and Rana (2017) described the strategic framework applied by Finolex Industries Limited so that it works with Mukul Madhav Foundation on a long-term basis on projects that benefitted the society as well as the organization.

Based on extensive literature review, the present study also documents the social responsibility initiatives undertaken by five listed Indian companies, in the wake of new regulatory changes on CSR expenditure introduced by Government of India. To highlight the impact of their activities on communities surrounding their manufacturing units, case studies of individual companies have been developed. It will also analyze and document the perception of various citizens, employees and government officials towards such social responsibility activities undertaken by each company.

CHAPTER III

MATERIALS AND METHODS

The present study was undertaken with the objectives: to analyze corporate social responsibility disclosures made by selected Indian companies; to study the relationship between corporate social responsibility and financial performance of selected Indian companies; and to develop case studies regarding corporate social responsibility initiatives undertaken by selected companies. The details about research methodology used in order to achieve aforementioned objectives have been presented below in a systematic manner under the following headings:

3.1 Conceptual framework of the study

3.2 Hypothesis Development

3.3 Research Design

3.4 Sampling Design

3.5 Data Collection

3.6 Data Analysis

3.1 Conceptual framework of the study

In the wake of new regulatory changes introduced by Government of India to make CSR expenditure mandatory for companies in India, the concept of Corporate Social Responsibility has become all the more important these days. As per new amendments in Companies Act, 2013 the companies are required to disclose in their annual reports the various activities on which CSR expenditure has been made by them. Using 'stakeholder theory' as its base theory, the present study has been conceptualized to analyze the amount, content and nature of Corporate Social Responsibility Disclosures (CSRDI) made by selected Indian companies in their annual reports. As no formal methods for measuring companies' social performance are available in India hence in order to plug this gap a Corporate Social Responsibility Disclosure Index (CSRDI) was developed. The first two objectives used this CSRDI instrument to measure corporate social performance of selected Indian companies. After measuring CSRDI, their relationship with various measures of financial performance of company is analyzed. Further an attempt has been made to explore the CSR activities being undertaken by various companies around their manufacturing facilities by conducting interviews and field visits with various stakeholders of the selected companies.

3.2 Hypothesis Development

The hypothesis of this study have been developed using 'stakeholder theory' as base which assumes that the behavior of the firm affects all its stakeholders which include shareholders, employees, customers, suppliers, financial institutions, community, government, political parties, trade associations and trade unions. Over years numbers of

studies have been conducted to analyze the relationship between CSRD and financial performance. A few studies like Waddock and Graves (1997), Choi *et al* (2010), Saleh *et al* (2011), Ferrero and Aceituno (2013) have found a positive relationship between CSRD and financial performance. There are other studies like McWilliams and Siegel (2000), Eljido-Ten (2007) which found no relationship between CSRD and financial performance. Also studies by Jones *et al* (2007), Crisostomo *et al* (2011) found a negative relationship between CSRD and financial performance. Hence empirical research over years suggests mixed results over relationship between CSRD and financial performance of a company.

The two theoretical frameworks developed to explain this relationship between CSRD and financial performance advocate opposite premises. The ‘instrumental stakeholder theory’ assumes that higher engagement in CSR leads to better financial performance while ‘slack resources theory’ assumes the opposite. Hence on the basis of stakeholder theory, past empirical research and review of literature following hypothesis have been developed to study the relationship between corporate social responsibility disclosures and financial performance.

The first hypothesis (H^A) analyzes the relationship between CSRD and financial performance by defining CSR disclosure as an independent variable and indicators of financial performance as dependent variable. The subcategories for this hypothesis are:

- H₁^A There is a positive and significant impact of Return on Assets (ROA) on CSR disclosures
- H₂^A There is a positive and significant impact of Return on Equity (ROE) on CSR disclosures
- H₃^A There is a positive and significant impact of Net Profit Margin (NPM) on CSR disclosures

The second hypothesis (H^B) analyzes the relationship between CSRD and financial performance by defining lagged values of CSR disclosure as an independent variable and indicators of financial performance as dependent variable. It consecutively studies the relationship by taking one year lag, two year lag and three year lag of CSRD respectively as independent variable. The subcategories for this hypothesis are:

- H₁^{B1} There is a positive and significant impact of Return on Assets (ROA) on CSR disclosures with one year lag
- H₁^{B2} There is a positive and significant impact of Return on Assets (ROA) on CSR disclosures with two year lag
- H₁^{B3} There is a positive and significant impact of Return on Assets (ROA) on CSR disclosures with three year lag
- H₂^{B1} There is a positive and significant impact of Return on Equity (ROE) on CSR disclosures with one year lag
- H₂^{B2} There is a positive and significant impact of Return on Equity (ROE) on CSR

disclosures with two year lag

H₂^{B3} There is a positive and significant impact of Return on Equity (ROE) on CSR disclosures with three year lag

H₃^{B1} There is a positive and significant impact of Net Profit Margin (NPM) on CSR disclosures with one year lag

H₃^{B2} There is a positive and significant impact of Net Profit Margin (NPM) on CSR disclosures with two year lag

H₃^{B3} There is a positive and significant impact of Net Profit Margin (NPM) on CSR disclosures with three year lag

The third hypothesis (H^C) analyzes the relationship between each dimension of CSR and financial performance, by defining each individual dimension of CSR disclosures as an independent variable and indicators of financial performance as dependent variable. The subcategories for this hypothesis are:

H₁^C There is a positive and significant relationship between each dimension of CSR disclosures and Return on Assets (ROA)

H₂^C There is a positive and significant relationship between each dimension of CSR disclosures and Return on Equity (ROE)

H₃^C There is a positive and significant relationship between each dimension of CSR disclosures and Net Profit Margin (NPM)

The fourth hypothesis (H^D) analyzes the relationship between each dimension of CSR and financial performance by defining lagged values of each individual dimension of CSR disclosure as an independent variable and indicators of financial performance as dependent variable. It consecutively studies the relationship by taking one year lag, two year lag and three year lag of all the dimensions of CSR as independent variable, respectively. The subcategories for this hypothesis are:

H₁^{D1} There is a positive and significant relationship between each dimension of CSR disclosures with one year lag and Return on Assets (ROA)

H₁^{D2} There is a positive and significant relationship between each dimension of CSR disclosures with two years lag and Return on Assets (ROA)

H₁^{D3} There is a positive and significant relationship between each dimension of CSR disclosures with three years lag and Return on Assets (ROA)

H₂^{D1} There is a positive and significant relationship between each dimension of CSR disclosures with one year lag and Return on Equity (ROE)

H₂^{D2} There is a positive and significant relationship between each dimension of CSR disclosures with two years lag and Return on Equity (ROE)

H₂^{D3} There is a positive and significant relationship between each dimension of CSR disclosures with three years lag and Return on Equity (ROE)

H₃^{D1} There is a positive and significant relationship between each dimension of CSR disclosures with one year lag and Net Profit Margin (NPM)

H₃^{D2} There is a positive and significant relationship between each dimension of CSR disclosures with two years lag and Net Profit Margin (NPM)

H₃^{D3} There is a positive and significant relationship between each dimension of CSR disclosures with three years lag and Net Profit Margin (NPM)

The fifth hypothesis (H^E) analyzes the relationship between CSR and financial performance by defining CSR disclosure as a dependent variable and indicators of financial performance as independent variable. The subcategories for this hypothesis are:

H₁^E There is a positive and significant relationship between CSR disclosures and Return on Assets (ROA)

H₂^E There is a positive and significant relationship between CSR disclosures and Return on Equity (ROE)

H₃^E There is a positive and significant relationship between CSR disclosures and Net Profit Margin (NPM)

3.3 Research Design

The research design for this study is both exploratory and conclusive in approach. The study conclusively analyzes the corporate social responsibility disclosures made by companies in India. The study also explores the causal relationship between corporate social responsibility disclosures and financial performance which makes it conclusive in nature. The present research also describes and explores the CSR initiatives undertaken by selected Indian companies around their manufacturing units.

3.4 Sampling Design

In order to conduct the research in a way to get accurate results selection of sample plays a very crucial role. The primary step in selecting sample is to first define the population. In this study the population for first and second objective comprised of all the companies listed on CNX 500. CNX 500 representing almost 96 percent of market capitalization on National Stock Exchange (NSE) the largest Stock Exchange in India, is the first broad-based stock market index in Indian stock market. In consistence with prior studies by Guthrie and Parker (1990); Hackston and Milne (1996); Thompson and Zakaria (2004) and Saleh (2009), top 150 companies listed on CNX 500 were selected in this study, by arranging them on the basis of their market capitalization. The data was collected for 10 years starting from the financial year 2008-09 till the financial year 2016-17. Thus total sample size for the purpose of study was supposed to be 1500 company years. However due to non availability of annual reports of different companies for different years the total sample size was reduced to 1370 company years. The list of companies selected for the purpose of study has been attached in Annexure I. For the third objective which is developing case studies, the population

constituted listed companies with manufacturing facilities in North India. Five companies were selected for fulfillment of this objective on the basis of their willingness to respond.

3.5 Data Collection

The present study demanded collection of data from both primary and secondary sources of information. For fulfillment of first two objectives only secondary data was required which was collected from the annual reports of the selected companies. In most of previous studies by Yapa *et al* (2008), Azim and Ahmed (2009), Saleh (2009), Rouf (2011), Bhatia and Chander (2014) annual reports of the companies were used as the data source for studying disclosures. According to Belal (2001) the reason for selecting annual reports as main source of data is because they are the most common and popular document produced by the companies regularly. For this study annual reports were downloaded either from websites of the individual company or from the database Report Junction, which is an exhaustive database for the annual reports of the companies. Hence annual reports of top 150 companies of CNX-500 were downloaded for 10 years from financial year 2008-09 to 2016-17. However total 36 annual reports were neither found to be available on company websites nor in Report junction, so do these missing reports not form a part of the total sample size.

Data related to selected financial parameters and other corporate characteristics was extracted from PROWESS Database from the year 2008-09 to 2016-17. This database is managed by CMIE (Centre for Monitoring Indian Economy) and is one of the most widely used secondary databases for companies in India. For collecting primary data to prepare case studies, field visits to selected companies manufacturing facilities and beneficiaries were carried out. Also information was collected by conducting non-structured interviews with various stakeholders of each company who include surrounding community, officials, company employees and general public. Further secondary data for achieving this objective was collected from annual reports of each selected company for last 5 years (from financial year 2012-13 to 2016-17), newspaper articles, journals, company websites and other internet resources.

3.5.1 Research Instrument

Corporate Social Responsibility Disclosure Index (CSRDI) was constructed to serve as the main research instrument for collecting data from annual reports of the selected companies. In order to prepare this CSRDI Index various activities and practices related to corporate social responsibility were considered and included from the following sources:

- Using CSEEE Index from Kansal *et al* (2014) as the base instrument, several items present in this index have been retained.
- CSR activities as mentioned in Schedule VII of Companies Act, 2013 have been included.
- Activities in accordance with principles mentioned in Business Responsibility Report by

Securities and Exchange Board of India (SEBI) have been considered and included.

- Items in accordance with Global Reporting Initiatives (GRI) for sustainability reporting have been considered and included.
- Activities based on the Sustainable Development Goals and ten principles of United Nations Global Compact have also been considered and included.
- Dimensions and activities from Webb (2009), Belal (2001), Saleh *et al* (2011) and Bhatia (2014) have also been included.

Finally this research instrument was obtained which was divided across total 8 dimensions or themes namely community development theme, human resources theme, energy theme, environment theme, product, services-safety and innovation theme, customers theme, emission of carbon and harmful gases theme and other CSR activities theme. These 8 dimensions were further subdivided into total 47 subthemes with research instrument consisting of total 178 activities on the whole as a part of these themes. The list of all dimensions along with further subthemes and all activities has been presented in Annexure II.

3.5.2 Measurement of corporate financial performance

The various measures of financial performance used in this study are Return on Assets, Return on Equity and Net Profit Margin. Return on Assets (ROA) is a fundamental profitability measure which indicates how effectively a firm uses its assets to generate earnings. It is measured as ratio of Profit after tax (PAT) to total assets. ROA being the most widely used indicator of financial performance has been used in Aupperle *et al* (1985), Stanwick and Stanwick (1998), McWilliams and Siegel (2000), Salam (2009), Aras *et al* (2010), Oeyono *et al* (2011), Uadiale and Fagbemi (2012) and number of other studies. Return on Equity (ROE) which is another indicator, measures the percentage of profits that a company generates with the money that shareholders have invested in the business. Previously employed in studies by Cochran and Wood (1984), Preston(1997), Tsoutsoura (2004), Freire (2011) and Uadiale and Fagbemi (2012); ROE is measured as ratio of Profit after tax (PAT) to net worth of the company. Another measure, Net profit margin (NPM) measured as ratio of Profit after tax (PAT) or net profit to total income is also used as an indicator of financial performance of firms in this study. Net profit margin has earlier been employed in several previous studies for instance by Griffin and Mahon (1997), Hossain *et al* (2006), Kimbro and Melendy (2010), Moneva and Ortas (2010).

3.5.3 Measurement of Control Variables

There are several firm specific variables which may influence the relationship between corporate social responsibility disclosures and financial performance. Taking guidance from study by Saleh *et al* (2011), this study employs size of the firm, debt equity ratio and age of the firm as control variables. Hence by controlling the effect of these

variables, the relationship between corporate social responsibility and financial performance is explored.

Size of the firm is observed to have a major influence on relationship between corporate social responsibility disclosures and financial performance in studies by Gray (1995), Waddock and Graves (1997), Nelling and Webb (2009), Chen and Wang (2011). In consistency with previous studies by Clarkson *et al* (2011) and Saleh *et al* (2011), logarithm of total assets of the firm has been used as the measure of firm size. Debt equity ratio which is a measure of financial strength of the company has been used as another control variable. It is calculated by dividing the company's total debt by shareholder's equity. Previously it has been used in studies by McGuire *et al* (1988), Belkaoui (1989) and Dragomir (2010). For the purpose of controlling the effect of the age of the firm, logarithm of age of firm is used in this study which has been previously used in studies by Jones *et al* (2007), Bnoui (2011) and Michelin (2011) and in many other studies.

3.6 Data Analysis

The study focused on analyzing corporate social responsibility disclosures made by Indian companies and then exploring its relationship with financial performance of the companies' using various methods and techniques. First of all content analysis was used to convert qualitative information from annual reports into quantitative form by using an instrument called Corporate Social Responsibility Disclosure index. The data thus collected was analyzed by using various tools and techniques for accomplishing the first objective. Then in order to fulfill second objective, the relationship between corporate social responsibility disclosures and financial performance was established and explored by using Panel data analysis. The details of various tools and techniques employed are discussed below under following headings:

3.6.1 Content Analysis

According to Krippendorff (1980), content analysis has been defined as “a method of codifying the text (or content) of a piece of writing into various groups or categories depending on the selected criteria.” Used in several previous studies including Yapa *et al* (2008), Azim *et al* (2009), Saleh (2009), Gautam and Singh (2010), Rouf (2011), Bhatia and Chander (2014), content analysis is the most commonly used technique for analyzing corporate social responsibility disclosures from annual reports of the selected companies. As elaborated by prior studies (Hall 2002; Raman, 2006 and Azim *et al* 2009) the technique of content analysis follows a three step process. The first one being selection of an appropriate document to conduct the analysis. In this study annual reports of the companies have been selected for analyzing, in consistency with the previous studies by Yapa *et al* (2008), Azim and Ahmed (2009), Saleh (2009), Rouf (2011) and Bhatia and Chander (2014). The second step is determining the unit of measurement of content. Adapting methodology used by Tsang

(1998) and Saleh (2009), number of sentences has been used as unit of measurement in this study. The third step is identifying the themes or categories into which, the analyzed content can be classified. Taking guidance from earlier studies by Guthrie and Parker (1990) and Gray *et al* (1995) this study categorizes the information into three dimensions which are theme or content, form and amount.

Theme or content classifies the information in annual reports into various selected themes; which are community development theme, human resources theme, energy theme, environment theme, product, services-safety and innovation theme, customers theme, emission of carbon and harmful gases theme and other CSR activities theme. It further identifies the individual CSR activities or items within these major themes. The CSRDI constructed for conducting this research was used to create an excel sheet named content sheet. The CSR activities for which disclosure was made in the annual report of individual companies were given score 1 and the CSR activities for which no disclosure was made were scored 0. This helped in identifying and analyzing each theme and activity.

Form of disclosure means identifying whether disclosure made is non-financial(non-quantitative) or non-financial(non-quantitative) with particular information or financial (quantitative) in nature. The developed research instrument named CSRDI was utilized for creating an excel sheet named weight sheet. Adapting methodology used by Saleh *et al* (2011) weights were assigned for different disclosure subthemes, depending upon information disclosed in annual report. The greatest weight of 3 was assigned to financial (quantitative) disclosure(s) which were made in financial term in annual report, the next highest weight 2 was assigned to non-financial (non-quantitative) disclosure(s) but with particular information, weight of 1 was assigned to non-financial (non-quantitative) disclosure(s) which were described in general with no specific information, weight of 0 was given in case of no disclosure(s). Then overall corporate social responsibility disclosure (CSRDI) score which is summation of the scores for all the CSRDI items was calculated, which was further used in analysis.

Amount of disclosure was measured by counting number of sentences related to each theme in annual reports of the companies. The index created was used to create an excel sheet named sentence sheet. As number of sentence is the unit of measurement in this study, so number of sentences related to each disclosure made by individual company in its annual report were counted and mentioned against each theme and subtheme in the research instrument. This further helped in identifying the amount of disclosures made by the selected company.

3.6.2 Trend Analysis

Trend analysis is the technique of making predictions about future on the basis of past values. In this study technique of trend analysis has been used to analyze the trend followed

by corporate social responsibility disclosures over a period of ten years across different industry groups and sectors. Trend was observed across each dimension of corporate social responsibility disclosure namely community development theme, human resources theme, energy theme, environment theme, product, services-safety and innovation theme, customers theme, emission of carbon and harmful gases theme and other CSR activities theme. The trend analysis was run by using time as independent variable and amount of disclosures across each individual theme as dependent variable. The trend equation used for estimation of trend across different industry groups and sectors is

$$Y_i = b_1 + b_2T_i + e_i$$

Where

Y_i = Amount of CSRD disclosures across each theme

T_i = Time period

e_i = error term

3.6.3 Analysis of Variance

Analysis of Variance (ANOVA) is to test whether the mean score of a dependent variable varies significantly across two or more categories of independent variables or not. In this study one way ANOVA was used to investigate variation across different dimensions of CSRD in various industry groups and sectors. Also it found variances across different industry groups and sectors in terms of CSRD disclosures. The null hypothesis in one way ANOVA assumed that there is no significant difference in the population means across different categories and they are equal. And the alternate hypothesis assumed that at least mean of one category is different. This test produces an F-statistic which is further used to calculate the p-value. If p-value is less than 0.05, then null hypothesis is rejected thus concluding that means are not same across all the categories. If p-value is more than 0.05, then null hypothesis is accepted concluding means are not different across all groups or categories.

3.6.4 Panel Data Regression

As in this study we are dealing with a combination of time series data and cross-section data, so panel data regression models were used to study the relationship between financial performance and corporate social responsibility disclosures. As elaborated in Gujarati *et al* (2012), that panel data better detects and measures the effects that simply cannot be observed in pure cross-section or pure time series data so this type of data has many advantages over other forms of data. In order to analyze panel data, three type of panel data regression models have been used and compared to study the relationship between corporate social responsibility disclosures and financial performance. These individual panel data regression models have been discussed below:

1. Pooled OLS model: In pooled OLS model all the observations across time and cross-

section are pooled together to estimate a grand regression neglecting the time series or cross-section nature of data. The pooled ordinary least squares method assumes that regressors are not correlated with the error term and for all the data intercept and slope coefficients are same.

2. **Fixed effects model:** It is also known as fixed effects least squares dummy variable (LSDV) model. This model allows for heterogeneity among subjects by allowing each cross-section to have its own intercept value but intercepts do not vary across time. It assumes that slope coefficients of the regressors do not vary across cross-section or time.
3. **Random effects model:** This model assumes that each cross-section has its own intercept value which is drawn randomly from a bigger population of cross-sections. It assumes that unobservable individual effects are random variables and uncorrelated with the independent variables in the model.

So to better understand the relationship between corporate social responsibility disclosures and financial performance in Indian context above discussed models were adopted. Further in order to make decisions regarding appropriate model among pooled OLS model, fixed effects model and random effects model following tests have been conducted:

1. **Redundant fixed effects - likelihood test:** This test checks for homogeneity of data and assists in determining whether fixed effects estimation is appropriate or not. For this test, null hypothesis is assuming that variances across cross-sections are zero which means there is no significant difference across various cross-sections. And the alternate hypothesis assumes that there is significant difference across cross-sections which mean variances across cross-sections are not zero. As per this test if null hypothesis is accepted then pooled OLS model is more suitable, while if rejected then there is heterogeneity in data and pooled OLS model is inappropriate.
2. **Correlated random effects - Hausman test:** This test assists in determining whether fixed effects model or random effects model is appropriate. The null hypothesis assumes that individual effects are not correlated with other regressors in the model, so random effects model would be consistent and efficient. And the alternate hypothesis assumes random effects model to be inconsistent and fixed effects model to be appropriate. So if test shows an insignificant p-value then null hypothesis is accepted, while if p-value is significant then null hypothesis is rejected and fixed effects model is preferred.

CHAPTER IV

RESULTS AND DISCUSSION

The present study was undertaken with the aim to achieve following objectives: to analyze corporate social responsibility disclosures made by selected Indian companies; to study the relationship between corporate social responsibility and financial performance of selected Indian companies; and to develop case studies regarding corporate social responsibility initiatives undertaken by selected companies. This chapter presents findings of the study objective-wise. Section 4.1 reveals the findings about corporate social responsibility disclosures made by selected Indian companies. Section 4.2 describes the findings on relationship between corporate social responsibility and financial performance of selected Indian companies. Lastly, section 4.3 presents the case studies developed regarding corporate social responsibility initiatives undertaken by selected companies.

4.1 Corporate Social Responsibility Disclosures (CSRDI) by companies

The purpose of this objective is to analyze the extent, content, quality and amount of CSRDI made by top 137 companies listed on CNX 500 over selected period of time from the year 2008 to 2017. The technique of content analysis was used for collecting data from annual reports of the selected companies. The qualitative data thus collected from the annual reports of selected companies was converted into quantitative form by using research instrument named Corporate Social Responsibility Disclosure Index (CSRDI), thus constructed for the purpose. The CSRDI consists of eight themes or dimensions namely 'community development theme', 'human resources theme', 'energy theme', 'environment theme', 'product, services-safety and innovation theme', 'customers theme', 'emission of carbon and harmful gases theme' and 'other CSR activities theme'. These 8 dimensions were further subdivided into 47 subthemes, consisting of total 178 CSR activities.

For analyzing the content and extent of disclosures made by selected Indian companies, the CSRDI constructed for collecting data was used to create an excel sheet named content sheet. The CSR activities for which disclosure were made in the annual report of individual companies were scored 1 and the CSR activities for which no disclosures were made were scored 0. This helped in identifying each activity across each theme for every company, thus giving a fair view of content and extent of disclosures made by these selected companies in their annual reports.

To analyze the form and quality of disclosures made by selected companies, the CSRDI was utilized for creating an excel sheet named weight sheet. Using methodology by Saleh *et al* (2011) it was identified whether each disclosures made was non-financial (non-quantitative) or non-financial (non-quantitative) with particular information or financial (quantitative) in nature and were assigned weights accordingly. The greatest weight of 3 was

assigned to financial (quantitative) disclosure(s), the next highest weight 2 was assigned to non-financial (non-quantitative) disclosure(s) but with particular information, weight of 1 was assigned to non-financial (non-quantitative) disclosure(s) which were described in general and with no specific information, weight of 0 was given in case of no disclosure(s).

For analyzing amount/volume of disclosures the number of sentences related to each theme in annual reports of the companies was counted. The CSDRI constructed, was used to create an excel sheet named sentence sheet. As number of sentences was the unit of measurement in this study, so sentences related to each disclosure made by individual company in their annual report were counted and mentioned against each theme and subtheme in the research instrument.

For in-depth analysis this section is further organized into following sub-sections and sub-parts:

4.1.1 CSR disclosures across years and themes

- 4.1.1.1 Number of total companies making CSRD across each year and theme
- 4.1.1.2 Top three most and least disclosed CSR activities in each theme
- 4.1.1.3 Top fifteen most and least CSR disclosing companies
- 4.1.1.4 Descriptive statistics of CSRD across years
- 4.1.1.5 Quality of CSRD across years
- 4.1.1.6 Quality of CSRD across themes
- 4.1.1.7 Amount and trend of CSRD across each year and theme
- 4.1.1.8 Significance of variations across all themes of CSRD

4.1.2 CSR disclosures across different industry groups

- 4.1.2.1 CSR disclosures within automobiles industry
 - 4.1.2.1.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.1.2 Quality of CSRD across years
 - 4.1.2.1.3 Quality of CSRD across themes
 - 4.1.2.1.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.1.5 Significance of variations across all CSRD themes
- 4.1.2.2 CSR disclosures within cement industry
 - 4.1.2.2.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.2.2 Quality of CSRD across years
 - 4.1.2.2.3 Quality of CSRD across themes
 - 4.1.2.2.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.2.5 Significance of variations across all CSRD themes
- 4.1.2.3 CSR disclosures within construction industry
 - 4.1.2.3.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.3.2 Quality of CSRD across years

- 4.1.2.3.3 Quality of CSRD across themes
- 4.1.2.3.4 Amount and trend of CSRD across each year and theme
- 4.1.2.3.5 Significance of variations across all CSRD themes
- 4.1.2.4 CSR disclosures within consumer goods industry
 - 4.1.2.4.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.4.2 Quality of CSRD across years
 - 4.1.2.4.3 Quality of CSRD across themes
 - 4.1.2.4.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.4.5 Significance of variations across all CSRD themes
- 4.1.2.5 CSR disclosures within energy industry
 - 4.1.2.5.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.5.2 Quality of CSRD across years
 - 4.1.2.5.3 Quality of CSRD across themes
 - 4.1.2.5.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.5.5 Significance of variations across all CSRD themes
- 4.1.2.6 CSR disclosures within financial services industry
 - 4.1.2.6.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.6.2 Quality of CSRD across years
 - 4.1.2.6.3 Quality of CSRD across themes
 - 4.1.2.6.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.6.5 Significance of variations across all CSRD themes
- 4.1.2.7 CSR disclosures within industrial manufacturing industry
 - 4.1.2.7.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.7.2 Quality of CSRD across years
 - 4.1.2.7.3 Quality of CSRD across themes
 - 4.1.2.7.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.7.5 Significance of variations across all CSRD themes
- 4.1.2.8 CSR disclosures within information technology industry
 - 4.1.2.8.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.8.2 Quality of CSRD across years
 - 4.1.2.8.3 Quality of CSRD across themes
 - 4.1.2.8.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.8.5 Significance of variations across all CSRD themes
- 4.1.2.9 CSR disclosures within metals industry
 - 4.1.2.9.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.9.2 Quality of CSRD across years
 - 4.1.2.9.3 Quality of CSRD across themes

- 4.1.2.9.4 Amount and trend of CSRD across each year and theme
- 4.1.2.9.5 Significance of variations across all CSRD themes
- 4.1.2.10 CSR disclosures within pharmaceuticals industry
 - 4.1.2.10.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.10.2 Quality of CSRD across years
 - 4.1.2.10.3 Quality of CSRD across themes
 - 4.1.2.10.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.10.5 Significance of variations across all CSRD themes
- 4.1.2.11 CSR disclosures within services industry
 - 4.1.2.11.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.11.2 Quality of CSRD across years
 - 4.1.2.11.3 Quality of CSRD across themes
 - 4.1.2.11.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.11.5 Significance of variations across all CSRD themes
- 4.1.2.12 CSR disclosures within telecom industry
 - 4.1.2.12.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.12.2 Quality of CSRD across years
 - 4.1.2.12.3 Quality of CSRD across themes
 - 4.1.2.12.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.12.5 Significance of variations across all CSRD themes
- 4.1.2.13 CSR disclosures within miscellaneous group
 - 4.1.2.13.1 Number of total companies making CSRD across each year and theme
 - 4.1.2.13.2 Quality of CSRD across years
 - 4.1.2.13.3 Quality of CSRD across themes
 - 4.1.2.13.4 Amount and trend of CSRD across each year and theme
 - 4.1.2.13.5 Significance of variations across all CSRD themes
- 4.1.2.14 Significance of variations of CSRD across all selected industry groups

4.1.3 CSR disclosures across different forms of ownership

- 4.1.3.1 CSR disclosures within public sector companies
 - 4.1.3.1.1 Number of total companies making CSRD across each year and theme
 - 4.1.3.1.2 Quality of CSRD across years
 - 4.1.3.1.3 Quality of CSRD across themes
 - 4.1.3.1.4 Amount and trend of CSRD across each year and theme
 - 4.1.3.1.5 Significance of variations across all CSRD themes
- 4.1.3.2 CSR disclosures within private sector companies
 - 4.1.3.2.1 Number of total companies making CSRD across each year and theme
 - 4.1.3.2.2 Quality of CSRD across years

4.1.3.2.3 Quality of CSRD across themes

4.1.3.2.4 Amount and trend of CSRD across each year and theme

4.1.3.2.5 Significance of variations across all CSRD themes

4.1.3.3 Significance of variations of CSRD across different forms of ownership

4.1.4 Total and average CSR expenditure made by selected companies

4.1.1 CSR disclosures across years and themes

This subsection explores the corporate social responsibility disclosures made by all selected (137) companies across all eight themes namely ‘community development theme’, ‘human resources theme’, ‘energy theme’, ‘environment theme’, ‘product, services-safety and innovation theme’, ‘customers theme’, ‘emission of carbon and harmful gases theme’ and ‘other CSR activities theme’ over a period of ten years (2008 to 2017). The content, extent, quality and amount of CSR disclosures made by selected Indian companies was analyzed. This analysis is further elaborated under following sub-parts:

4.1.1.1 Number of total companies making CSRD across each year and theme

The CSRD was used to identify activities disclosed by each company across each theme and year. The descriptive statistics of number of companies making disclosures on CSR have been presented in the table 4.1. It presents number and percentage of CSR disclosing companies out of selected sample across each year and theme. The table depicts that the number of selected companies making CSRD in their annual reports over selected time-period has always been high. Starting with 136 companies (99.3%) making disclosures in the year 2008, each company from the sample has made CSR disclosures in their annual report over other years of selected time period, with only exception in 2011 when 134 companies (97.8%) made disclosures.

‘Customer theme’ is observed to be disclosed by each company throughout the period of study with exception to the years 2008 with 136 companies (99.3%) and 2011 with 134 companies (97.8%). Amongst other themes, disclosures on ‘community development theme’ were made by 117 companies (85.4%) in 2008 which steadily increased to 133 companies (97.1%) in 2017. The disclosures on ‘human resources theme’ increased from 105 companies (76.6%) in 2008 to 135 companies (98.5%) in 2017 and on ‘product, services-safety and innovation theme’ from 121 companies (88.3%) in 2008 to 134 companies (97.8%) in 2017.

It can be observed that ‘emission of carbon and harmful gases theme’ was reported by only 41 companies (29.9%) in 2008 which increased gradually over year’s upto 105 companies (76.6%) in 2017. Amongst other themes, disclosures on ‘energy theme’ were made by only 95 companies (69.3%) in 2008 which incremented to 122 companies (89%) in 2017. The disclosures on ‘other CSR activities’ were made by just 52 companies (38%) in 2008 which increased to 135 companies (98.5%) in 2017. ‘Environment theme’ was disclosed

Table 4.1 Number of total companies making disclosures on CSR across themes and years

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	136 (99.3)	117 (85.4)	105 (76.6)	95 (69.3)	97 (70.8)	121 (88.3)	136 (99.3)	41 (29.9)	52 (38.0)
2009	137 (100.0)	123 (89.8)	104 (75.9)	98 (71.5)	95 (69.3)	122 (89.0)	137 (100.0)	52 (38.0)	55 (40.1)
2010	137 (100.0)	127 (92.7)	117 (85.4)	108 (78.8)	98 (71.5)	125 (91.2)	137 (100.0)	47 (34.3)	78 (56.9)
2011	134 (97.8)	124 (90.5)	110 (80.3)	106 (77.4)	101 (73.7)	125 (91.2)	134 (97.8)	50 (36.5)	98 (71.5)
2012	137 (100.0)	126 (92.0)	112 (81.7)	109 (79.6)	101 (73.7)	129 (94.2)	137 (100.0)	61 (44.5)	119 (86.9)
2013	137 (100.0)	130 (94.9)	120 (87.6)	114 (83.2)	107 (78.1)	124 (90.5)	137 (100.0)	82 (59.8)	127 (92.7)
2014	137 (100.0)	133 (97.1)	125 (91.2)	117 (85.4)	115 (83.9)	131 (95.6)	137 (100.0)	102 (74.4)	132 (96.3)
2015	137 (100.0)	134 (97.8)	134 (97.8)	126 (92.0)	121 (88.3)	134 (97.8)	137 (100.0)	103 (75.2)	133 (97.1)
2016	137 (100.0)	135 (98.5)	135 (98.5)	126 (92.0)	129 (94.2)	137 (100.0)	137 (100.0)	105 (76.6)	134 (97.8)
2017	137 (100.0)	133 (97.1)	135 (98.5)	122 (89.0)	126 (92.0)	134 (97.8)	137 (100.0)	105 (76.6)	135 (98.5)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

by 97 companies (70.8%) in 2008 which incremented to 126 companies (92%) in 2017.

4.1.1.2 Top three most and least disclosed CSR activities in each theme

The table 4.2 presents the three most disclosed activities and three least disclosed activities across each theme within the selected time-period. The calculations are made by using average number of selected companies making disclosures on each activity in their respective annual reports over selected period from 2008 to 2017. In the table along with average number of disclosing companies their percentage out of total selected sample size is presented in brackets. It can be observed from the table that within ‘community development theme’ ‘providing healthcare services to general public’ is the most disclosed activity with 93.5 per cent companies in sample making its disclosure along with ‘promoting gender equality and empowering women’ and ‘infrastructure investments and services supported e.g. improving road networks, social facilities etc’ with 87.7 per cent companies in the sample making both these disclosures.

While ‘measures for benefit of armed forces veterans, war widows and their dependent’ with only 4.3 per cent disclosing companies and ‘protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art’ with 6.5 per cent and ‘promotion and development of traditional arts and handicrafts/ sponsorship of art exhibits’ with 8 per cent disclosing companies are the three least disclosed activities. In ‘human resources theme’ most disclosures are made regarding ‘employee remuneration’ with 87.7 per cent disclosing companies and ‘promotion of their safety, physical and mental health’ with 81.9 per cent companies making disclosures and ‘reduction of hazards and injuries at workplace’ with 79 per cent disclosing companies. The least popular activities in this theme being ‘provision of recreational, cultural and activities/facilities’ with only 32.6 per cent of total companies reporting, ‘periodic review of workforce policies and employee benefits’ with 44.2 per cent of the companies disclosing and ‘employment of differently abled people/ex-servicemen’ with disclosure by 44.9 per cent companies.

In ‘energy theme’, 81.9 per cent of the total companies have made disclosures related to ‘discussing the company's efforts to reduce energy consumption/ reduction of energy consumption’ and 63.8 per cent of companies have ‘disclosed energy savings resulting from product recycling along’ with ‘using alternate sources of energy’ by 60.9 per cent companies. The least disclosed items in this theme being ‘receiving an award or appreciation for an energy conservation program’ with 39.1 per cent disclosing companies, ‘research aimed at improving energy efficiency of products’ and ‘energy conservation/ day week / month awareness’ with 52.9 per cent of total companies making both these disclosures. Among activities in ‘environment theme’ 78.3 per cent of total companies have disclosed about ‘using environment friendly materials’ and ‘making agreements that commit the organization to

consider the environment in its operations each’. Also another popular disclosure in this theme being disclosures about ‘recycled input materials used’ with 69.6 per cent of total companies making these disclosures. The least popular disclosures among all themes are ‘environmental disclosures’ related to ‘contributions in terms of cash or art/sculptures to beautify the environment’ with mere 1.4 per cent disclosing companies, ‘designing facilities harmonious with the environment’ with just 2.2 per cent and ‘habitats protected or restored’ with only 5.8 per cent companies making such disclosures.

In ‘product, service-safety and innovation theme’ about 92.7 per cent of companies have made ‘disclosures on research and development expenditure for specific products and/or its benefits’ and 91.3 per cent on ‘eco friendly products’ and ‘developing product catalogues’. The least popular disclosures in the category being ‘information on any research projects set up by the company to improve its product in any way’ with 74.6 per cent, ‘information on the quality of the firm's products as reflected in prizes/awards received’ with 76.1 per cent and ‘disclosing that products meet applicable safety standards’ with disclosures by 78.3 per cent companies. Within ‘customers theme’ 100 per cent of companies have made disclosures about ‘customer relationship management’ and 98.5 per cent ‘customer information’. The least disclosed activities in the category are ‘consumer awards’ with 32.6 per cent and ‘provision of adequate grievance handling mechanisms to address customer concern’ with 62.3 per cent companies making disclosures. Both these themes are the most popular themes for disclosures in annual reports of the companies.

Table 4.2 Top three most and least disclosed activities across each theme

Most Disclosed Activities	Average number of disclosing companies	Least Disclosed Activities	Average number of disclosing companies
Community Development Theme			
Providing healthcare services to general public	129 (93.5)	Measures for benefit of armed forces veterans, war widows and their dependent	6 (4.3)
Promoting gender equality and empowering women	121 (87.7)	Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art	9 (6.5)
Infrastructure investments and services supported e.g. improving road networks, social facilities etc	121 (87.7)	Promotion and development of traditional arts and handicrafts/ Sponsorship of art exhibits	11 (8)

Human Resources Theme			
Employee remuneration	121 (87.7)	Providing recreational, cultural and activities/facilities	45 (32.6)
Promoting employee safety and physical or mental health	113 (81.9)	Periodic review of workforce policies and employee benefits	61 (44.2)
Statements regarding reduction of pollutants, irritants, hazards, injuries in workplace	109 (79)	Employment of differently abled people/ex-servicemen	62 (44.9)
Energy Theme			
Discussing the company's efforts to reduce energy consumption/ Reduction of energy consumption	113 (81.9)	Receiving an award or appreciation for an energy conservation program	54 (39.1)
Disclosing energy savings resulting from product recycling	88 (63.8)	Research aimed at improving energy efficiency of products	73 (52.9)
Use of alternate sources of energy	84 (60.9)	Energy conservation/ day week / month awareness	73 (52.9)
Environment Theme			
Use of environment friendly materials	108 (78.3)	Contributions in terms of cash or art/sculptures to beautify the environment	2 (1.4)
Signatory status to agreements that commit the organization to consider the environment in its operations	108 (78.3)	Designing facilities harmonious with the environment	3 (2.2)
Disclosures about recycled input materials used	96 (69.6)	Habitats protected or restored	8 (5.8)
Product, Services-Safety and Innovation (PSI) Theme			
The amount/ percentage figures of research and development expenditure for specific products and/or its benefits	128 (92.7)	Information on any research projects set up by the company to improve its product in any way	103 (74.6)
Eco friendly products	126 (91.3)	Information on the quality of the firm's products as reflected in prizes/awards received	105 (76.1)
Developing Product Catalogues	126 (91.3)	Disclosing that products meet applicable safety standards	108 (78.3)

Customers Theme			
Customer relationship management	138 (100)	Consumer awards	45 (32.6)
Customer information	136 (98.5)	Provision of adequate grievance handling mechanisms to address customer concern	86 (62.3)
Emission of Carbon and Harmful gases Theme			
Green building movement	71 (51.4)	Signatory to MOU with other corporate with regard to reduction of emissions	23 (16.7)
Carbon emission management system	62 (44.9)	Statements that company is carbon positive	32 (23.2)
Planting Trees	60 (43.5)	Efforts to reduce carbon emissions	39 (28.3)
Other CSR activities Theme			
Corporate objectives/ policies: general disclosure of corporate objectives/policies relating to the social responsibility of the company to the various segments of society	107 (77.5)	Membership of United Nation Global Compact(UNGC) Program	24 (17.4)
Sustainability Report	52 (37.7)	Receiving CSR Awards	47 (34.1)

Note: The numbers denote average number of companies making disclosures and numbers within bracket denote percentage of average companies.

Within ‘emission of carbon and harmful gases theme’, ‘green building movement’ is the most disclosed activity with 51.4 per cent companies making disclosures, ‘carbon emission management’ with 44.9 per cent and ‘planting trees’ with 43.5 per cent companies making disclosures. The least popular activities in this theme are ‘MOU with other corporates with regard to reduction of emissions’ with 16.7 per cent companies making such disclosures, ‘statements about their carbon positive status’ by 23.2 per cent companies and ‘efforts for reducing carbon emissions’ with declaration by 28.3 per cent of companies. Most popular CSR disclosures other than belonging to any of above discussed broad themes are ‘general disclosure of corporate objectives/policies relating to the social responsibility of the company to the various segments of society’ by 77.5 per cent companies and mention of ‘sustainability report’ by 37.7 per cent companies. The least popular CSR activities overall are ‘Membership

of United Nation Global Compact (UNGC) Program' and 'Receiving CSR Awards' with discussion by only 17.4 per cent and 34.1 per cent companies.

4.1.1.3 Top fifteen most and least CSR disclosing companies

In order to find out the companies disclosing maximum and minimum number of CSR activities in their annual report, top fifteen most and least disclosing CSR companies across selected time period have been investigated. The table 4.3 presents the top fifteen companies, disclosing maximum number of CSR activities and fifteen companies reporting minimum number of CSR activities in their annual report out of the selected sample size. It is calculated on the basis of percentage of total number of CSR activities disclosed by each company in their respective annual reports over selected period of ten years to the total number of CSR activities in CSRDI.

It can be observed from the table that Bharat Heavy Electricals Limited made maximum disclosures towards CSR with a disclosure rate of 74.8 per cent of the total activities in their annual reports from 2008 to 2017. Following it is Ambuja Cements Limited at 2nd rank by reporting 73.2 per cent of the total activities with Ultratech Cement Limited at 3rd place with disclosure of 68.9 per cent activities. The other companies which have made significant disclosures of their social responsibility initiatives over selected time period are Grasim Industries Limited (68.5%), Cummins India Limited (66.9%), Ashok Leyland Limited (64.7%), JSW Steel Limited (64.4%), Mahindra & Mahindra Limited (64%) and Bharat Electronics Limited (63.8%). Other companies out of selected sample falling in the category of major CSR disclosing companies are Hindustan Petroleum Limited (63.6%), Amara Raja Batteries Limited (63%) and Oil & Natural Gas Corporation Limited (62.7%).

Similarly Aurobindo Pharmaceuticals Limited is the least CSR disclosing company by disclosing only 22.3 per cent of the total activities in their annual report over selected time period of ten years. The other companies scoring low in terms of CSR disclosures are Dr Reddy's Laboratories Limited being 2nd lowest with only 28.4 per cent disclosures and Cholamandalam Finance Company Limited which is 3rd lowest with 28.9 per cent disclosure of CSR activities. Other slowcoaches in terms of CSR disclosures are Axis Bank Limited (32.4%), LIC Housing Finance Limited (35%), Tech Mahindra Limited (35.1%), Sun TV Network Limited (35.7%), Oracle Financial Services Limited (35.8%) and Godrej Consumer Products Limited (36.2%). More companies with low disclosure score are Shree Cement Limited (37.2%), Central Bank of India Limited (39%) and Welspun India Limited (41.9%). The last three companies in the list are Reliance Communication Limited with 42.1% disclosure rate, Shriram City Union Finance Limited with 42.4% score and M&M Financial Services Ltd by disclosing 42.7% of total activities.

Table 4.3 Top fifteen most and least CSR disclosing companies

Rank	Company Name	Percentage of total number of activities disclosed
Top fifteen most CSR disclosing companies		
1	Bharat Heavy Electricals Limited	74.8
2	Ambuja Cements Limited	73.2
3	Ultratech Cement Limited	68.9
4	Grasim Industries Limited	68.5
5	Cummins India Limited	66.9
6	Ashok Leyland Limited	64.7
7	JSW Steel Limited	64.4
8	Mahindra & Mahindra Limited	64
9	Bharat Electronics Limited	63.8
10	Hindustan Petroleum Limited	63.6
11	Amara Raja Batteries Limited	63
12	Oil & Natural Gas Corporation Limited	62.7
13	Cadila Healthcare Limited	62.4
14	Punjab National Bank Limited	62.4
15	NTPC Limited	62.2
Fifteen least CSR disclosing companies		
1	Aurobindo Pharmaceuticals Limited	22.3
2	Dr Reddy's Laboratories Limited	28.4
3	Cholamandalam Finance Company Limited	28.9
4	Axis Bank Limited	32.4
5	LIC Housing Finance Limited	35
6	Tech Mahindra Limited	35.1
7	Sun TV Network Limited	35.7
8	Oracle Financial Services Limited	35.8
9	Godrej Consumer Products Limited	36.2
10	Shree Cement Limited	37.2
11	Central Bank of India Limited	39
12	Welspun India Limited	41.9
13	Reliance Communication Limited	42.1
14	Shriram City Union Finance Limited	42.4
15	M&M Financial Services Ltd	42.7

4.1.1.4 Descriptive statistics of CSRD across years

In the table 4.4 it can be observed that in the year 2008 minimum number of activities disclosed by any one of the selected companies were only 17 activities (9.5%) which gradually increased to 51 activities (28.6%) by 2017. Also maximum numbers of activities disclosed by any company in the year 2008 were 114 activities (64%) and this increased to 160 activities (89.9%) by 2017. The average number of activities disclosed by the selected sample was 71 activities (39.9%) in 2008 which became highest 126 activities (71%) in 2016 and finally slightly dipping down to 124 activities (69.7%) in 2017. The median value of all disclosed activities was 72 activities (40.4%) in 2008 and became 134 activities (75.3%) in 2016 while falling to 129 activities (72.5%) in 2017.

Table 4.4 Descriptive statistics of activities disclosed

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Minimum number of activities disclosed	17 (9.5)	28 (15.7)	31 (17.4)	31 (17.4)	38 (21.3)	33 (18.5)	39 (21.9)	39 (21.9)	50 (28.1)	51 (28.6)
Maximum number of activities disclosed	114 (64)	121 (68)	124 (69.7)	130 (73)	133 (74.7)	135 (75.8)	148 (83.1)	159 (89.3)	162 (91)	160 (89.9)
Average number of activities disclosed	71 (39.9)	73 (41.2)	78 (43.9)	84 (47.4)	87 (48.7)	90 (50.5)	101 (56.9)	124 (69.6)	126 (71)	124 (69.7)
Median Value of total activities disclosed	72 (40.4)	73 (41)	79 (44.4)	85 (47.7)	87 (48.9)	91 (51.1)	103 (57.9)	133 (74.7)	134 (75.3)	129 (72.5)

Note: The numbers denote number of disclosed activities and numbers within bracket denote their percentage.

4.1.1.5 Quality of CSRD across years

In order to investigate the quality of disclosures of across each theme and year, the methodology used by Saleh *et al* (2011) was followed to identify whether disclosures made by companies were non-financial (non-quantitative) or non-financial (non-quantitative) with particular information or financial (quantitative) in nature and were assigned weights accordingly. The greatest weight of 3 was assigned to financial (quantitative) disclosure(s), the next highest weight 2 was assigned to non-financial (non-quantitative) disclosure(s) but with particular information, weight of 1 was assigned to non-financial (non-quantitative) disclosure(s) which were described in general and no specific information was given for these disclosures, weight of 0 was given in case of no disclosure(s).

For analyzing quality of disclosures across years, as observed in the table 4.5 the percentage of qualitative disclosures which are non-financial in nature has consistently decreased over years from 67.8 per cent in 2008 to 22.3 per cent in 2017, while the percentage of qualitative disclosures with specific has increased persistently from 17.3 per cent in 2008

Table 4.5 Quality of disclosures across years

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	67.8	60.1	48.8	45.5	41.8	38.3	36.7	23.7	23	22.3
Percentage of Qualitative disclosures with specific information	17.3	24.9	35.4	36.7	38.9	39.8	40.2	52.3	52.9	52.1
Percentage of Quantitative disclosures	14.9	15	15.8	17.8	19.3	21.9	23.1	23.9	24	25.6

to 52.1 per cent in 2017. And the percentage of financial (quantitative) disclosures has gradually and continuously increased from 14.9 per cent in 2008 to 25.6 per cent in 2017. In the year 2008, maximum disclosures being made were qualitative in nature (67.8%) with financial disclosures being lowest (14.9%). However by the end of study period in 2017, the maximum disclosures were of qualitative nature with specific information (52.1%) followed by financial disclosures (25.6%) with qualitative disclosures (22.3%) becoming the lowest. Hence it can be inferred that over years proportion of financial disclosures by companies has been increasing continuously while that of simple qualitative disclosures is decreasing. However qualitative disclosures with specific information and elaboration are still the most preferred form of disclosures by companies in India.

4.1.1.6 Quality of CSRD across themes

As discussed in the previous section to analyze the quality of disclosures of each theme and year, the methodology used by Saleh *et al* (2011) was followed. While investigating quality of disclosures across themes, as observed in the table 4.6, that over selected time period maximum proportion of financial disclosures were made for 'energy theme' (41.9%) with first rank and followed by 'community development theme' (28.5%) with second rank. In terms of making quantitative disclosures 'product, services-safety and innovation theme' (24.8%) acquired third rank and was marginally followed by 'human resources theme' (24.4%) with fourth spot. No financial disclosures related to 'other CSR activities' were made in any of the years. Of the total disclosures made 'customers theme' had only 3.2 per cent financial disclosures while 'environment theme' had 9.2 per cent and 'emission of carbon and harmful gases theme' had 10.5 per cent of total disclosures in quantitative form.

'Customers theme' had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 53.7 per cent. Following it are

‘product, services-safety and innovation theme’ (51.3%) at second spot and ‘environment theme’ (47.3%) at third place. ‘Community development theme’ had 42 per cent and ‘human resources theme’ had 38.5 per cent of their total disclosures as qualitative disclosures with specific information. In case of ‘other CSR activities theme’ 35.3 per cent of the total disclosures were from this category while ‘emission of carbon and harmful gases theme’ had only 16.9 per cent of such disclosures. The lowest amount of non-financial disclosures with particular information was from ‘energy theme’ contributing 12 per cent of its total disclosures.

In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 72.5 per cent followed by ‘other CSR activities theme’ with 64.7 per cent. Third rank in category of non-financial disclosures goes to ‘energy theme’ (46.1%), fourth position to ‘environment theme’ (43.4%) and with marginal points the fifth spot goes to ‘customers theme’ (43.1%). ‘Human resources theme’ had 37.1 per cent and ‘community development theme’ had 29.5 per cent of their total disclosures as qualitative disclosures. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 23.9 per cent.

Table 4.6 Quality of disclosures across themes

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	29.5	42	28.5
Human Resource Theme	37.1	38.5	24.4
Energy Theme	46.1	12	41.9
Environment Theme	43.4	47.3	9.2
Product, Services-Safety and Innovation Theme	23.9	51.3	24.8
Customer Theme	43.1	53.7	3.2
Emission of Carbon and Harmful gases Theme	72.5	16.9	10.5
Other CSR activities Theme	64.7	35.3	0

4.1.1.7 Amount and trend of CSRD across each year and theme

For analyzing amount and trend of disclosures, the numbers of sentences related to each theme of CSR were counted from the annual report of each company. As number of sentence was the unit of measurement in this study, so number of sentences related to each activity disclosed by individual company in their annual report was counted and mentioned against each theme and subtheme in the CSRD index. The disclosures were calculated for

each year from 2008 to 2017 across each selected theme. The average amount of disclosures for each year have been calculated by dividing total number of sentences disclosed across each theme by all companies in particular year with total number of companies. After which trend analysis has been done on individual themes on the basis of their average number of sentences, along with presenting t-value of each trend coefficient.

As observed in the table 4.7 there has been a consistent increase in average number of sentences aggregated over all themes from 214.1 sentences in 2008 to 448.9 sentences in 2017. In ‘community development theme’, ‘human resource theme’ and ‘environment theme’ a persistent increase in average number of sentences with a positive and significant trend was observed across selected time period. However ‘emission of carbon and harmful gases theme’ experienced slight dip from 22.3 sentences in 2015 to 21.9 sentences in 2016 and ‘energy theme’ reported a downfall from average 24.3 sentences in 2014 to 22.9 sentences in 2015 and then a marginal increase to 23 sentences in 2016 to finally 23.3 sentences in 2017. But the overall trend analysis indicated a positive trend among these themes over entire study period. Also the average number of sentences remained constant in 2015 and 2016 to 20.1 sentences in ‘other CSR activities theme’ and decreased slightly from 60.1 sentences in 2016 to 59.2 sentences in 2017 across ‘product, services-safety and innovation theme’ and from 39.6

Table 4.7 Amount and trend of disclosures

Year	Community Development	Human Resource	Energy	Environment
2008	48.78	62.41	11.05	23.28
2009	57.33	68.12	13.14	25.18
2010	70.02	78	14.68	28.39
2011	79.87	82.52	16.27	30.83
2012	86.38	87.52	18.44	32.47
2013	97.69	95.88	20.89	35.22
2014	112.17	104.93	24.34	39.82
2015	114.66	111.22	22.93	43.87
2016	115.71	114.08	23.02	44.31
2017	118.82	115.9	23.33	45.63
Trend Equation	TE=44.46+8.3T, R ² =0.96, t=13.76 (p=.000)	TE=57.22+6.3T, R ² =0.98, t=22.15 (p=.000)	TE=10.55+1.5T, R ² =0.90, t=8.56 (p=.000)	TE=20.16+2.68T, R ² =0.98, t=21.44 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	36.26	21.58	6.9	3.85	214.12
2009	40.38	23.43	7.7	4.63	239.94
2010	46.38	27.52	10.65	7.01	282.62
2011	47.04	30.32	12.39	9.13	308.38
2012	50.6	31.8	14.28	12.28	333.78
2013	54.69	34.72	17.54	14.64	371.38
2014	59.38	38.87	21.09	16.49	417.09
2015	59.47	39.56	22.26	20.06	434.04
2016	60.14	39.33	21.9	20.06	438.57
2017	59.22	41.51	23.24	21.28	448.93
Trend Equation	TE=36.30+2.74T, R ² =0.92, t=9.49 (p=.000)	TE=20.22+2.3T, R ² =0.96, t=14.27 (p=.000)	TE=4.67+2.02T, R ² =0.96, t=14.55 (p=.000)	TE=1.13+2.15T, R ² =0.98, t=20.46 (p=.000)	TE=194.73+28.03T, R ² =0.97, t=16.33 (p=.000)

sentences in 2015 to 39.3 sentences in 2016 across ‘customers theme’. In the year 2008, maximum amount of disclosures were observed in ‘human resources theme’ with 62.4 sentences followed by ‘community development theme’ with 48.8 sentences and then ‘product, services-safety and innovation theme’ with 36.3 sentences.

Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 3.8 sentences. ‘Human resources theme’ lost its first position in terms of amount of disclosures to ‘community development theme’ in 2013 which then consistently maintained its first slot till 2017 with 118.8 average numbers of sentences. Throughout the period of study ‘other CSR activities theme’ has been the least disclosed theme across all years with 21.3 average numbers of sentences in 2017. ‘Emission of carbon and harmful gases theme’ throughout all years of sample study has been the second least disclosed theme followed by ‘energy theme’ as third least disclosed theme in terms of amount of disclosures. Hence the table presents a persistent increase in total amount of disclosures by companies in their annual reports over the period of study. The results of trend analysis indicate that there is positive and highly significant trend during the period of study across all the themes of CSR and trend coefficient is significantly different from zero in each theme. The ‘community development theme’ as the theme with maximum amount/volume of disclosures conveys the notion of increasing interest among Indian corporates towards the social and community development project. Activities focused on employees have always been important to corporate with first rank in initial years of the study for ‘human resources theme’ and then

attaining second rank later on.

‘Product, services-safety and innovation theme’ and ‘customers theme’ have throughout maintained third and fourth rank respectively on the basis of amount of disclosures made. The volume of disclosures on ‘energy theme’ and ‘emission of carbon and harmful gases theme’ have always been on comparatively lower side across all years of study. However the amount of disclosures on ‘other CSR activities theme’ has always been lowest throughout the selected period of study amongst all themes of CSR.

4.1.1.8 Significance of variations across all themes of CSR

Analysis of Variance (ANOVA) was applied to investigate variation across all selected themes of CSR, using average number of sentences on each theme disclosed by all companies in sample across all selected years as the base. It can be observed in table 4.8 that the mean value is highest for ‘human resources theme’ (92.06) followed by ‘community development theme’ (90.15). Hence these two themes are most disclosed themes of CSR with maximum amount of disclosures. The mean value came out to be lowest for ‘other CSR activities theme’ (12.94) and ‘emission of carbon and harmful gases theme’ (15.8). The calculated F-value came out to be 60.957, with p-value 0.000 which indicates that there is a significant variation in amount/volume of disclosures across all selected themes of CSR at 1 per cent level of significance.

Table 4.8 Comparison across all themes

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	90.15	25.673	60.957 (0.000)
Human Resources	92.06	19.331	
Energy	18.81	4.786	
Environment	34.90	8.184	
Prdouct, Services-Safety and Innovation	51.36	8.646	
Customers	32.87	7.099	
Emission of Carbon and Harmful Gases	15.80	6.238	
Other CSR activities	12.94	6.567	
Total	43.61	32.394	

(Significant at 1% level of significance)

4.1.2 CSR disclosures across different industry groups

The selected sample consists of companies from across 17 industry groups. A few industries contributed only one or two companies in the selected sample, so companies from such industry groups were arranged together under miscellaneous category. Finally analysis

for CSR disclosures was conducted upon 13 major industry groups namely Automobiles, Consumer goods, Cement and cement products, Construction, Energy, Financial services, Industrial manufacturing, Information technology, Metals, Pharmaceuticals, Services, Telecom and Miscellaneous. Again each industry group is analyzed individually on the parameters of extent, amount and quality of disclosures by its member companies using same methodology as discussed in the previous section.

4.1.2.1 CSR disclosures within automobiles industry

The automobiles sector contributed total 11 companies towards the final sample under study. These companies are Amara Raja Batteries Ltd, Ashok Leyland Ltd, Bajaj Auto Ltd, Exide Industries Ltd, Hero Motocorp Ltd, Mahindra & Mahindra Ltd, Maruti Suzuki India Ltd, Motherson Sumi Systems Ltd, Tata Motors Ltd, Wabco India Ltd and T V S Motor Co. Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.1.1 Number of total companies making CSR across each year and theme

As observed in table 4.9, the number of companies making CSR disclosures in automobile sector over selected time period has always been high. In the selected time-period each of the eleven companies from this sector has made disclosures on CSR in their annual reports. The activities from 'community development theme', 'human resources theme', 'customers theme', 'product, services-safety and innovation theme' and 'environment theme' were mostly reported by the companies in this group with all 11 companies (100%) making disclosures in most of the years. However 'other CSR activities theme' was disclosed by 4 companies (36.4%) in 2008 which increased gradually over years to all 11 companies (100%) from 2014 till 2017. The number of companies making disclosures on 'community development theme', 'human resources theme' and 'environment theme' throughout the period of study has been either 10 or more (90.9% or above). The 'energy theme' was disclosed by 10 companies (90.9%) in 2008 and 2010, while by 9 companies (81.8%) in 2009 and later by all selected companies within sector till 2017. 'Emission of carbon and harmful gases theme' was disclosed by 7 companies (63.6%) in 2008 and 2011, while by 9 companies (81.8%) in years 2009, 2010, 2012 and 2013, and by 10 companies (90.9%) from 2014 to 2017.

4.1.2.1.2 Quality of CSR across years

From the table 4.10 it is clear that percentage of qualitative disclosures by companies in automobiles sector has decreased largely over years from 71.9 per cent in 2008 to 25 per cent in 2017. And the percentage of qualitative disclosures with specific information has increased highly from 17.2 per cent in 2008 to 52.2 per cent in 2017 in this sector. Also the percentage of financial disclosures has gradually increased within automobile sector from 10.9 per cent in 2008 to 22.7 per cent in 2017.

Table 4.9 Number of companies making disclosures on CSR in automobiles sector

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	11 (100)	11 (100)	10 (90.9)	10 (90.9)	11 (100)	11 (100)	11 (100)	7 (63.6)	4 (36.4)
2009	11 (100)	10 (90.9)	10 (90.9)	9 (81.8)	11 (100)	11 (100)	11 (100)	9 (81.8)	4 (36.4)
2010	11 (100)	10 (90.9)	10 (90.9)	10 (90.9)	10 (90.9)	11 (100)	11 (100)	9 (81.8)	5 (45.4)
2011	11 (100)	10 (90.9)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	7 (63.6)	8 (72.7)
2012	11 (100)	11 (100)	11 (100)	10 (90.9)	10 (90.9)	11 (100)	11 (100)	9 (81.8)	9 (81.8)
2013	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	9 (81.8)	10 (90.9)
2014	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	10 (90.9)	11 (100)
2015	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	10 (90.9)	11 (100)
2016	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	10 (90.9)	11 (100)
2017	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	11 (100)	10 (90.9)	11 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

Table 4.10 Quality of disclosures across years in automobiles sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	71.9	62.1	49.7	59	54.6	45.3	45.8	22.5	22.9	25
Percentage of Qualitative disclosures with specific information	17.2	27.1	37.8	28.2	30	36.6	34	54.7	55.8	52.2
Percentage of Quantitative disclosures	10.9	10.8	12.5	12.8	15.3	18	20.2	22.8	21.3	22.7

In the year 2008, maximum disclosures being made were qualitative in nature (71.9%) with financial disclosures being lowest (10.9%). However by the end of study period in 2017 the maximum disclosures in automobile sector were of qualitative nature with specific information (52.2%) followed by qualitative disclosures (25%) and lastly financial disclosures (22.7%).

4.1.2.1.3 Quality of CSRD across themes

It can be observed in the table 4.11 that over the entire period of study among all the themes in automobiles sector, maximum number of financial disclosures were from 'energy theme' (43.4%) with first place and following it is 'product, services-safety and innovation theme' (24.5%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures made 'customers theme' had

Table 4.11 Quality of disclosures across themes in automobile sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	37.8	41.7	20.5
Human Resource Theme	42.4	36.6	20.9
Energy Theme	46.5	10.1	43.4
Environment Theme	46	44.7	9.2
Product, Services-Safety and Innovation Theme	26.6	48.9	24.5
Customer Theme	40.9	58.4	0.6
Emission of Carbon and Harmful gases Theme	79.1	15.5	5.4
Other CSR activities Theme	67.9	32.1	0

just 0.6 per cent financial disclosures which is second lowest in the category. ‘Customers theme’ had most of its disclosures in the form of non-financial disclosures with particular information and ranked one in this category with 58.4 per cent. Following it are ‘product, services-safety and innovation theme’ (48.9%) at second spot and ‘environment theme’ (44.7%) at third place. The lowest amount of non-financial disclosures with particular information was from ‘energy theme’ by contributing only 10.1 per cent of its disclosures. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 79.1 per cent followed by ‘other CSR activities theme’ with 67.9 per cent. The least disclosures in this category were made by ‘product, services-safety and innovation theme’ with 26.6 per cent of its total disclosures.

4.1.2.1.4 Amount and trend of CSRD across each year and theme

As observed in the table 4.12, there has been a consistent increase in average number of sentences in automobiles sector aggregated over all themes from 208.7 sentences in 2008 with a slight dip in 2016 with 434.1 sentences to a rise again in 2017 with 454.5 sentences. Across most of the themes there has been a continuous increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between, for instance ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 43.5 sentences to 107.3 sentences in 2015 which fell down to 102.5 sentences in 2016 and again increasing to 110.6 sentences in 2017. Somewhat similar trends with variations in some other years were observed to be repeated in all other themes within this sector. However in ‘other CSR activities theme’ a continuous increase in average number of sentences was observed from 2008 to 2017. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 59.5 sentences followed by ‘community development theme’ with 43.5 sentences and then ‘product, services-safety and innovation theme’ with 37.3 sentences.

Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 2.8 sentences. Throughout the period of study till 2017 ‘human resources theme’ has maintained the first position as most disclosed activity followed by ‘community development theme’ with second position and ‘product, services-safety and innovation theme’ at third slot. Also ‘other CSR activities theme’ remained to be the least disclosed till 2017. ‘Emission of carbon and harmful gases theme’ throughout period of study has been the second least disclosed theme followed by ‘energy theme’ as third least disclosed theme, with finally both swapping their positions in 2017 by ‘energy theme’ becoming second least disclosed with 25.3 average sentences.

The overall trend analysis indicated a highly significant and positive trend among all the themes in automobiles sector over the entire study period.

Table 4.12 Amount and trend of disclosures in automobile sector

Year	Community Development	Human Resource	Energy	Environment
2008	43.5	59.5	10.8	24.4
2009	53.8	65.4	13.6	29.2
2010	57.4	73.9	14.6	30.3
2011	65.3	73.7	15.4	27.9
2012	71	73.5	17.5	29.3
2013	81.7	93.3	24.2	37.1
2014	91.5	92.8	30.9	41.1
2015	107.3	113.7	29.5	48.7
2016	102.5	112.6	24.8	48.8
2017	110.6	115.4	25.3	51.2
Trend Equation	TE=35.67+7.8T, R ² =0.97, t=17.37 (p=.000)	TE=50.44+6.7T, R ² =0.93, t=10.52 (p=.000)	TE=9.47+2T, R ² =0.75, t=4.93 (p=.001)	TE=19.54+3.1T, R ² =0.90, t=8.55 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	37.3	22.5	7.7	2.8	208.7
2009	41	21.5	6.2	4	234.8
2010	42.4	26.4	8.7	7.1	260.8
2011	40.1	28.2	10.8	7.4	268.8
2012	43.4	29	16.8	9.6	290.3
2013	54.4	34.4	21.2	13.6	359.9
2014	57.4	35.8	25.8	14.3	389.7
2015	59.6	42.1	25.7	20.4	447.2
2016	60.4	40.2	23.5	21.2	434.1
2017	62.3	42	25.4	22.4	454.5
Trend Equation	TE=32.86+3.1T, R ² =0.91, t=8.86 (p=.000)	TE=18.46+2.5T, R ² =0.95, t=12.35 (p=.000)	TE=3.35+2.5T, R ² =0.88, t=7.62 (p=.000)	TE=2.3T-0.62, R ² =0.97, t=16.16 (p=.000)	TE=169.18+30.13T, R ² =0.96, t=13.52 (p=.000)

4.1.2.1.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in automobiles industry using average number of sentences disclosed as the base. It can be seen in table 4.13 that the mean value is highest for ‘human resources theme’ (87.4) followed by ‘community development theme’ (78.47). Hence these two themes are most disclosed themes of CSR. The mean value came out to be lowest for ‘other CSR activities theme’ (12.29) and ‘emission of carbon and harmful gases theme’ (17.2). The calculated F-value came out to be 43.902, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in automobiles sector at 1 per cent level of significance.

Table 4.13 Comparison across all themes in automobiles sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	78.47	23.871	43.902 (0.000)
Human Resources	87.40	21.067	
Energy	20.67	7.112	
Environment	36.80	10.004	
Product, Services-Safety and Innovation	49.85	9.815	
Customers	32.21	7.764	
Emission of Carbon and Harmful Gases	17.20	8.131	
Other CSR activities	12.29	7.218	
Total	41.86	29.389	

(Significant at 1% level of significance)

4.1.2.2 CSR disclosures within cement and cement products industry

The cement and cement products sector contributed total 5 companies towards the final sample under study. These companies are A C C Ltd, Ambuja Cements Ltd, Grasim Industries Ltd, Shree Cement Ltd and Ultratech Cement Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.2.1 Number of total companies making CSRD across each year and theme

The table 4.14 depicts that the number of selected companies in cement sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high. In the selected time-period each of the five companies from this sector has reported CSR activities in their annual reports. The activities from ‘energy theme’, ‘environment theme’, ‘human resources theme’, ‘product, services-safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group with all five companies making disclosures throughout study period.

Table 4.14 Number of companies in cement industry making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	4 (80)	1 (20)
2009	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	3 (60)	1 (20)
2010	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	3 (60)
2011	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	4 (80)	4 (80)	4 (80)
2012	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)
2013	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)
2014	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)
2015	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)
2016	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)
2017	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)	5 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

However, ‘Other CSR activities theme’ was disclosed by only 1 company (20%) in 2008, which increased gradually over years to all 5 companies (100%) in 2017. ‘Emission of carbon and harmful gases theme’ was disclosed by 3 companies (60%) in 2009 and by 4 companies (80%) in 2008 and 2011 both.

4.1.2.2.2 Quality of CSRD across years

From the table 4.15 it is clear that percentage of qualitative disclosures has consistently decreased from 57.3 per cent in 2008 to 24.4 per cent in 2017, while the percentage of qualitative disclosures with specific information have increased from 30.8 per cent in 2008 to 50.7 per cent in 2017 by companies in cement industry. Also the percentage of financial disclosures has increased from 11.9 per cent in 2008 to 24.9 per cent in 2017. In the year 2008, maximum disclosures being made were qualitative in nature (57.3%) while financial disclosures were the lowest (11.9%). However by the end of study period in 2017, the maximum disclosures in cement sector were of qualitative nature with specific information (50.7%) followed by financial disclosures (24.9%) with finally qualitative disclosures (24.4%) becoming the lowest.

Table 4.15 Quality of disclosures across years in cement industry

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	57.3	47.9	42.7	42.9	38.1	37.5	32.6	25.1	24.1	24.4
Percentage of Qualitative disclosures with specific information	30.8	39	45.3	41.7	43.7	41.3	43.5	51.8	52.3	50.7
Percentage of Quantitative disclosures	11.9	13	12	15.5	18.2	21.2	23.8	23.1	23.6	24.9

4.1.2.2.3 Quality of CSRD across themes

It can be observed in the table 4.16 that over the entire period of study among all the themes in cement industry, maximum number of financial disclosures were from ‘energy theme’ (39%) at first place and following it is ‘community development theme’ (26%) with second rank. No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures made ‘customers theme’ had only 3.2 per cent financial disclosures which is second lowest in the category. ‘Product, services-safety and innovation theme’ had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 62.6 per cent. Following it were ‘human

resources theme’ (51.3%) at second spot and ‘community development theme’ (47.6%) at third place.

Table 4.16 Quality of disclosures across themes in cement industry

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	26.5	47.6	26
Human Resource Theme	24.3	51.3	24.3
Energy Theme	46.6	14.4	39
Environment Theme	44.5	45.4	10.1
Product, Services-Safety and Innovation Theme	12.6	62.6	24.7
Customer Theme	40.8	56	3.2
Emission of Carbon and Harmful gases Theme	71.6	16.6	11.8
Other CSR activities Theme	63.7	36.3	0

The lowest amount of non-financial disclosures with particular information was by ‘energy theme’ by contributing only 14.4 per cent of its total disclosures. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 71.6 per cent followed by ‘other CSR activities theme’ with 63.7 per cent. The lowest contribution in this category was from ‘product, services-safety and innovation theme’ with 12.6 per cent of its disclosures.

4.1.2.2.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.17 that there has been an increase in average number of sentences in cement sector aggregated over all themes from 258.6 sentences in 2008 to 549.4 sentences in 2017. Across all the themes there has been continuous increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 64.4 sentences to 150.4 sentences in 2014 which slightly fell down to 147.8 sentences in 2015 and then further to 146.6 sentences in 2016 and finally rising to 152.8 sentences in 2017. Also somewhat similar trends were observed to be repeated across all other themes by companies within the cement sector.

In the year 2008, maximum amount of disclosures were observed in ‘human resources theme’ with 65.8 sentences followed by ‘community development theme’ with 64.4 sentences and then ‘product, services-safety and innovation theme’ with 44 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 1.4

Table 4.17 Amount and trend of disclosures in cement industry

Year	Community Development	Human Resource	Energy	Environment
2008	64.4	65.8	19	28.6
2009	71.2	79	18.6	38.8
2010	88.4	82.4	20.8	38.6
2011	99	85	22.8	40.2
2012	109.4	106.2	28	47
2013	127.4	109.8	36.4	55
2014	150.4	141.2	40.8	63.4
2015	147.8	115	30.2	57
2016	146.6	116	27.2	62
2017	152.8	122.8	31	66.4
Trend Equation	TE=55.99+10.9T, R ² =0.94, t=11.03 (p=.000)	TE=65.41+6.7T, R ² =0.75, t=4.96 (p=.001)	TE=18.23+1.7T, R ² =0.47, t=2.68 (p=.028)	TE=27.29+4.1T, R ² =0.92, t=9.77 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	44	23.4	12	1.4	258.6
2009	45	26.4	12.6	1.8	293.4
2010	48.8	26.8	16.8	9.4	332
2011	54.4	32.6	25.6	18.2	377.8
2012	62.2	33.8	29.6	19.2	435.4
2013	65.8	41	27.6	17.6	480.6
2014	77.4	50.6	32.6	25.8	582.2
2015	66.6	41.6	34.8	24.6	517.6
2016	64.4	44.2	34.6	22.6	517.6
2017	64.4	47.4	38.6	26	549.4
Trend Equation	TE=43.27+2.9T , R ² =0.66, t=3.97 (p=.004)	TE=20.92+2.9T , R ² =0.84, t=6.58 (p=.000)	TE=3T+9.73 , R ² =0.92, t=9.9 (p=.000)	TE=2.8T+1.19 , R ² =0.83, t=6.28 (p=.000)	TE=242.03+35T , R ² =0.87, t=7.46(p=.000)

sentences. ‘Human resources theme’ shared maximum amount of disclosures only in 2008 and 2009 while loosing first slot to ‘community development theme’ from 2010 till 2017 with 152.8 sentences. From 2010 to 2017 ‘human resources theme’ ranked second with 122.8 sentences and ‘product, services-safety and innovation theme’ remained at third slot from 2008 till 2016 with finally ‘environment theme’ ranking third in 2017 with 66.4 sentences. However ‘other CSR activities theme’ remained the least disclosed theme throughout the period of study in terms of amount of disclosures.

The results of trend analysis indicated a highly significant and positive trend among all the themes except the ‘energy theme’ in cement and cement products sector over the entire study period. In case of ‘energy theme’, the trend coefficient is not significantly different from zero at 1 per cent level of significance value indicating the presence of neither a positive nor a negative trend. Also the value of R-square for linear trend equation of ‘energy theme’ is comparatively low.

4.1.2.2.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in cement industry using average number of sentences disclosed as the base. It can be seen in table 4.18 that the mean value is highest for ‘product, services-safety and innovation theme’ (59.3) followed by ‘environment theme’ (49.7). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘community development theme’ and ‘human resources theme’. The calculated F-value came out to be 46.289, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in cement and cement products sector at 1 per cent level of significance

Table 4.18 Comparison across all themes in cement industry

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	1.1574E2	33.95815	46.289 (0.000)
Human Resources	1.0232E2	23.39120	
Energy	27.4800	7.41182	
Environment	49.7000	12.84099	
Product, Services-Safety and Innovation	59.3000	10.83421	
Customers	36.7800	9.50202	
Emission of Carbon and Harmful Gases	26.4800	9.58758	
Other CSR activities	16.6600	9.34050	
Total	54.3075	38.02099	

(Significant at 1% level of significance)

Table 4.19 Number of companies in construction industry making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	1 (33.3)	2 (66.7)
2009	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	2 (66.7)	2 (66.7)
2010	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	1 (33.3)	2 (66.7)
2011	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	2 (66.7)	2 (66.7)
2012	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	2 (66.7)	2 (66.7)
2013	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	2 (66.7)	3 (100)
2014	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)
2015	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)
2016	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)
2017	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)	3 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

4.1.2.3 CSR disclosures within construction industry

The construction sector contributed total 3 companies towards the final sample under study. These companies are D L F Ltd, Larsen & Toubro Ltd and NBCC (India) Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.3.1 Number of total companies making CSRD across each year and theme

The table 4.19 depicts that the number of selected companies in construction sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high. In the selected range of time each of the three companies from this sector have made some sort of CSR disclosures in their annual reports. The activities from ‘energy theme’, ‘environment theme’, ‘customer theme’, ‘human resources theme’, ‘product, services-safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group with all three companies making disclosures throughout study period.

However, ‘emission of carbon and harmful gases theme’ was disclosed by only 1 company (33.3%) in 2008 which increased gradually over years to all 3 companies (100%) in 2017. ‘Other CSR activities theme’ was disclosed by 2 companies (66.7%) till 2012 and later by all 3 companies (100%) till 2017.

4.1.2.3.2 Quality of CSRD across years

From the table 4.20 it is clear that percentage of qualitative disclosures which are non-financial in nature by companies in construction sector has consistently decreased over years from 65.8 per cent in 2008 to 24.1 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 13.9 per cent in 2008 to 48.1 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased within construction sector from 20.2 per cent in 2008 to 27.8 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (65.8%) with qualitative nature

Table 4.20 Quality of Disclosures across years in construction industry

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	65.8	58.5	44.7	48.7	52.9	46.2	28.8	23.6	23.6	24.1
Percentage of Qualitative disclosures with specific information	13.9	24.4	36.5	30	27.1	32.3	47.1	52.8	52.8	48.1
Percentage of Quantitative disclosures	20.2	17.1	18.8	21.2	20	21.5	24	23.6	23.6	27.8

with specific information being the lowest (13.9%). However by the end of study period in 2017 the maximum disclosures in construction sector were of qualitative nature with specific information (48.1%) followed by financial disclosures (27.8%) with qualitative disclosures (24.1%) becoming the lowest.

4.1.2.3.3 Quality of CSRD across themes

It can be observed in the table 4.21 that over the entire period of study among all the themes in construction industry, maximum number of financial disclosures were from ‘energy theme’ (52.6%) with first place and following it is ‘community development theme’ (30.3%) with second rank. No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures made ‘customers theme’ had only 1.1 per cent financial disclosures which is second lowest in the category. ‘Customer theme’ had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 58.4 per cent. Following it are ‘environment theme’ (54.8%) at second spot and ‘product, services-safety and innovation theme’ (43.3%) at third place. ‘Energy theme’ had no disclosures and ‘emission of carbon and harmful gases theme’ had only 1.6 per cent disclosures thus making second lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 83.6 per cent followed by ‘other CSR activities theme’ with 71.7 per cent. The least disclosures in this category were from ‘community development theme’ with 26.9 per cent of its disclosures.

Table 4.21 Quality of disclosures across themes in construction industry

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	26.9	42.8	30.3
Human Resource Theme	35.8	37.5	26.7
Energy Theme	47.4	0	52.6
Environment Theme	39.8	54.8	5.4
Product, Services-Safety and Innovation Theme	29.2	43.3	27.5
Customer Theme	40.4	58.4	1.1
Emission of Carbon and Harmful gases Theme	83.6	1.6	14.7
Other CSR activities Theme	71.7	28.3	0

4.1.2.3.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.22 that there has been an increase in average number of sentences in construction sector aggregated over all themes from 217.3 sentences in 2008

Table 4.22 Amount and trend of disclosures in construction industry

Year	Community Development	Human Resource	Energy	Environment
2008	49.3	62.7	8.3	20.3
2009	69.7	68	8.7	24.7
2010	71.3	76	11	32.7
2011	69	70.3	10	24
2012	79	76	13.3	30.7
2013	89.7	81.7	13.7	33
2014	114	114.3	27.7	38
2015	106	118	26.7	41
2016	105.7	111.3	21	40
2017	106.7	117	27.7	45
Trend Equation	TE=49.8+6.6T, R ² =0.86, t=6.94 (p=.000)	TE=51.53+6.9T, R ² =0.85, t=6.71 (p=.000)	TE=3.73+2.4T, R ² =0.79, t=5.46 (p=.001)	TE=19.1+2.5T, R ² =0.87, t=7.43 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	39	23.7	6.7	7.3	217.3
2009	33	21.7	8	6.3	240
2010	44.7	30	10.3	7.7	283.7
2011	42.7	24.7	5.3	7.7	253.7
2012	41.3	23.3	5.3	8	277
2013	41.3	28.3	9	13.3	310
2014	58.7	38	16.3	18	425
2015	62	35	19.7	21.3	429.7
2016	63.3	41	22.3	19	423.7
2017	55	45.3	28.3	29.3	454.3
Trend Equation	TE=31.73+3T, R ² =0.71, t=4.43 (p=.002)	TE=17.76+2.4T, R ² =0.79, t=5.41 (p=.001)	TE=2.3T+0.51, R ² =0.74, t=4.83 (p=.001)	TE=2.4T+0.76, R ² =0.84, t=6.6 (p=.000)	TE=174.91+28.5T, R ² =0.89, t=8.01 (p=.000)

to 454.3 sentences in 2017. Across all the themes there has been continuous increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 62.7 sentences followed by ‘community development theme’ with 49.3 sentences and then ‘product, services-safety and innovation theme’ with 39 sentences. Least amount of disclosures was observed in ‘emission of carbon and harmful gases theme’ in 2008 with average 6.7 sentences. ‘Human resources theme’ and ‘community development theme’ made maximum amount of disclosures throughout the period of study followed by ‘product, services-safety and innovation theme’. However ‘emission of carbon and harmful gases theme’, ‘energy theme’ and ‘other CSR activities theme’ contributed the least amount of disclosures throughout study period. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in construction sector over the entire study period.

4.1.2.3.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was used to investigate variation across different themes of CSRD in construction industry using average number of sentences disclosed as the base. It can be seen in table 4.23 that the mean value is highest for ‘human resources theme’ (89.533) followed by ‘community development theme’ (86.033). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘emission of carbon and harmful gases theme’ (13.133) and ‘other CSR activities theme’ (13.800). The calculated F-value came out to be 53.898, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in construction sector at 1 per cent level of significance.

Table 4.23 Comparison across all themes in construction industry

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	86.033	21.540	53.898 (0.000)
Human Resources	89.533	22.699	
Energy	16.800	8.101	
Environment	32.933	8.154	
Product, Services-Safety and Innovation	48.100	10.689	
Customers	31.100	8.288	
Emission of Carbon and Harmful Gases	13.133	8.051	
Other CSR activities	13.800	7.813	
Total	41.429	31.775	

(Significant at 1% level of significance)

4.1.2.4 CSR disclosures within consumer goods industry

The consumer goods sector contributed total 20 companies towards the final sample under study. These companies are Asian Paints Ltd, Berger Paints India Ltd, Britannia Industries Ltd, Colgate-Palmolive (India) Ltd, Dabur India Ltd, Emami Ltd, Gillette India Ltd, Glaxosmithkline Consumer Healthcare Ltd, Godrej Consumer Products Ltd, Godrej Industries Ltd, Havells India Ltd, Hindustan Unilever Ltd, I T C Ltd, Kansai Nerolac Paints Ltd, Marico Ltd, Procter & Gamble Hygiene & Health Care Ltd, Rajesh Exports Ltd, Titan Company Ltd, United Breweries Ltd and United Spirits Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.4.1 Number of total companies making CSRD across each year and theme

The table 4.24 depicts that the number of selected companies in consumer goods sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the twenty companies from this sector having made some sort of CSR disclosures in their annual reports. The activities from ‘customer theme’ were mostly reported with each of twenty companies making disclosures in selected time period. ‘Other CSR activities theme’ was reported by only 3 companies (15%) in 2008 which increased gradually over years to all 20 companies (100%) making disclosures in 2017 and ‘emission of carbon and harmful gases theme’ with only 4 companies (20%) making disclosures in 2008 , finally increased to 16 companies (80%) in 2017. The disclosures on ‘community development theme’ and ‘human resources theme’ have always been high with 16 or more companies (80% or above) making disclosures throughout the period of study. The ‘energy theme’ was disclosed by 14 companies (70%) in 2008 and which gradually increased to all companies (100%) over time. ‘Environment theme’ was disclosed by 15 companies (75%) in 2008 while by 20 companies (100%) in 2016, which again fell to 19 companies (95%) in 2017.

4.1.2.4.2 Quality of CSRD across years

From the table 4.25 it is clear that percentage of qualitative disclosures which are non-financial in nature by companies in consumer goods sector has decreased over years from 72.6 per cent in 2008 to 21.5 per cent in 2017. While the percentage of qualitative disclosures with specific information have consistently increased from 12.2 per cent in 2008 to 55 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased within consumer goods sector from 15.2 per cent in 2008 to 23.4 per cent in 2017. In the year 2008, maximum disclosures being made were qualitative in nature (72.6%) with qualitative disclosures with specific information being lowest (12.2%).

However by the end of study period in 2017 the maximum disclosures in consumer goods sector were of qualitative nature with specific information (55%) followed by financial disclosures (23.4%) with qualitative disclosures (21.5%) becoming the lowest.

Table 4.24 Number of total companies in consumer goods sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	20 (100)	17 (85)	17 (85)	14 (70)	15 (75)	20 (100)	20 (100)	4 (20)	3 (15)
2009	20 (100)	17 (85)	16 (80)	15 (75)	17 (85)	19 (95)	20 (100)	5 (25)	4 (20)
2010	20 (100)	19 (95)	17 (85)	15 (75)	17 (85)	20 (100)	20 (100)	7 (35)	8 (40)
2011	20 (100)	19 (95)	18 (90)	15 (75)	18 (90)	20 (100)	20 (100)	8 (40)	11 (55)
2012	20 (100)	20 (100)	18 (90)	19 (95)	17 (85)	20 (100)	20 (100)	10 (50)	17 (85)
2013	20 (100)	20 (100)	16 (80)	17 (85)	17 (85)	20 (100)	20 (100)	13 (65)	18 (90)
2014	20 (100)	20 (100)	19 (95)	19 (95)	20 (100)	20 (100)	20 (100)	14 (70)	18 (90)
2015	20 (100)	20 (100)	20 (100)	20 (100)	19 (95)	20 (100)	20 (100)	16 (80)	19 (95)
2016	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	16 (80)	20 (100)
2017	20 (100)	20 (100)	20 (100)	20 (100)	19 (95)	20 (100)	20 (100)	16 (80)	20 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

Table 4.25 Quality of disclosures across years in consumer goods sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	72.6	64.4	53.4	43.1	41.3	36.1	33.5	20.8	20.9	21.5
Percentage of Qualitative disclosures with specific information	12.2	20.7	33.2	42.2	43.7	47.1	48	58.2	57.7	55
Percentage of Quantitative disclosures	15.2	14.9	13.4	14.8	15	16.8	18.5	21	21.3	23.4

4.1.2.4.3 Quality of CSRD across themes

It can be observed in the table 4.26 that over the entire period of study among all the themes in consumer goods industry, maximum number of financial disclosures were from 'energy theme' (42.3%) with first place and following it is 'community development theme' (26.3%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures made 'customers theme' had only 1.4 per cent financial disclosures which is second lowest in the category. 'Product, services-safety and innovation theme' had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 54.3 per cent. Following it were 'customer

Table 4.26 Quality of disclosures across themes in consumer goods sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	30	43.7	26.3
Human Resource Theme	34.6	45.3	19.9
Energy Theme	40.2	17.5	42.3
Environment Theme	44	50.3	5.6
Product, Services-Safety and Innovation Theme	24.2	54.3	21.5
Customer Theme	44.7	53.9	1.4
Emission of Carbon and Harmful gases Theme	75	20	4.9
Other CSR activities Theme	66.8	33.2	0

theme’ (53.9%) at second spot and ‘environment theme’ (50.3%) at third place. ‘Energy theme’ had only 17.5 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 75 per cent followed by ‘other CSR activities theme’ with 66.8 per cent. The least qualitative disclosures with no special information were from ‘product, services-safety and innovation theme’ with 24.2 per cent of its disclosures.

4.1.2.4.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.27 that there has been a consistent increase in average number of sentences in consumer goods sector aggregated over all themes from 185.6 sentences in 2008 with a slight dip in 2016 with 461.7 sentences to a further fall in 2017 upto 442.7 sentences. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between within companies of this sector. Like ‘energy theme’ saw consistent increase in average number of sentences from year 2008 with 7.8 sentences to 28.9 sentences in 2015 which fell down to 27.7 sentences in 2016 further becoming 25.2 sentences in 2017. Also similar trends are observed to be repeated across all other themes by companies in the consumer goods sector.

Table 4.27 Amount and trend of disclosures in consumer goods sector

Year	Community Development	Human Resource	Energy	Environment
2008	42.8	57	7.8	20.7
2009	47.1	63.6	10.2	23.1
2010	63.7	76.5	14.1	27
2011	78.5	86.3	17	32
2012	81.9	91.6	20.7	32.2
2013	99.4	106.8	25.9	38.2
2014	118.5	117	27.9	42.4
2015	117.1	120.1	28.9	48.4
2016	117	122.2	27.7	47.6
2017	112.1	116.1	25.2	45.7
Trend Equation	TE=37.22+9.2T, R ² =0.90, t=8.45 (p=.000)	TE=53.5+7.7T, R ² =0.92, t=9.56 (p=.000)	TE=7.53+2.4T, R ² =0.84, t=6.54 (p=.000)	TE=17.74+3.3T, R ² =0.94, t=11.58 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	33	19.1	3.3	1.7	185.6
2009	37.9	22.5	3.5	2.5	210.4
2010	41.6	25.8	6.8	4.7	260.4
2011	47.7	28.8	10.1	5.8	306.4
2012	54.6	29.8	12.8	9.7	333.5
2013	59.2	33.6	14.3	11.9	389.5
2014	67.7	40.7	20.6	13.2	448.2
2015	65	41.8	22.6	18.5	462.5
2016	67.7	40.8	21	17.7	461.7
2017	60.9	40.7	22.7	19.2	442.7
Trend Equation	TE=32.2+3.9T, R ² =0.85, t=6.78 (p=.000)	TE=17.65+2.7T, R ² =0.93, t=10.31 (p=.000)	TE=0.16+2.5T, R ² =0.95, t=12.15 (p=.000)	TE=2.2T-1.37, R ² =0.97, t=16.11 (p=.000)	TE=164.63+33.72T, R ² =0.92, t=9.81 (p=.000)

In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 57 sentences followed by ‘community development theme’ with 42.8 sentences and then ‘product, services-safety and innovation theme’ with 33 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 1.7 sentences. Throughout the period of study till 2017 ‘human resources theme’ has maintained its first position to be the most disclosed activity followed by ‘community development theme’ continuing with second position except in 2014 when both these themes swapped their position. ‘Product, Services-Safety and Innovation theme’ remained at third slot from 2008 till 2017. Also ‘other CSR activities theme’ remained the least disclosed theme till 2017 and ‘emission of carbon and harmful gases theme’ throughout all years of sample study has been the second least disclosed theme followed by ‘energy theme’ as third least disclosed theme in terms of amount of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in consumer goods sector over the entire study period.

4.1.2.4.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in consumer goods industry using average number of sentences disclosed as the base. It can be seen in table 4.28 that the mean value is highest for ‘human resources theme’ (95.750) followed by ‘community development theme’ (87.815). Hence these two

themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (10.520) and ‘emission of carbon and harmful gases theme’ (13.795). The calculated F-value came out to be 43.747, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in consumer goods sector at 1 per cent level of significance.

Table 4.28 Comparison across all themes in consumer goods sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	87.815	29.372	43.747 (0.000)
Human Resources	95.750	24.255	
Energy	20.560	7.812	
Environment	35.755	10.209	
Product, Services-Safety and Innovation	53.550	12.733	
Customers	32.375	8.403	
Emission of Carbon and Harmful Gases	13.795	7.708	
Other CSR activities	10.520	6.647	
Total	43.765	34.184	

(Significant at 1% level of significance)

4.1.2.5 CSR disclosures within energy industry

The energy sector contributed total 20 companies towards the final sample under study. These companies are Adani Power Ltd, Bharat Petroleum Corpn. Ltd, Castrol India Ltd, GAIL (India) Ltd, Hindustan Petroleum Corpn. Ltd, Indian Oil Corpn. Ltd, Mangalore Refinery & Petrochemicals Ltd, N H P C Ltd, N L C India Ltd, N T P C Ltd, Oil & Natural Gas Corpn. Ltd, Oil India Ltd, Petronet L N G Ltd, Power Grid Corpn. Of India Ltd, Reliance Industries Ltd, Reliance Infrastructure Ltd, Reliance Power Ltd, S J V N Ltd, Tata Power Co. Ltd and Torrent Power Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.5.1 Number of total companies making CSRD across each year and theme

The table 4.29 depicts that the number of selected companies in energy sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the twenty companies having made some sort of CSR disclosures. The activities from ‘customer theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by 12 companies (60%) in 2008 which increased gradually over years to 18 companies (90%) in 2017 and ‘other CSR activities theme’ was disclosed by 14 companies (70%) in 2008 which increased gradually upto 20 companies (100%) in 2017. ‘Product, services- safety and innovation theme’ was always disclosed by 19 or more companies (95% or above) throughout the period of study while ‘community

Table 4.29 Number of total companies in energy sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	20 (100)	18 (90)	18 (90)	15 (75)	16 (80)	19 (95)	20 (100)	12 (60)	14 (70)
2009	20 (100)	19 (95)	17 (85)	16 (80)	16 (80)	20 (100)	20 (100)	17 (85)	15 (75)
2010	20 (100)	19 (95)	18 (90)	18 (90)	17 (85)	20 (100)	20 (100)	13 (65)	18 (90)
2011	20 (100)	19 (95)	17 (85)	18 (90)	15 (75)	20 (100)	20 (100)	12 (60)	19 (95)
2012	20 (100)	19 (95)	19 (95)	20 (100)	18 (90)	19 (95)	20 (100)	13 (65)	20 (100)
2013	20 (100)	20 (100)	17 (85)	20 (100)	17 (85)	19 (95)	20 (100)	17 (85)	20 (100)
2014	20 (100)	20 (100)	19 (95)	20 (100)	20 (100)	20 (100)	20 (100)	19 (95)	20 (100)
2015	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	19 (95)	20 (100)
2016	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	19 (95)	20 (100)
2017	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	20 (100)	18 (90)	20 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

development theme’ and ‘human resources theme’ were always disclosed by 17 or more companies (85% or above). The ‘energy theme’ and ‘environment theme’ were disclosed by 15 companies (75%) and 16 companies (80%) respectively in 2008, finally being disclosed by all companies by the end of study period.

4.1.2.5.2 Quality of CSRD across years

From the table 4.30 it is clear that percentage of qualitative disclosures by companies in energy sector has decreased over years from 60.8 per cent in 2008 to 21.4 percent in 2017. The percentage of qualitative disclosures with specific information has increased from 20.1 per cent in 2008 to 50.4 per cent in 2017 in this sector. Also the percentage of financial disclosures has gradually increased within energy sector from 19.1 per cent in 2008 to 28.2 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (60.8%) with quantitative disclosures being the lowest (19.1%).

Table 4.30 Quality of disclosures across years in energy sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	60.8	55.6	46.5	41.9	38.1	35.4	38.4	25	24.9	21.4
Percentage of Qualitative disclosures with specific information	20.1	23.9	32.6	37.2	38	38	35	48	47.9	50.4
Percentage of Quantitative disclosures	19.1	20.5	20.9	20.9	23.9	26.6	26.6	26.9	27.2	28.2

However by the end of study period in 2017 the maximum disclosures in energy sector were of qualitative nature with specific information (50.4%) followed by financial disclosures (28.2%) with qualitative disclosures (21.4%) becoming the lowest.

4.1.2.5.3 Quality of CSRD across themes

It can be observed in the table 4.31 that over the entire period of study among all the themes in energy industry, maximum number of financial disclosures were from ‘energy theme’ (39.3%) with first place and following it is ‘community development theme’ (33.6%) with second rank. No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures made ‘customers theme’ had only 2.7 per cent financial disclosures which is second lowest in the category. ‘Customer theme’ had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 56.5 per cent. Following it are ‘environment theme’ (51.1%) at second spot and

‘product, services-safety and innovation theme’ (46.5%) at third place. ‘Energy theme’ had only 5.6 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘other CSR activities theme’ contributed the maximum with 70.3 per cent followed by ‘emission of carbon and harmful gases theme’ with 61.8 per cent at second rank. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 21 per cent of its total disclosures.

Table 4.31 Quality of disclosures across themes in energy sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	24.1	42.3	33.6
Human Resource Theme	34.9	34	31.1
Energy Theme	55.1	5.6	39.3
Environment Theme	37.7	51.1	11.2
Product, Services-Safety and Innovation Theme	21	46.5	32.5
Customer Theme	40.7	56.5	2.7
Emission of Carbon and Harmful gases Theme	61.8	21.8	16.4
Other CSR activities Theme	70.3	29.6	0

4.1.2.5.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.32 that there has been a consistent increase in average number of sentences in energy sector aggregated over all themes from 257.6 sentences in 2008 to 478 sentences in 2017. Across most of the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 53.5 sentences to 116.3 sentences in 2015 which slightly fell down to 116.2 sentences in 2016 then further increasing to 121.7 sentences in 2017. Also similar trends are observed to be repeated across all other themes by companies in the energy sector. However in ‘human resources theme’ and ‘other CSR activities theme’ a persistent increase in average number of sentences was observed from 2008 to 2017.

In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 70.7 sentences followed by ‘community development theme’ with 53.5 sentences and then ‘product, services-safety and innovation theme’ with 40.8 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 8.9

Table 4.32 Amount and trend of disclosures in energy sector

Year	Community Development	Human Resource	Energy	Environment
2008	53.5	70.7	16.4	31.5
2009	64.4	73.1	19	31.3
2010	73.6	81.6	19.1	36
2011	88	84.7	20.3	37.6
2012	93.1	90.4	22.9	39.7
2013	104.2	92.3	24	41.3
2014	110.4	94.1	27.1	44.8
2015	116.3	104	25.5	49
2016	116.2	109.1	26.7	46.8
2017	121.7	117.4	28.4	52.6
Trend Equation	TE=51.91+7.7T, R ² =0.96, t=13.13 (p=.000)	TE=64.62+4.9T, R ² =0.97, t=17.8 (p=.000)	TE=15.8+1.3T, R ² =0.94, t=11.7 (p=.000)	TE=28.2+2.3T, R ² =0.96, t=14.7 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	40.8	22.6	13	8.9	257.6
2009	41.5	24.1	14.5	9.9	278.1
2010	47.6	30	18.7	12.5	319.2
2011	49	29.9	19.2	13.1	341.9
2012	47.4	32.6	19.3	15.9	361.5
2013	52.3	35.3	25.7	18.6	393.9
2014	53.1	35.9	29.6	19	414.2
2015	56	38	29.5	22.4	440.9
2016	57.7	35.7	27.2	23.8	443.4
2017	58.2	43.5	30.4	25.6	478
Trend Equation	TE=39.41+2T, R ² =0.95, t=12.15 (p=.000)	TE=21.78+2T, R ² =0.91, t=9.1 (p=.000)	TE=11.49+2T, R ² =0.90, t=8.37 (p=.000)	TE=1.92T+6.41, R ² =0.99, t=27.65 (p=.000)	TE=239.64+24.2T, R ² =0.99, t=25.52 (p=.000)

sentences. ‘Human resources theme’ shared maximum amount of disclosures till 2010, after which from 2011 to 2017 ‘community development theme’ became the theme with maximum disclosures. In 2011 ‘human resources theme’ became second and ‘product, services-safety and innovation theme’ remained at third slot from 2008 till 2017. However ‘other CSR activities theme’ remained the least disclosed theme throughout the period of study in terms of amount of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in energy sector over the entire study period.

4.1.2.5.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in energy industry using average number of sentences disclosed as the base. It can be seen in table 4.33 that the mean value is highest for ‘community development theme’ (94.175) followed by ‘human resources theme’ (91.775). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (16.995) and ‘emission of carbon and harmful gases theme’ (22.730). The calculated F-value came out to be 73.346, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in energy sector at 1 per cent level of significance.

Table 4.33 Comparison across all themes in energy sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	94.175	23.800	73.346 (0.000)
Human Resources	91.775	15.136	
Energy	22.960	4.054	
Environment	41.090	7.215	
Product, Services-Safety and Innovation	50.380	6.198	
Customers	32.795	6.349	
Emission of Carbon and Harmful Gases	22.730	6.533	
Other CSR activities	16.995	5.859	
Total	46.612	30.734	

(Significant at 1% level of significance)

4.1.2.6 CSR disclosures within financial services industry

The financial services sector contributed total 26 companies towards the final sample under study. These companies are Axis Bank Ltd, Bajaj Finance Ltd, Bajaj Finserv Ltd, Bajaj Holdings & Invst. Ltd, Bank Of Baroda, Canara Bank, Central Bank Of India, Cholamandalam Investment & Finance Co. Ltd, Crisil Ltd, H D F C Bank Ltd, Housing Development Finance Corpn. Ltd, I C I C I Bank Ltd, I D B I Bank Ltd, Indiabulls Housing

Table 4.34 Number of total companies in financial services sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	25 (96.1)	22 (84.6)	21 (80.8)	10 (38.5)	18 (69.2)	22 (84.6)	25 (96.1)	5 (19.2)	10 (38.5)
2009	26 (100)	23 (88.5)	23 (88.5)	11 (42.3)	15 (57.7)	24 (92.3)	26 (100)	6 (23.1)	8 (30.8)
2010	26 (100)	26 (100)	24 (92.3)	12 (46.1)	18 (69.2)	25 (96.1)	26 (100)	8 (30.8)	12 (46.1)
2011	26 (100)	26 (100)	23 (88.5)	12 (46.1)	18 (69.2)	26 (100)	26 (100)	12 (46.1)	14 (53.8)
2012	26 (100)	25 (96.1)	22 (84.6)	13 (50)	16 (61.5)	26 (100)	26 (100)	16 (61.5)	21 (80.8)
2013	26 (100)	24 (92.3)	23 (88.5)	14 (53.8)	19 (73.1)	25 (96.1)	26 (100)	20 (76.9)	24 (92.3)
2014	26 (100)	24 (92.3)	22 (84.6)	15 (57.7)	19 (73.1)	26 (100)	26 (100)	20 (76.9)	25 (96.1)
2015	26 (100)	26 (100)	26 (100)	17 (65.4)	21 (80.8)	26 (100)	26 (100)	22 (84.6)	25 (96.1)
2016	26 (100)	26 (100)	26 (100)	17 (65.4)	22 (84.6)	26 (100)	26 (100)	23 (88.5)	25 (96.1)
2017	26 (100)	25 (96.1)	26 (100)	16 (61.5)	21 (80.8)	26 (100)	26 (100)	22 (84.6)	25 (96.1)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

Finance Ltd, Indusind Bank Ltd, Kotak Mahindra Bank Ltd, L I C Housing Finance Ltd, Mahindra & Mahindra Financial Services Ltd, Power Finance Corpn. Ltd, Punjab National Bank, Rural Electrification Corpn. Ltd, Shriram City Union Finance Ltd, Shriram Transport Finance Co. Ltd, State Bank Of India, Sundaram Finance Ltd and Yes Bank Ltd. The analysis of CSR disclosures of these companies is presented under following subheadings:

4.1.2.6.1 Number of total companies making CSRD across each year and theme

The table 4.34 depicts that the number of selected companies in financial services sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high. Throughout the period of study each company in the sample has made CSR disclosures in their annual report except in 2008 when 25 companies (96.1%) made disclosures. The activities from ‘customer theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by 5 companies (19.2%) in 2008 which increased gradually over years to finally 22 companies (84.6%) in 2017. ‘Energy theme’ was disclosed by 10 companies (38.5%) in 2008 which increased to 16 companies (61.5%) in 2017. ‘Product services, safety and innovation theme’ and ‘community development theme’ throughout study period have been disclosed by 22 or more companies (84.6% or above) and ‘human resources theme’ by 21 companies (80.8%) in 2008 and later by all companies in the sample in 2017.

4.1.2.6.2 Quality of CSRD across years

From the table 4.35 it is clear that percentage of qualitative disclosures by companies in financial services sector has decreased over years from 74.2 per cent in 2008 to 25 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 15 per cent in 2008 to 50.6 per cent in 2017 in this sector. Also the percentage of financial disclosures has gradually increased within financial services sector from 10.8 per cent in 2008 to 24.4 per cent in 2017.

Table 4.35 Quality of disclosures across years in financial services sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	74.2	63.1	52.1	50.9	46.8	41.9	41.4	27.5	25.4	25
Percentage of Qualitative disclosures with specific information	15	25.2	34.5	33.5	35.1	36.5	36.2	48.7	50.7	50.6
Percentage of Quantitative disclosures	10.8	11.6	13.3	15.6	18.2	21.6	22.4	23.8	23.8	24.4

In the year 2008 maximum disclosures being made were qualitative in nature (74.2%) with quantitative disclosures being the lowest (10.8%). However by the end of study period in 2017 the maximum disclosures in financial services sector were of qualitative nature with specific information (50.6%) followed by qualitative disclosures (25%) with financial disclosures (24.4%) becoming the lowest.

4.1.2.6.4 Quality of CSRD across themes

It can be observed in the table 4.36 that over the entire period of study among all the themes in financial services industry, maximum number of financial disclosures were from 'energy theme' (29.1%) with first place and following it is 'community development theme' (29%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures 'emission of carbon and harmful gases theme' had only 3.3 per cent financial disclosures which are second lowest in the category. 'Customer theme' had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 50.6 per cent. Following it are 'product, services-safety and innovation theme' (47.9%) at second spot and 'other CSR activities theme' (43.8%) at third place. 'Energy theme' had only 19.4 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum with 85.9 per cent followed by 'other CSR activities theme' with 56.2 per cent. The least disclosures in this category were from 'product, services-safety and innovation theme' with 31.5 per cent of its disclosures.

Table 4.36 Quality of disclosures across themes in financial services sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	35.2	35.8	29
Human Resource Theme	43.8	34.7	21.4
Energy Theme	51.4	19.4	29.1
Environment Theme	48.7	42.7	8.6
Product, Services-Safety and Innovation Theme	31.5	47.9	20.6
Customer Theme	43.2	50.6	6.2
Emission of Carbon and Harmful gases Theme	85.9	10.8	3.3
Other CSR activities Theme	56.2	43.8	0

4.1.2.6.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.37 that there has been an increase in average number of sentences in financial services sector aggregated over all themes from 185.7 sentences in 2008 to 400.2 sentences in 2017. Across most of the themes there has been a continuous increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘energy theme’ saw consistent increase in average number of sentences from year 2008 with 5.6 sentences to 12.7 sentences in 2014 which slightly fell down to 12.4 sentences in 2015 and further increasing to 14 sentences in 2016 and then again falling to 13.6 sentences in 2017. Somewhat similar trends were observed to be repeated across all other themes by companies in the financial services sector. However in case of ‘community development theme’ and ‘human resources theme’ a continuous increase in average number of sentences was observed from 2008 to 2017. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 59.9 sentences followed by ‘community development theme’ with 46.7 sentences and then ‘product, services-safety and innovation theme’ with 30.1 sentences.

Table 4.37 Amount and trend of disclosures in financial services sector

Year	Community Development	Human Resource	Energy	Environment
2008	46.7	59.9	5.6	15.4
2009	59	66	7.7	15.3
2010	71.9	75.8	8.1	16.7
2011	78.5	77.9	8.8	21
2012	86.1	82	9.4	22.7
2013	101.4	93.1	11.5	23.2
2014	115.4	96.3	12.7	24.2
2015	115.4	104.9	12.4	25.4
2016	118.4	112.4	14	27.5
2017	121.6	112.6	13.6	27.1
Trend Equation	TE=43.63+8.7T, R ² =0.96, t= 13.18 (p=.000)	TE=54.37+6.1T, R ² =0.99, t=23.49 (p=.000)	TE=5.37+0.9T, R ² =0.95, t=12.9 (p=.000)	TE=13.73+1.5T, R ² =0.94, t=11.48 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	30.1	22.2	2.6	3.1	185.7
2009	37.3	23.5	3.7	2.9	215.4
2010	44.1	27.9	6	4.5	254.9
2011	42.5	31.6	6.8	6.9	274
2012	44.2	29.6	8.4	11.3	293.6
2013	47.7	35.6	11.2	13.7	337.4
2014	51.2	38.5	12.2	14.6	365.1
2015	54.6	39.1	14.6	17.8	384.2
2016	55.9	39.7	16.8	17.5	402.2
2017	54.4	40.1	14.3	16.5	400.2
Trend Equation	TE=31.88+2.6T, R ² =0.91, t=8.87 (p=.000)	TE=20.83+2.2T, R ² =0.93, t=10.39 (p=.000)	TE=1.6T+1.02, R ² =0.95, t=12.24 (p=.000)	TE=1.9T+0.38, R ² =0.92, t=9.67 (p=.000)	TE=171.2+25.5T, R ² =0.97, t=17.4 (p=.000)

Least amount of disclosures was observed in ‘emission of carbon and harmful gases theme’ in 2008 with average 2.6 sentences. ‘Human resources theme’ shared maximum amount of disclosures till 2010 after which from 2011 to 2017 ‘community development theme’ became the theme with maximum disclosures. In 2011 ‘human resources theme’ became second and ‘product, services-safety and innovation theme’ remained at third slot from 2008 till 2017. However by 2017 ‘energy theme’ became the least disclosed theme followed by ‘emission of carbon and harmful gases theme’ as second least disclosed and ‘other CSR activities theme’ as third least disclosed theme in terms of volume of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in financial services sector over the entire study period.

4.1.2.6.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in financial services industry using average number of sentences disclosed as the base. It can be seen in table 4.38 that the mean value is highest for ‘community development theme’ (91.408) followed by ‘human resources theme’ (88.085). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘emission of carbon and harmful gases theme’ (9.654) and ‘energy theme’ (10.396). The calculated F-value came out to be 71.663, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in financial

services sector at 1 per cent level of significance.

Table 4.38 Comparison across all themes in financial services sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	91.408	26.900	71.663 (0.000)
Human Resources	88.085	18.694	
Energy	10.396	2.830	
Environment	21.850	4.602	
Product, Services-Safety and Innovation	46.211	8.278	
Customers	32.788	6.825	
Emission of Carbon and Harmful Gases	9.654	4.879	
Other CSR activities	10.885	6.024	
Total	38.910	34.051	

(Significant at 1% level of significance)

4.1.2.7 CSR disclosures within industrial manufacturing industry

The industrial manufacturing sector contributed total 7 companies towards the final sample under study. These companies are ABB India Ltd, Bharat Electronics Ltd, Bharat Forge Ltd, Bharat Heavy Electricals Ltd, Cummins India Ltd, GET & D India Ltd and Siemens Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.7.1 Number of total companies making CSRD across each year and theme

The table 4.39 depicts that the number of selected companies in industrial manufacturing sector making disclosures in their annual reports over selected time period of ten years has always been high with each of the seven companies having made some CSR disclosures in their annual reports. The activities from ‘customer theme’, ‘product services-safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by 4 companies (57.1%) in 2008 which increased gradually over years to 7 companies (100%) in 2017 and ‘other CSR activities theme’ with 3 companies (42.9%) making disclosure in 2008 increased to all 7 companies (100%) in 2017. The disclosures by ‘human resources theme’, ‘energy theme’ and ‘environment theme’ have always been high with 6 companies (85.7%) in initial years of study and by all 7 companies later.

4.1.2.7.2 Quality of CSRD across years

From the table 4.40 it is clear that percentage of qualitative disclosures by companies in industrial manufacturing sector has decreased over years from 63 per cent in 2008 to 24.7 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 21 per cent in 2008 to 49.8 per cent in 2017 in this sector. Also the

Table 4.39 Number of companies in industrial manufacturing sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	7 (100)	7 (100)	6 (85.7)	7 (100)	6 (85.7)	7 (100)	7 (100)	4 (57.1)	3 (42.9)
2009	7 (100)	7 (100)	7 (100)	6 (85.7)	6 (85.7)	7 (100)	7 (100)	6 (85.7)	3 (42.9)
2010	7 (100)	7 (100)	7 (100)	6 (85.7)	7 (100)	7 (100)	7 (100)	4 (57.1)	5 (71.4)
2011	7 (100)	7 (100)	7 (100)	6 (85.7)	7 (100)	7 (100)	7 (100)	5 (71.4)	5 (71.4)
2012	7 (100)	7 (100)	7 (100)	6 (85.7)	7 (100)	7 (100)	7 (100)	6 (85.7)	6 (85.7)
2013	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	6 (85.7)	7 (100)
2014	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
2015	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
2016	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
2017	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

Table 4.40 Quality of disclosures across years in industrial manufacturing sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	63	51.8	41.1	42.6	42.6	32.5	33.2	26.3	25.8	24.7
Percentage of Qualitative disclosures with specific information	21	31.7	41.1	38.1	36.7	44.7	43.1	49.2	49.8	49.8
Percentage of Quantitative disclosures	16	16.6	17.7	19.3	20.7	22.8	23.7	24.4	24.3	25.5

percentage of financial disclosures has gradually increased among industrial manufacturing sector from 16 per cent in 2008 to 25.5 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (63%), with quantitative disclosures being the lowest (16%). However by the end of study period in 2017 the maximum disclosures in industrial manufacturing sector were of qualitative nature with specific information (49.8%) followed by financial disclosures (25.5%) with qualitative disclosures (24.7%) becoming the lowest.

4.1.2.7.3 Quality of CSRD across themes

It can be observed in the table 4.41 that over the entire period of study among all the themes in financial services industry, maximum number of financial disclosures were from 'energy theme' (44.3%) with first place and following it is 'product, services-safety and innovation theme' (26.1%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures 'customers theme' had only 1.9 per cent financial disclosures which is second lowest in the category. 'Product, services-safety and innovation theme' had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 57.5 per cent. Following it was 'customer theme' (55.8%) at second spot and 'environment theme' (50.7%) at third place. 'Energy theme' had only 2.5 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum with 64.2 per cent followed by 'other CSR activities theme' with 57.8 per cent. The least contribution in this category was 'product, services-safety and innovation theme' with 16.4 per cent of total disclosures.

Table 4.41 Quality of disclosures across themes in industrial manufacturing sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	34.6	40.8	24.5
Human Resource Theme	29.5	44.8	25.7
Energy Theme	53.2	2.5	44.3
Environment Theme	35.6	50.7	13.7
Product, Services-Safety and Innovation Theme	16.4	57.5	26.1
Customer Theme	42.3	55.8	1.9
Emission of Carbon and Harmful gases Theme	64.2	15.9	19.9
Other CSR activities Theme	57.8	42.2	0

4.1.2.7.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.42 that there has been a continuous increase in average number of sentences in industrial manufacturing sector aggregated over all themes

Table 4.42 Amount and trend of disclosures in industrial manufacturing sector

Year	Community Development	Human Resource	Energy	Environment
2008	55	62.9	15	32.3
2009	59.1	72.3	14.9	34.4
2010	70.3	81.1	16.6	44
2011	85.3	76.3	20.4	39.1
2012	85	97.1	23.3	41.9
2013	103.4	108.4	21.1	44.9
2014	126.6	117.6	29.6	51.1
2015	119.7	124.4	24.6	57.6
2016	127.3	132.7	26.9	57.3
2017	128.4	125.9	27	57
Trend Equation	TE=45.1+9.3T, R ² =0.94, t= 11.2 (p=.000)	TE=55.15+8.1T, R ² =0.94, t=11.41 (p=.000)	TE=13.35+1.6T, R ² =0.81, t=5.89 (p=.000)	TE=29.65+3T, R ² =0.91, t=8.81 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-value.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	33.4	22.6	12.3	5.7	239.1
2009	46	25	17.4	7.1	276.3
2010	55.3	28.1	18.6	9.7	323.7
2011	49.9	32.9	21	10.1	335
2012	56.1	33.6	21.3	13.7	372
2013	59.3	36.3	26.6	15.6	415.6
2014	61	38.1	29	16.9	469.9
2015	66	41.3	32.6	18	484.1
2016	64.7	41	32.1	19.9	501.9
2017	65.9	44.6	36.1	18.3	503.1
Trend Equation	TE=38.7+3.1T, R ² =0.83, t=6.34 (p=.000)	TE=21.2+2.4T, R ² =0.98, t=18.2 (p=.000)	TE=2.5T+10.82, R ² =0.97, t=17.8 (p=.000)	TE=1.61T+4.65, R ² =0.95, t=11.89 (p=.000)	TE=218.6+31.5T, R ² =0.97, t=16.24 (p=.000)

from 239.1 sentences in 2008 to 503.1 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘energy theme’ saw consistent increase in average number of sentences from year 2008 with 15 sentences to 23.3 sentences in 2012 which slightly fell down to 21.1 sentences in 2013 and further increasing to 29.6 sentences in 2014 and then again falling to 24.6 sentences in 2015 and finally rising till 2017 up to 27 sentences. Somewhat similar trends are observed to be repeated across all other themes among companies in the industrial manufacturing sector.

In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 62.9 sentences followed by ‘community development theme’ with 55 sentences and then ‘product, services-safety and innovation theme’ with 33.4 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 5.7 sentences. ‘Human resources theme’ made maximum amount of disclosures continuously till 2013 and then again in 2016. However during years 2014, 2015 and 2017 ‘community development theme’ made maximum amount of disclosures. Although ‘human resources theme’ and ‘community development theme’ were interchanging first and second rank since 2014, the ‘product, services-safety and innovation theme’ remained at third slot from 2008 till 2017. ‘Other CSR activities theme’ remained the least disclosed activity in terms of amount of disclosures throughout the period of study. The results of trend analysis indicated a highly

significant and positive trend among all the CSRD themes in industrial manufacturing sector over the entire study period.

4.1.2.7.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in industrial manufacturing industry using average number of sentences disclosed as the base. It can be seen in table 4.43 that the mean value is highest for ‘human resources theme’ (99.871) followed by ‘community development theme’ (96.014). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (13.500) and ‘energy theme’ (21.929). The calculated F-value came out to be 47.527, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in industrial manufacturing sector at 1 per cent level of significance.

Table 4.43 Comparison across all themes in industrial manufacturing sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	96.014	28.904	47.527 (0.000)
Human Resources	99.871	25.362	
Energy	21.929	5.237	
Environment	45.957	9.429	
Product, Services-Safety and Innovation	55.757	10.307	
Customers	34.343	7.322	
Emission of Carbon and Harmful Gases	24.700	7.747	
Other CSR activities	13.500	5.009	
Total	49.009	34.324	

(Significant at 1% level of significance)

4.1.2.8 CSR disclosures within information technology industry

The information technology sector contributed total 9 companies towards the final sample under study. These companies are H C L Technologies Ltd, Infosys Ltd, Mindtree Ltd, Mphasis Ltd, Oracle Financial Services Software Ltd, Tata Consultancy Services Ltd, Tech Mahindra Ltd, Vakrangee Ltd and Wipro Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.8.1 Number of total companies making CSRD across each year and theme

The table 4.44 depicts that the number of selected companies in information technology sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the nine companies from this sector having made some sort of CSR disclosures. The activities from ‘customer theme’, ‘community development theme’

Table 4.44 Number of companies in information technology sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	9 (100)	9 (100)	7 (77.8)	8 (88.9)	7 (77.8)	8 (88.9)	9 (100)	4 (44.4)	1 (11.1)
2009	9 (100)	9 (100)	8 (88.9)	7 (77.8)	5 (55.5)	9 (100)	9 (100)	5 (55.5)	4 (44.4)
2010	9 (100)	9 (100)	8 (88.9)	9 (100)	8 (88.9)	9 (100)	9 (100)	5 (55.5)	4 (44.4)
2011	9 (100)	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	6 (66.7)	7 (77.8)
2012	9 (100)	9 (100)	8 (88.9)	9 (100)	8 (88.9)	9 (100)	9 (100)	5 (55.5)	7 (77.8)
2013	9 (100)	8 (88.9)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	6 (66.7)	8 (88.9)
2014	9 (100)	9 (100)	9 (100)	9 (100)	7 (77.8)	9 (100)	9 (100)	6 (66.7)	8 (88.9)
2015	9 (100)	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	5 (55.5)	8 (88.9)
2016	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	6 (66.7)	8 (88.9)
2017	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	7 (77.8)	8 (88.9)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

and ‘product, services-safety and innovation theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by 4 companies (44.4%) in 2008 which increased gradually over years to 7 companies (77.8%) in 2017 and ‘other CSR activities theme’ with 1 company (11.1%) making disclosure in 2008 increased to 8 companies (88.9%) in 2017. ‘Human resources theme’, ‘energy theme’ and ‘environment theme’ were disclosed by 7 or more companies (77.8% or above) in years of study from 2008 to 2017. ‘Community development theme’ and ‘product, services-safety and innovation theme’ were disclosed by 8 or more companies (88.9% or above) throughout the period of study.

4.1.2.8.2 Quality of CSRD across years

From the table 4.45 it is clear that percentage of qualitative disclosures by companies in information technology sector has consistently decreased over years from 72 per cent in 2008 to 20.3 per cent in 2017. However the percentage of qualitative disclosures with specific information has increased from 13.1 per cent in 2008 to 55.4 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased among information technology sector from 14.8 per cent in 2008 to 24.3 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (72 per cent) and qualitative nature with specific information was the lowest (13.1 per cent). However by the end of study period in 2017 the maximum disclosures in information technology sector were of qualitative nature with specific information (55.4 per cent) followed by financial disclosures (24.3 per cent) with qualitative disclosures (20.3 per cent) becoming the lowest.

Table 4.45 Quality of Disclosures across years in information technology sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	72	69.1	50	47	38.5	38.3	29.8	28.7	24.4	20.3
Percentage of Qualitative disclosures with specific information	13.1	16.9	33.5	35.4	42.6	39.3	46	50.7	52.5	55.4
Percentage of Quantitative disclosures	14.8	14	16.5	17.5	18.9	22.4	24.2	20.7	23.1	24.3

4.1.2.8.3 Quality of CSRD across themes

It can be observed in the table 4.46 that over the entire period of study among all the themes in information technology industry, maximum financial disclosures were made by

‘energy theme’ (40.8%) at first place and following it is ‘product, services-safety and innovation theme’ (25.8%) with second rank. No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures made ‘customers theme’ made only 3 per cent financial disclosures which are second lowest in the category. ‘Customers theme’ made most of its disclosures in the form of non-financial with particular information and ranked one in this category with 52.7 per cent. Following it are ‘product, services-safety and innovation theme’ (49.4%) at second spot and ‘community development theme’ (44.8%) at third place. ‘Emission of carbon and harmful gases theme’ made only 15.2 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘other CSR activities’ contributed the maximum with 70.9 per cent followed by ‘emission of carbon and harmful gases theme’ with 70.1 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 24.7 per cent of its disclosures.

Table 4.46 Quality of Disclosures across themes in information technology sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	31.7	44.8	23.5
Human Resource Theme	36.8	37.9	25.3
Energy Theme	35.5	23.7	40.8
Environment Theme	48.5	39.2	12.3
Product, Services-Safety and Innovation Theme	24.7	49.4	25.8
Customer Theme	44.3	52.7	3
Emission of Carbon and Harmful gases Theme	70.1	15.2	14.7
Other CSR activities Theme	70.9	29	0

4.1.2.8.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.47 there has been an increase in average number of sentences in information technology sector aggregated over all themes from 207.8 sentences in 2008 to 422.9 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 47.8 sentences to 106.7 sentences in 2014 which slightly fell down to 101.7 sentences in 2015 and finally rising till 2017 up to 112.3 sentences. Somewhat similar

Table 4.47 Amount and trend of disclosures in information technology sector

Year	Community Development	Human Resource	Energy	Environment
2008	47.8	61	10.3	22.1
2009	53.1	62	12.3	23.7
2010	66.9	78.6	16.7	27.8
2011	73.6	90.8	18.1	32.1
2012	82.7	86.8	16.9	34.6
2013	91.6	96.9	22.8	34.3
2014	106.7	110.2	26.2	38.8
2015	101.7	96.3	21.4	41.4
2016	107.8	97	22.3	43.3
2017	112.3	102.3	26.3	44.9
Trend Equation	TE=42.9+7.5T, R ² =0.96, t=13.18 (p=.000)	TE=62.38+4.7T, R ² =0.75, t=4.86 (p=.001)	TE=10.41+1.6T, R ² =0.82, t=5.99 (p=.000)	TE=19.94+2.6T, R ² =0.98, t=19.76 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	33.7	20	9.8	3.1	207.8
2009	39.9	22.7	11.2	5.8	230.7
2010	51.9	24.9	15.9	7	289.6
2011	50.1	33.1	16	14.3	328.1
2012	54.4	36.6	14.8	13.1	339.8
2013	57.1	35.3	17.4	17.1	372.6
2014	62.1	45	21.3	22.1	432.4
2015	56	35.2	20.7	24.3	397.1
2016	52.2	39	17.8	24.6	404
2017	53.3	40.8	20.4	22.4	422.9
Trend Equation	TE=40.33+1.9T, R ² =0.50, t=2.83 (p=.022)	TE=20.34+2.3T, R ² =0.75, t=4.93 (p=.001)	TE=1.1T+10.38, R ² =0.76, t=5.05 (p=.001)	TE=2.5T+1.41, R ² =0.92, t=9.36 (p=.000)	TE=208.1+24.4T, R ² =0.88, t=7.72 (p=.000)

trends were observed to be repeated across all other themes by companies in the information technology sector. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 61 sentences followed by ‘community development theme’ with 47.8 sentences and then ‘product, services-safety and innovation theme’ with 33.7 sentences.

Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 3.1 sentences. ‘Human resources theme’ shared maximum amount of disclosures continuously till 2014 with 110.2 sentences after which ‘community development theme’ attained rank one from 2015 to 2017 thus pushing ‘human resources theme’ to second position. ‘Product, services-safety and innovation theme’ remained at third slot from 2008 till 2017. However ‘other CSR activities theme’ remained the least disclosed activity and ‘emission of carbon and harmful gases theme’ remained second disclosed activity till 2013. In 2014 both these activities swapped ranks thus making ‘emission of carbon and harmful gases theme’ least disclosed activity from 2014 to 2017 in terms of amount of disclosures.

The results of trend analysis indicated a highly significant and positive trend among all the themes except the ‘product, services-safety and innovation theme’ in information technology sector over the entire study period. In case of ‘product, services-safety and innovation theme’ the trend coefficient is not significantly different from zero at 1 per cent level of significance value indicating the presence of neither a positive nor a negative trend. Also the value of R-square for linear trend equation of ‘product, services-safety and innovation theme’ is comparatively quite low.

4.1.2.8.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in information technology industry using average number of sentences

Table 4.48 Comparison across all themes in information technology sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	84.400	23.379	60.987 (0.000)
Human Resources	88.189	16.437	
Energy	19.344	5.440	
Environment	34.300	7.985	
Product, Services-Safety and Innovation	51.078	8.367	
Customers	33.256	8.195	
Emission of Carbon and Harmful Gases	16.533	3.879	
Other CSR activities	15.389	8.040	
Total	42.811	29.827	

(Significant at 1% level of significance)

disclosed as the base. It can be seen in table 4.48 that the mean value is highest for ‘human resources theme’ (88.189) followed by ‘community development theme’ (84.400). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (15.389) and ‘emission of carbon and harmful gases theme’ (16.533). The calculated F-value came out to be 60.987, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in information technology sector at 1 per cent level of significance.

4.1.2.9 CSR disclosures within metals industry

The metals sector contributed total 9 companies towards the final sample under study. These companies are Coal India Ltd, Hindalco Industries Ltd, Hindustan Zinc Ltd, J S W Steel Ltd, NMDC Ltd, National Aluminium Co. Ltd, Steel Authority Of India Ltd, Tata Steel Ltd and Vedanta Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.9.1 Number of total companies making CSRD across each year and theme

The table 4.49 depicts that the number of selected companies in metals sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the nine companies from this sector having made some sort of CSR disclosures. The activities from ‘customer theme’, ‘human resources theme’, ‘product, services-safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ with 7 companies (77.8%) making disclosure in 2008 increased gradually over years to all 9 companies (100%) in 2017 and ‘other CSR activities theme’ with 6 companies (66.7%) making disclosure in 2008 increased to all 9 companies (100%) in 2017. The disclosures on ‘energy theme’ have always been high with always 7 or more companies (77.8% or above) making disclosures during study period. ‘Environment theme’ was disclosed by 8 companies (88.9%) in 2008 and 2009 which increased to all companies making disclosures in 2017.

4.1.2.9.2 Quality of CSRD across years

From the table 4.50 it is clear that percentage of qualitative disclosures in metals sector has consistently decreased over years from 66.3 per cent in 2008 to 20.9 percent in 2017. While the percentage of qualitative disclosures with specific information have increased from 17.2 per cent in 2008 to 49.8 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased among metals sector from 16.5 per cent in 2008 to 29.3 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (66.3%) with financial disclosures being the lowest (16.5%). However by the end of study period in 2017 the maximum disclosures in metals sector were of qualitative nature with specific information (49.8%) followed by financial disclosures (29.3%) with qualitative disclosures (20.9%) becoming the lowest.

Table 4.49 Number of companies in metals sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	9 (100)	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	7 (77.8)	6 (66.7)
2009	9 (100)	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	6 (66.7)	8 (88.9)
2010	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)	9 (100)	9 (100)	7 (77.8)	9 (100)
2011	9 (100)	9 (100)	9 (100)	7 (77.8)	9 (100)	9 (100)	9 (100)	6 (66.7)	9 (100)
2012	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	8 (88.9)	9 (100)
2013	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)
2014	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)
2015	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)
2016	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)
2017	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)	9 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

Table 4.50 Quality of Disclosures across years in metals sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	66.3	65.4	52	43.3	35.3	36.5	38.6	20.4	20.4	20.9
Percentage of Qualitative disclosures with specific information	17.2	19.4	32.5	35	41.8	39.6	35.6	54.2	54.2	49.8
Percentage of Quantitative disclosures	16.5	15.2	15.5	21.7	22.9	23.9	25.7	25.4	25.4	29.3

4.1.2.9.3 Quality of CSRD across themes

It can be observed in the table 4.51 that over the entire period of study among all the themes in metals industry, maximum number of financial disclosures were from 'energy theme' (44.4%) with first place and following it is 'community development theme' (33.5%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures 'customers theme' has only 2.2 per cent financial disclosures which is second lowest in the category. 'Customers theme' has most of its disclosures in the form of non-financial with particular information and ranked one in this category with 54.9 per cent. Following it are 'product, services-safety and innovation theme'

Table 4.51 Quality of disclosures across themes in metals sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	21.9	44.6	33.5
Human Resource Theme	34.3	39.7	26
Energy Theme	48.6	7	44.4
Environment Theme	42.1	44.3	13.6
Product, Services-Safety and Innovation Theme	21.7	51.7	26.7
Customer Theme	42.9	54.9	2.2
Emission of Carbon and Harmful gases Theme	64.6	19.6	15.8
Other CSR activities Theme	71.1	28.9	0

(51.7%) at second spot and ‘community development theme’ (44.6%) at third place. ‘Energy theme’ has only 7 per cent disclosures thus making lowest disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘other CSR activities theme’ contributed the maximum with 71.1 per cent followed by ‘emission of carbon and harmful gases theme’ with 64.6 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 21.7 per cent of its total disclosures.

4.1.2.9.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.52 there has been a consistent increase in average number of sentences in metals sector aggregated over all themes from 236.6 sentences in 2008 to 503.7 sentences in 2017. Across most of the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 56.6 sentences to 98.4 sentences in 2012 which slightly fell down to 97.1 sentences in 2013 and finally rising till 2017 up to 117 sentences. Somewhat similar trends were observed to be repeated across few other themes by companies in the metals sector. However in ‘human resources theme’ and ‘environment theme’ a continuous increase in average number of sentences was observed from 2008 to 2017.

Table 4.52 Amount and trend of disclosures in metals sector

Year	Community Development	Human Resource	Energy	Environment
2008	56.6	62.7	13.6	26.9
2009	61.4	66.7	16.3	29.4
2010	76.1	77.8	20.4	31.9
2011	91.9	83.9	23	36.3
2012	98.4	90.2	28.2	44.8
2013	97.1	92.8	24.6	46.8
2014	100.9	104.9	25.9	54.3
2015	114.8	117.4	27.9	54.4
2016	115.9	117.9	28.4	56.7
2017	117	121.8	29.4	59.8
Trend Equation	TE=54.9+6.9T, R ² =0.92, t= 9.85 (p=.000)	TE=55.12+7T, R ² =0.98, t=20.05 (p=.000)	TE=14.8+1.64T, R ² =0.83, t=6.18 (p=.000)	TE=22.3+4T, R ² =0.97, t=15.72 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	37.4	22	12.8	4.7	236.6
2009	39.9	22.7	11.6	6.6	254.6
2010	46.4	28.6	17.3	8.3	306.9
2011	49	29.7	21	11.7	346.4
2012	51.7	36.9	27.7	16.1	394
2013	52.7	36.7	32.7	21.4	404.7
2014	59.9	40.3	34.7	23.6	444.4
2015	58.1	42.2	35.2	30	480.1
2016	59.4	39.6	35.2	27.9	481
2017	60.8	44.9	37.9	32.1	503.7
Trend Equation	TE=36.9+2.7T, R ² =0.93, t=10.17 (p=.000)	TE=20.2+2.6T R ² =0.92, t=9.67 (p=.000)	TE=3.2T+9.03, R ² =0.92, t=9.69 (p=.000)	TE=3.3T+0.04, R ² =0.97, t=16.4 (p=.000)	TE=213.24+31.3T, R ² =0.97, t=16.74 (p=.000)

In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 62.7 sentences followed by ‘community development theme’ with 56.6 sentences and then ‘product, services-safety and innovation theme’ with 37.4 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 4.7 sentences. ‘Human resources theme’ and ‘community development theme’ shared largest amount of disclosures, followed by ‘product, services-safety and innovation theme’ throughout study period. However ‘other CSR activities theme’ remained the least disclosed theme throughout the study period except in 2015 when ‘energy theme’ attained this position in terms of amount of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSR themes in metals sector over the entire study period.

4.1.2.9.5 Significance of variations across all CSR themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSR in metals industry using average number of sentences disclosed as the base. It can be seen in table 4.53 that the mean value is highest for ‘human resources theme’ (93.600) followed by ‘community development theme’ (93.011). Hence these two themes were most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (18.233) and ‘energy theme’ (23.778). The calculated F-value came out to be 49.121, with p-value 0.000 which indicates that there is a significant variation across different themes of CSR in metals sector at 1 per cent level of significance.

Table 4.53 Comparison across all themes in metals sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	93.011	21.841	49.121 (0.000)
Human Resources	93.600	21.393	
Energy	23.778	5.449	
Environment	44.133	12.218	
Product, Services-Safety and Innovation	51.533	8.359	
Customers	34.344	8.112	
Emission of Carbon and Harmful Gases	26.600	10.076	
Other CSR activities	18.233	10.160	
Total	48.154	30.932	

(Significant at 1% level of significance)

4.1.2.10 CSR disclosures within pharmaceuticals industry

The pharmaceuticals sector contributed total 12 companies towards the final sample under study. These companies are Ajanta Pharma Ltd, Aurobindo Pharma Ltd, Cadila Healthcare Ltd, Cipla Ltd, Divi'S Laboratories Ltd, Dr. Reddy'S Laboratories Ltd, Glaxosmithkline Pharmaceuticals Ltd, Glenmark Pharmaceuticals Ltd, Lupin Ltd, Piramal Enterprises Ltd, Sun Pharmaceutical Inds.Ltd and Torrent Pharmaceuticals Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.10.1 Number of total companies making CSRD across each year and theme

The table 4.54 depicts that the number of selected companies in pharmaceutical sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the twelve companies from this sector having made some sort of CSR disclosures. The activities from 'customers theme' were mostly reported by the companies in this group with each of selected twelve companies making disclosures in all years. 'Other CSR activities theme' with only 3 companies (25%) making disclosure in 2008 increased gradually over years to all 12 companies (100%) in 2017 while 'emission of carbon and harmful gases theme' with only 3 companies (25%) making disclosure in 2008 increased upto 8 companies (66.7%) in 2017. The 'human resources theme', 'energy theme' and 'product, services-safety and innovation theme' have been disclosed by 10 or more companies (83.3% or above) throughout the period of study. The disclosures on 'community development theme' were made by 11 companies (91.7%) till 2013 which later increased to all companies from 2014 till 2017.

4.1.2.10.2 Quality of CSRD across years

From the table 4.55 it is clear that percentage of qualitative disclosures by companies in pharmaceuticals sector has decreased over years from 66.9 per cent in 2008 to 18.5 per cent

Table 4.54 Number of companies in pharmaceuticals sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	12 (100)	11 (91.7)	11 (91.7)	12 (100)	10 (83.3)	11 (91.7)	12 (100)	3 (25)	3 (25)
2009	12 (100)	11 (91.7)	12 (100)	12 (100)	11 (91.7)	10 (83.3)	12 (100)	4 (33.3)	3 (25)
2010	12 (100)	11 (91.7)	10 (83.3)	12 (100)	9 (75)	12 (100)	12 (100)	5 (41.7)	6 (50)
2011	12 (100)	11 (91.7)	10 (83.3)	11 (91.7)	10 (83.3)	12 (100)	12 (100)	4 (33.3)	10 (83.3)
2012	12 (100)	11 (91.7)	12 (100)	10 (83.3)	10 (83.3)	12 (100)	12 (100)	8 (66.7)	11 (91.7)
2013	12 (100)	11 (91.7)	12 (100)	12 (100)	10 (83.3)	12 (100)	12 (100)	8 (66.7)	11 (91.7)
2014	12 (100)	12 (100)	12 (100)	11 (91.7)	12 (100)	12 (100)	12 (100)	8 (66.7)	12 (100)
2015	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	8 (66.7)	12 (100)
2016	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	8 (66.7)	12 (100)
2017	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	12 (100)	8 (66.7)	12 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

Table 4.55 Quality of disclosures across years in pharmaceuticals sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	66.9	56.6	48.1	39.7	39.1	40	34.7	20.6	20.9	18.5
Percentage of Qualitative disclosures with specific information	16.2	26.7	35	39.4	40.4	36.5	41.7	52.8	53.9	54
Percentage of Quantitative disclosures	16.9	16.7	16.8	20.9	20.5	23.5	23.6	26.6	25.2	27.5

in 2017. While the percentage of qualitative disclosures with specific information have increased from 16.2 per cent in 2008 to 54 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased among pharmaceuticals sector from 16.9 per cent in 2008 to 27.5 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (66.9%) with qualitative disclosures with specific information being lowest (16.2%). However by the end of study period in 2017 the maximum disclosures in pharmaceuticals sector were of qualitative nature with specific information (54%) followed by financial disclosures (27.5%) with qualitative disclosures (18.5%) becoming the lowest.

4.1.2.10.3 Quality of CSRD across themes

It can be observed in the table 4.56 that over the entire period of study among all the themes in pharmaceuticals industry, maximum number of financial disclosures were from 'energy theme' (55.5%) with first place and following it is 'human resources theme' (29.2%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures 'customers theme' had only 2 per cent financial disclosures which were second lowest in the category. 'Customers theme' ranked one in category of non-financial disclosures with particular information with 56.3 per cent. Following it were 'other CSR activities theme' (52.9%) at second spot and 'product, services-safety and innovation theme' (52.1%) at third place. 'Energy theme' made only 10.5 per cent disclosures with least disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum with 80.7 per cent followed by 'environment theme' with 49.1 per cent. The least disclosures in this category were from 'product, services-safety and innovation theme' with 20.9 per cent of total disclosures.

Table 4.56 Quality of disclosures across themes in pharmaceuticals sectors

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	30.5	44.5	25
Human Resource Theme	34.5	36.3	29.2
Energy Theme	34	10.5	55.5
Environment Theme	49.1	42.7	8.2
Product, Services-Safety and Innovation Theme	20.9	52.1	26.9
Customer Theme	41.7	56.3	2
Emission of Carbon and Harmful gases Theme	80.7	12.9	6.4
Other CSR activities Theme	47.1	52.9	0

4.1.2.10.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.57 there has been a consistent increase in average number of sentences in pharmaceuticals sector aggregated over all themes from 197.2 sentences in 2008 to 433.7 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 41.3 sentences to 111.7 sentences in 2015 which slightly fell down to 111.4 sentences in 2016 and again increasing to 116.1 sentences in 2017. Somewhat similar trends were observed to be repeated across all other themes by companies in the pharmaceutical sector. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 58.8 sentences followed by ‘community development theme’ with 41.3 sentences and then ‘product, services-safety and innovation theme’ with 36.2 sentences.

Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 1.5 sentences. From 2010 ‘emission of carbon and harmful gases theme’ became the least disclosed theme till 2017 with ‘other CSR activities theme’ becoming the second least disclosed theme. Throughout the period of study ‘human resources theme’ has maintained its first position to be the most disclosed activity in terms of amount of disclosures followed by ‘community development theme’ continuing with second position except in 2017 when finally they both swapped their position. ‘Product, services-safety and innovation theme’ remained at third slot from 2008 till 2017. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in pharmaceuticals sector over the entire study period.

Table 4.57 Amount and trend of disclosures in pharmaceuticals sector

Year	Community Development	Human Resource	Energy	Environment
2008	41.3	58.8	13.1	22.4
2009	47.6	71.6	14.8	25.2
2010	62	72	15.2	26.9
2011	71.5	83.1	16.6	31.2
2012	80.9	86.2	19.7	29.3
2013	88.3	92.9	21.7	28.8
2014	107.6	112.6	27.2	37.9
2015	111.7	116.8	27	45
2016	111.4	115.7	26.4	47.1
2017	116.1	115.7	25.8	48.2
Trend Equation	TE=34.39+9T, R ² =0.96, t=14.67 (p=.000)	TE=54.6+6.9T, R ² =0.94, t=11.14 (p=.000)	TE=11.13+1.7T, R ² =0.89, t=8.15 (p=.000)	TE=17.7+3T, R ² =0.90, t=8.44 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	36.2	19.3	4.5	1.5	197.2
2009	43.3	20.2	5.6	2.2	230.5
2010	46.9	24.6	5.3	5.8	258.7
2011	46.2	28.4	5.7	7.8	290.5
2012	55.7	27.7	8.7	10.7	319.1
2013	61.4	31.2	9.8	10.8	345
2014	66.4	33.1	13.8	14	412.7
2015	66.2	35.6	12.9	16.8	432
2016	63	38.2	13.6	18.1	433.4
2017	61.2	35.4	13.8	17.4	433.7
Trend Equation	TE=37.13+3.2T, R ² =0.81, t=5.89 (p=.000)	TE=17.92+2.1T, R ² =0.93, t=10.75 (p=.000)	TE=2.6+1.2T, R ² =0.90, t=8.67 (p=.000)	TE=1.9T-0.42, R ² =0.97, t=15.62 (p=.000)	TE=175.01+29.1T, R ² =0.96, t=13.94 (p=.000)

4.1.2.10.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in pharmaceuticals industry using average number of sentences disclosed as the base. It can be seen in table 4.58 that the mean value is highest for ‘human resources theme’ (92.542) followed by ‘community development theme’ (83.842). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘emission of carbon and harmful gases theme’ (9.383) and ‘other CSR activities theme’ (10.525). The calculated F-value came out to be 52.440, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in pharmaceuticals sector at 1 per cent level of significance.

Table 4.58 Comparison across all themes in pharmaceuticals sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	83.842	27.724	52.440 (0.000)
Human Resources	92.542	21.571	
Energy	20.758	5.612	
Environment	34.217	9.589	
Product, Services-Safety and Innovation	54.658	10.704	
Customers	29.358	6.513	
Emission of Carbon and Harmful Gases	9.383	3.928	
Other CSR activities	10.525	6.121	
Total	41.910	32.998	

(Significant at 1% level of significance)

4.1.2.11 CSR disclosures within services industry

The services sector contributed total 4 companies towards the final sample under study. These companies are 3M India Ltd, Adani Ports & Special Economic Zone Ltd, Container Corpn. of India Ltd and Indian Hotels Co. Ltd. The analysis of CSR disclosures of these companies firms is presented under the following subheadings:

4.1.2.11.1 Number of total companies making CSRD across each year and theme

The table 4.59 depicts that the number of selected companies in services sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the four companies from this sector having made some sort of CSR disclosures. The activities from ‘environment theme’, ‘customers theme’, ‘human resources theme’, ‘product, services- safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group with all four companies making disclosures throughout study period. ‘Emission of carbon and harmful gases theme’ with only 1 company (25%) making disclosure in 2008 increased gradually over years to 4 companies (100%) in

Table 4.59 Number of companies in services sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	4 (100)	1 (25)	2 (50)
2009	4 (100)	4 (100)	4 (100)	2 (50)	4 (100)	4 (100)	4 (100)	1 (25)	2 (50)
2010	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	4 (100)	1 (25)	2 (50)
2011	4 (100)	4 (100)	4 (100)	2 (50)	4 (100)	4 (100)	4 (100)	1 (25)	2 (50)
2012	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	4 (100)	2 (50)	3 (75)
2013	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	4 (100)	2 (50)	4 (100)
2014	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2015	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)
2016	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)
2017	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

2017. ‘Energy theme’ was disclosed by 2 or more companies (50% or above) throughout period of study. ‘Other CSR activities theme’ was disclosed by 2 companies (50%) till 2011 and by 3 companies (75%) in 2012 which later increased to all companies till end of study period.

4.1.2.11.2 Quality of CSRD across years

From the table 4.60 it is clear that percentage of qualitative disclosures by companies in services sector has consistently decreased over years from 66 per cent in 2008 to 19.7 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 17.5 per cent in 2008 to 54.3 per cent in 2017 in this sector. Also the percentage of financial disclosures has increased among companies in services sector from 16.5 per cent in 2008 to 26 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (66%) with financial disclosures being the lowest (16.5%). However by the end of study period in 2017 the maximum disclosures in services sector were of qualitative nature with specific information (54.3%) followed by financial disclosures (26%) with qualitative disclosures (19.7%) becoming the lowest.

Table 4.60 Quality of disclosures across years in services sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	66	62.5	51	42.2	50	38.6	27	19.3	18.5	19.7
Percentage of Qualitative disclosures with specific information	17.5	23.1	30.8	31.2	27.3	37	46.8	58.1	57.3	54.3
Percentage of Quantitative disclosures	16.5	14.4	18.3	26.6	22.7	24.4	26.2	22.6	24.2	26

4.1.2.11.3 Quality of CSRD across themes

It can be observed in the table 4.61 that over the entire period of study among all the themes in services industry, maximum number of financial disclosures were from ‘energy theme’ (57.7%) with first place and following it is ‘community development theme’ (33.2%) with second rank. No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures ‘environment theme’ had only 0.8 per cent financial disclosures which were second lowest in the category. ‘Product, services-safety and innovation theme’ had most of its disclosures in the form of non-financial with particular

information and ranked one in this category with 51.2 per cent. Following it were ‘environment theme’ (47.3%) at second spot and ‘other CSR activities theme’ (46.9%) at third place.’ Energy theme’ had only 9.6 per cent disclosures with least disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases theme’ contributed the maximum with 82.6 per cent followed by ‘other CSR activities theme’ with 53.1 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 25 per cent of total disclosures.

Table 4.61 Quality of disclosures across themes in services industry

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	25.9	40.9	33.2
Human Resource Theme	38.7	35	26.2
Energy Theme	32.7	9.6	57.7
Environment Theme	51.9	47.3	0.8
Product, Services-Safety and Innovation Theme	25	51.2	23.7
Customer Theme	46.7	44.2	9.2
Emission of Carbon and Harmful gases Theme	82.6	10.9	6.5
Other CSR activities Theme	53.1	46.9	0

4.1.2.11.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.62 there has been an increase in average number of sentences in services sector aggregated over all themes from 218.25 sentences in 2008 to 439.5 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘customers theme’ saw consistent increase in average number of sentences from year 2008 with 20.25 sentences to 47.25 sentences in 2014 which slightly fell down to 43 sentences in 2015 and further falling to 41 sentences in 2016. Also similar trends were observed to be repeated across all other themes among companies in the services sector. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 64 sentences followed by ‘community development theme’ with 54 sentences and then ‘product, services-safety and innovation theme’ with 36.5 sentences. Least amount of disclosures was observed in ‘emission of carbon and harmful gases theme’ in 2008 with average 2 sentences. ‘Human

Table 4.62 Amount and trend of disclosures in services sector

Year	Community Development	Human Resource	Energy	Environment
2008	54	64	12.25	24.5
2009	53.5	64.75	15.25	22.5
2010	69	78.75	11.5	28.75
2011	76.5	82	16.75	33.5
2012	72.75	75	10.75	28.5
2013	87	84.5	16.5	33.25
2014	112	105.5	23.25	35.5
2015	108.25	111.25	15	41.5
2016	115.75	111.5	19	44.5
2017	122	120.5	16.25	43.5
Trend Equation	TE=41.58+8.3T, R ² =0.94, t=11.65 (p=.000)	TE=53.83+6.5T, R ² =0.92, t=9.38 (p=.000)	TE=12.15+0.64T, R ² =0.27, t=1.71(p=.125)	TE=20.28+2.4T, R ² =0.90, t=8.4 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	36.5	20.25	2	4.75	218.25
2009	42.5	26.75	1.75	6.5	233.5
2010	48	29	3.25	5.25	273.5
2011	50.5	29.75	4	5	298
2012	53.25	33.75	5	9.5	288.5
2013	54.5	39	9.5	13.25	337.5
2014	58.75	47.25	10.75	17	410
2015	57	43	11	18.25	405.25
2016	56.75	41	10.75	18.5	417.75
2017	61.25	41	14.25	20.75	439.5
Trend Equation	TE=38.78+2.4T, R ² =0.88, t=7.54 (p=.000)	TE=21.3+2.5T, R ² =0.80, t=5.6 (p=.001)	TE=1.4T-0.67, R ² =0.93, t=10.55 (p=.000)	TE=2T+0.78, R ² =0.91, t=9.1 (p=.000)	TE=188+26.2T, R ² =0.95, t=12.67 (p=.000)

resources theme' shared maximum amount of disclosures till 2012 with 75 sentences while 'community development theme' acquired the first position persistently till 2017 with 122 sentences. 'Product, services-safety and innovation theme' remained at third slot from 2008 till 2017. However 'emission of carbon and harmful gases theme' remained the least disclosed and 'other CSR activities theme' second least disclosed theme throughout the period of study.

The results of trend analysis indicated a highly significant and positive trend among all the themes except the 'energy theme' in services sector over the entire study period. In case of 'energy theme' the trend coefficient is not significantly different from zero at 1 percent level of significance value indicating the presence of neither a positive nor a negative trend. Also the value of R-square for linear trend equation of 'energy theme' is comparatively quite low.

4.1.2.11.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in services industry using average number of sentences disclosed as the base. It can be seen in table 4.63 that the mean value is highest for 'human resources theme' (89.775) followed by 'community development theme' (87.075). Hence these two themes were most disclosed themes of corporate social responsibility. The mean value came out to be lowest for 'emission of carbon and harmful gases theme' (7.225) and 'other CSR activities theme' (11.875). The calculated F-value came out to be 61.778, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in services sector at 1 per cent level of significance.

Table 4.63 Comparison across all themes in services sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	87.075	25.770	61.778 (0.000)
Human Resources	89.775	20.664	
Energy	15.650	3.722	
Environment	33.600	7.735	
Product, Services-Safety and Innovation	51.900	7.711	
Customers	35.075	8.516	
Emission of Carbon and Harmful Gases	7.225	4.498	
Other CSR activities	11.875	6.394	
Total	41.522	32.921	

(Significant at 1% level of significance)

Table 4.64 Number of companies in telecom sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	2 (50)	2 (50)
2009	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)	4 (100)	2 (50)	2 (50)
2010	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	2 (50)
2011	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2012	4 (100)	4 (100)	4 (100)	3 (75)	3 (75)	4 (100)	4 (100)	2 (50)	4 (100)
2013	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2014	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2015	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2016	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)
2017	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	4 (100)	3 (75)	4 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

4.1.2.12 CSR disclosures within telecom industry

The telecom sector contributed total 4 companies towards the final sample under study. These companies are Bharti Airtel Ltd, Idea Cellular Ltd, Reliance Communications Ltd and Tata Communications Ltd. The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.12.1 Number of total companies making CSRD across each year and theme

The table 4.64 depicts that the number of selected companies in telecom sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the four companies from this sector having made some sort of CSR disclosures. The activities from ‘customer theme’, ‘human resources theme’, ‘product, services-safety and innovation theme’ and ‘community development theme’ were mostly reported by the companies in this group with all four companies making disclosures throughout the period of study. ‘Emission of carbon and harmful gases theme’ with 2 companies (50%) making disclosure in 2008 increased gradually over years to 3 companies (75%) in 2017. ‘Environment theme’ and ‘energy theme’ were disclosed by 3 or more companies (75% or above) throughout period of study. ‘Other CSR activities theme’ was disclosed by 2 companies (50%) till 2010 which was increased to all companies till end of study period.

4.1.2.12.2 Quality of CSRD across years

From the table 4.65 it is clear that percentage of qualitative disclosures by companies in telecom sector has consistently decreased over years from 65.7 per cent in 2008 to 18.4 per cent in 2017.

Table 4.65 Quality of disclosures across years in telecom sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	65.7	60.4	50.4	42.6	38.6	33.3	33.3	21.8	22.2	18.4
Percentage of Qualitative disclosures with specific information	20.9	27	35.9	41.8	44.9	41.1	40.1	50.4	51.1	53.7
Percentage of Quantitative disclosures	13.3	12.6	13.7	15.6	16.5	25.6	26.5	27.8	26.7	27.9

The percentage of qualitative disclosures with specific information has increased from 20.9 per cent in 2008 to 53.7 per cent in 2017 in this sector. Also the percentage of

financial disclosures has increased among telecom sector from 13.3 per cent in 2008 to 27.9 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (65.7%) with financial disclosures being the lowest (13.3%). However by the end of study period in 2017 the maximum disclosures in telecom sector were of qualitative nature with specific information (53.7%) followed by financial disclosures (27.9%) with qualitative disclosures (18.4%) becoming the lowest.

4.1.2.12.3 Quality of CSRD across themes

It can be observed in the table 4.66 that over the entire period of study among all the themes in telecom industry, maximum number of financial disclosures were from ‘community development theme’ (34.2%) with first place and following it was ‘energy theme’ with second rank (26.7%). No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures ‘environment theme’ had only 6.1 per cent financial disclosures which were second lowest in the category. ‘Product, services-safety and innovation theme’ had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 63.7 per cent. Following it were ‘environment theme’ (53.1%) at second spot and ‘customer theme’ (45.8%) at third place. ‘Energy theme’ had only 17.3 per cent disclosures thus least in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘other CSR activities theme’ contributed the maximum with 65.1 per cent followed by ‘emission of carbon and harmful gases theme’ with 53.7 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 11.2 per cent of total disclosures.

Table 4.66 Quality of disclosures across themes in telecom industry

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	22.5	43.3	34.2
Human Resource Theme	45.6	30.9	23.4
Energy Theme	56	17.3	26.7
Environment Theme	40.8	53.1	6.1
Product, Services-Safety and Innovation Theme	11.2	63.7	25
Customer Theme	47.2	45.8	6.9
Emission of Carbon and Harmful gases Theme	53.7	37.5	8.7
Other CSR activities Theme	65.1	34.9	0

4.1.2.12.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.67 there has been a continuous increase in average number of sentences in telecom sector aggregated over all themes from 248.7 sentences in 2008 to 468.5 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 59.5 sentences to 125 sentences in 2014 which slightly fell down to 124.5 sentences in 2015 and then further to 122 sentences in 2016 and finally rising to 136.2 sentences in 2017. Also similar trends are observed to be repeated across all other themes by companies in the telecom sector.

In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 66 sentences followed by ‘community development theme’ with 59.5 sentences and then ‘product, services-safety and innovation theme’ with 49.7 sentences. Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 3.2 sentences. ‘Human resources theme’ shared maximum amount of disclosures only in 2008 with loosing first slot to ‘community development theme’ from 2010 till 2017. In 2009 both ‘community development theme’ and ‘human resources theme’ made same amount of

Table 4.67 Amount and trend of disclosures in telecom sector

Year	Community Development	Human Resource	Energy	Environment
2008	59.5	66	15.5	20.7
2009	67.5	67.5	16	22.5
2010	90.2	76.7	15.7	23.5
2011	97	86.2	15.7	25.2
2012	109.2	82.2	18.2	23.7
2013	112.2	89.5	20.5	28.2
2014	125	91.7	17.2	35.2
2015	124.5	108.2	17.5	33
2016	122	112.7	20	32.5
2017	136.2	121.2	21.2	36.5
Trend Equation	TE=60+8.1T, R ² =0.91, t= 9.21 (p=.000)	TE=57.05+6T, R ² =0.95, t=12.24 (p=.000)	TE=14.6+0.58T, R ² =0.66, t= 3.95 (p=.004)	TE=18.3+1.8T, R ² =0.87, t=7.5 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	49.7	26.5	7.5	3.2	248.7
2009	43.2	30.7	9.2	3.7	260.5
2010	52.7	36.7	13.5	4.5	313.7
2011	55.2	36.5	19	9.7	344.7
2012	58.7	40.5	18.2	13.7	364.7
2013	61.7	41.5	22.5	15.2	391.5
2014	63	39.2	23.7	16.2	411.5
2015	56.7	41.7	23	18	422.7
2016	58.2	44.5	23.5	17.2	430.7
2017	64.5	47.2	23	18.5	468.5
Trend Equation	TE=46.93+1.7T, R ² =0.64, t=3.82 (p=.005)	TE=27.95+1.9T, R ² =0.88, t=7.55 (p=.000)	TE=2.1T+7.03, R ² =0.88, t=6.23 (p=.000)	TE=1.9T+1.35, R ² =0.90, t=8.73 (p=.000)	TE=234.37+23.9T, R ² =0.97, t=15.23 (p=.000)

disclosures which is 67.5 sentences. From 2010 ‘human resources theme’ ranked second while ‘product, services-safety and innovation theme’ remained at third slot throughout study period. However ‘other CSR activities theme’ remained the least disclosed activity in all ten years except in 2015 when energy theme made least amount of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in telecom sector over the entire study period.

4.1.2.12.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was used to investigate variation across different themes of CSRD in telecom industry using average number of sentences disclosed as the base. It can be seen in table 4.68 that the mean value is highest for ‘human resources theme’ (90.225) followed by ‘product, services-safety and innovation theme’ (56.400). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘community development theme’ (1.0435E2) and ‘other CSR activities theme’ (12.025). The calculated F-value came out to be 81.656, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in telecom sector at 1 per cent level of significance.

Table 4.68 Comparison across all themes in telecom sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	1.0435E2	25.539	81.656 (0.000)
Human Resources	90.225	18.744	
Energy	17.775	2.149	
Environment	28.125	5.761	
Product, Services-Safety and Innovation	56.400	6.486	
Customers	38.525	6.216	
Emission of Carbon and Harmful Gases	18.325	6.152	
Other CSR activities	12.025	6.177	
Total	45.719	34.930	

(Significant at 1% level of significance)

4.1.2.13 CSR disclosures within miscellaneous group

The miscellaneous group contributed total 7 companies towards the final sample under study. It consists of companies from various industrial sectors. These are Sun TV Network Ltd and Zee Entertainment Enterprises Ltd (Media and Entertainment industry), Pidilite Industries Ltd (Chemicals industry), Apollo Hospitals Enterprise Ltd (Healthcare services industry), Page Industries Ltd and Welspun India Ltd (Textiles industry) and UPL Ltd (Fertilizers and Pesticides industry). The analysis of CSR disclosures of these companies is presented under the following subheadings:

4.1.2.13.1 Number of total companies making CSRD across each year and theme

The table 4.69 depicts that the number of selected companies in miscellaneous group making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the seven firms from this category having made some sort of CSR disclosures. The activities from ‘product, services-safety and innovation theme’ and ‘customer theme’ were mostly reported by the companies in this group. ‘Other CSR activities theme’ and ‘emission of carbon and harmful gases theme’ with disclosures by only 1 company (14.3%) in 2008 were finally disclosed by 6 companies (85.7%) in 2017 in case of ‘emission of carbon and harmful gases’ and by 7 companies (100%) in case of ‘other CSR activities theme’. The disclosures on ‘community development theme’ were always high with 6 or more companies (85.7% or above) making disclosures throughout study period. The disclosures on ‘human resources theme’ increased from 5 companies (71.4%) making disclosures in 2008 to 7 companies (100%) making disclosures in 2017.

Table 4.69 Number of companies in miscellaneous group making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	7 (100)	7 (100)	5 (71.4)	4 (57.1)	5 (71.4)	7 (100)	7 (100)	1 (14.3)	1 (14.3)
2009	7 (100)	6 (85.7)	6 (85.7)	4 (57.1)	4 (57.1)	7 (100)	7 (100)	1 (14.3)	1 (14.3)
2010	7 (100)	7 (100)	7 (100)	4 (57.1)	6 (85.7)	7 (100)	7 (100)	3 (42.9)	2 (28.6)
2011	7 (100)	6 (85.7)	7 (100)	5 (71.4)	5 (71.4)	7 (100)	6 (85.7)	4 (57.1)	3 (42.9)
2012	7 (100)	7 (100)	7 (100)	5 (71.4)	6 (85.7)	7 (100)	7 (100)	2 (28.6)	5 (71.4)
2013	7 (100)	7 (100)	6 (85.7)	4 (57.1)	5 (71.4)	7 (100)	7 (100)	4 (57.1)	4 (57.1)
2014	7 (100)	7 (100)	7 (100)	5 (71.4)	7 (100)	7 (100)	7 (100)	5 (71.4)	6 (85.7)
2015	7 (100)	7 (100)	7 (100)	5 (71.4)	7 (100)	7 (100)	7 (100)	6 (85.7)	6 (85.7)
2016	7 (100)	7 (100)	7 (100)	5 (71.4)	7 (100)	7 (100)	7 (100)	6 (85.7)	6 (85.7)
2017	7 (100)	7 (100)	7 (100)	4 (57.1)	6 (85.7)	7 (100)	7 (100)	6 (85.7)	7 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

4.1.2.13.2 Quality of CSRD across years

From the table 4.70 it is clear that percentage of qualitative disclosures by companies in miscellaneous group has consistently decreased over years from 64.9 per cent in 2008 to 21.6 per cent in 2017. The percentage of qualitative disclosures with specific information have increased from 21.4 per cent in 2008 to 53.7 per cent in 2017. Also the percentage of financial disclosures has increased from 13.6 per cent in 2008 to 24.7 percent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (64.9%) with quantitative disclosures being the lowest (13.6%).

Table 4.70 Quality of disclosures across years in miscellaneous group

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	64.9	53.7	36.7	40.3	28.2	36.2	37.6	20.1	19.5	21.6
Percentage of Qualitative disclosures with specific information	21.4	31.7	46.7	41.5	51.9	44.3	41.1	57.9	58.1	53.7
Percentage of Quantitative disclosures	13.6	14.6	16.6	18.2	19.9	19.5	21.3	22	22.4	24.7

However by the end of study period in 2017 the maximum disclosures in miscellaneous group were of qualitative nature with specific information (53.7%) followed by financial disclosures (24.7%) with qualitative disclosures (21.6%) becoming the lowest.

4.1.2.13.3 Quality of CSRD across themes

It can be observed in the table 4.71 that over the entire period of study among all the themes in miscellaneous group, maximum number of financial disclosures were from 'energy theme' (53.3%) with first place and following it was 'community development theme' (35.5%) with second rank. No financial disclosures related to 'other CSR activities theme' were made in any of the years. Of the total disclosures 'customer theme' had only 1.5 per cent financial disclosures which were second lowest in the category. 'Environment theme' had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 58.8 per cent. Following it were 'product, services-safety and innovation theme' (56.4%) at second spot and 'customer theme' (51%) at third place. 'Emission of carbon and harmful gases theme' had only 6.5 per cent disclosures thus making lowest disclosures in this category. In terms of qualitative disclosures with no special information

‘emission of carbon and harmful gases theme’ contributed the maximum with 90.9 per cent followed by ‘other CSR activities theme’ with 64.9 per cent. The least disclosures in this category were from ‘community development theme’ with 18.1 per cent of its disclosures.

Table 4.71 Quality of disclosures across themes within miscellaneous group

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	18.1	46.4	35.5
Human Resource Theme	36.2	43.9	19.9
Energy Theme	24	22.7	53.3
Environment Theme	34.5	58.8	6.7
Product, Services-Safety and Innovation Theme	25.4	56.4	18.2
Customer Theme	47.4	51	1.5
Emission of Carbon and Harmful gases Theme	90.9	6.5	2.6
Other CSR activities Theme	64.9	35.1	0

4.1.2.13.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.72 that there has been an increase in average number of sentences in miscellaneous group aggregated over all themes from 213.1 sentences in 2008 to 410.6 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 69.4 sentences followed by ‘community development theme’ with 45.6 sentences and then ‘product, services-safety and innovation theme’ with 43.7 sentences. Least amount of disclosures was observed in ‘emission of carbon and harmful gases theme’ in 2008 with average 0.7 sentences. ‘Human resources theme’ made maximum amount of disclosures throughout period of study followed by ‘community development theme’ grabbing the second slot and ‘product, services-safety and innovation theme’ with third position. However ‘emission of carbon and harmful gases theme’, ‘energy theme’ and ‘other CSR activities theme’ contributed the least amount of disclosures throughout the period of study.

The results of trend analysis indicated a highly significant and positive trend among all the themes except the ‘energy theme’ in miscellaneous group over the entire study period. In case of ‘energy theme’ the trend coefficient was not significantly different from zero at

Table 4.72 Amount and trend of disclosures in miscellaneous group

Year	Community Development	Human Resource	Energy	Environment
2008	45.6	69.4	7.9	21.9
2009	61.9	73	11.4	24.4
2010	76.1	90.9	13.4	27.4
2011	73.1	91	14	29.6
2012	86.6	101.9	16.3	29
2013	84.6	90.9	13.4	30.3
2014	99.4	96.9	16	37.9
2015	106.9	110	15.1	50.4
2016	105.7	111.1	15.7	46.7
2017	107	113.3	14.9	44.1
Trend Equation	TE=48.34+6.61T, R ² =0.92, t=9.67 (p=.000)	TE=69.36+4.6T, R ² =0.86, t=6.9 (p=.000)	TE=10.32+0.6T, R ² =0.56, t=3.22 (p=.012)	TE=17.58+3T, R ² =0.84, t=6.57 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	43.7	21.9	0.7	2.1	213.1
2009	41.9	25.4	1.1	1.7	240.9
2010	48.4	26	3.1	4.7	290.1
2011	49.3	29.7	4.4	5.4	296.6
2012	52.3	36.3	2.3	9.9	334.4
2013	51.9	26.7	4.1	8.6	310.4
2014	54.6	35.9	8.6	9.1	358.3
2015	56.4	39.6	12.9	12.9	404.1
2016	61.3	35.1	14	12.7	402.4
2017	59.7	37.4	14	20.1	410.6
Trend Equation	TE=40.76+2T, R ² =0.94, t=10.95 (p=.000)	TE=21.9+1.7T, R ² =0.72, t=4.53 (p=.002)	TE=1.65T-2.5, R ² =0.87, t=7.34 (p=.000)	TE=1.75T-0.92, R ² =0.89, t=8.21 (p=.000)	TE=204.8+22T, R ² =0.94, t=11.41 (p=.000)

1 per cent level of significance value indicating the presence of neither a positive nor a negative trend. Also the value of R-square for linear trend equation of ‘energy theme’ was comparatively low.

4.1.2.13.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in miscellaneous group using average number of sentences disclosed as the base. It can be seen in table 4.73 that the mean value is highest for ‘human resources theme’ (94.829) followed by ‘community development theme’ (84.686). Hence these two themes were most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘emission of carbon and harmful gases theme’ (6.529) and ‘other CSR activities theme’ (8.729). The calculated F-value came out to be 101.198, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in miscellaneous group at 1 per cent level of significance.

Table 4.73 Comparison across all themes in miscellaneous group

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	84.686	20.843	101.198 (0.000)
Human Resources	94.829	15.123	
Energy	13.814	2.557	
Environment	34.171	9.942	
Product, Services-Safety and Innovation	51.943	6.357	
Customers	31.400	6.160	
Emission of Carbon and Harmful Gases	6.529	5.357	
Other CSR activities	8.729	5.620	
Total	40.762	33.469	

(Significant at 1% level of significance)

4.1.2.14 Significance of variations of CSRD across all selected industry groups

To analyze the variation of CSRD across different industry groups on the basis of average number of sentences disclosed Analysis of Variance (ANOVA) was applied. It can be seen in table 4.74 that the mean value is very low for all the industry groups and standard deviation is very large in case of all industries. The calculated F-value came out to be 1.464, with p-value 0.148 which is insignificant indicating that there is no significant variation in CSRD across different industry groups at 1 per cent level of significance.

Table 4.74 Comparison across all industry groups

Industry types	Mean	Std. Deviation	F-Value (p-value)
Automobiles	3.3489E2	93.19931	1.464 (0.148)
Consumer Goods	3.5012E2	106.26524	
Pharmaceuticals	3.3528E2	90.02694	
Energy	3.7290E2	73.80469	
Services	3.3218E2	81.30917	
Telecom	3.6575E2	73.56044	
Metals	3.8523E2	96.02324	
Information Technology	3.4249E2	78.80685	
Industrial Manufacturing	3.9207E2	96.95129	
Financial Services	3.1128E2	78.11311	
Construction	3.3143E2	91.37618	
Cement	4.3446E2	113.29690	
Miscellaneous	3.2610E2	68.79402	
Total	3.5494E2	90.64707	

(Significant at 1% level of significance)

4.1.3 CSR disclosures across different forms of ownership

On the basis of types of ownership the companies can either be from public/government sector or from private sector. Out of selected total sample of 137 companies, public sector constitutes 30 companies and private sector contributes 107 companies. The analysis of companies from these two ownership types has been discussed in detail under the following parts and headings:

4.1.3.1 CSR disclosures within public sector companies

In the selected sample under study there are total 30 companies belonging to government or public ownership. Some of these included companies are Coal India Ltd, Oil & Natural Gas Corpn Ltd, State Bank of India, N T P C Ltd, Indian Oil Corpn Ltd, Power Grid Corpn of India Ltd, GAIL (India) Ltd, NMDC Ltd etc. The analysis of CSR disclosures of companies from this group is presented under the following subheadings:

4.1.3.1.1 Number of total companies making CSRD across each year and theme

The table 4.75 depicts that the number of selected companies of public sector making disclosures in their annual reports over a period of 2008 to 2017 has always been high with each of the thirty companies having made some sort of CSR disclosures. The activities from ‘customer theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by only 14 companies (46.7%) in 2008 which increased gradually over years to 24 companies (80%) in 2017. The disclosures on

Table 4.75 Number of companies in public sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	30 (100)	29 (96.7)	26 (86.7)	17 (56.7)	24 (80)	28 (93.3)	30 (100)	14 (46.7)	21 (70)
2009	30 (100)	29 (96.7)	25 (83.3)	21 (70)	20 (66.7)	28 (93.3)	30 (100)	18 (60)	21 (70)
2010	30 (100)	30 (100)	26 (86.7)	23 (76.7)	23 (76.7)	28 (93.3)	30 (100)	17 (56.7)	25 (83.3)
2011	30 (100)	29 (96.7)	25 (83.3)	23 (76.7)	20 (66.7)	29 (96.7)	30 (100)	12 (40)	26 (86.7)
2012	30 (100)	30 (100)	26 (86.7)	25 (83.3)	23 (76.7)	28 (93.3)	30 (100)	17 (56.7)	28 (93.3)
2013	30 (100)	29 (96.7)	25 (83.3)	25 (83.3)	22 (73.3)	29 (96.7)	30 (100)	22 (73.3)	30 (100)
2014	30 (100)	30 (100)	27 (90)	28 (93.3)	25 (83.3)	30 (100)	30 (100)	26 (86.7)	30 (100)
2015	30 (100)	30 (100)	30 (100)	29 (96.7)	29 (96.7)	30 (100)	30 (100)	24 (80)	30 (100)
2016	30 (100)	30 (100)	30 (100)	29 (96.7)	29 (96.7)	30 (100)	30 (100)	24 (80)	30 (100)
2017	30 (100)	30 (100)	30 (100)	29 (96.7)	29 (96.7)	30 (100)	30 (100)	24 (80)	30 (100)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies.

‘environment theme’ and ‘other CSR activities theme’ were always high with 20 or more companies (66.7% or above) making disclosures throughout the period of study. The ‘community development theme’ and ‘product, services-safety and innovation theme’ were disclosed by 28 or more companies (93.3% or above) over selected period. ‘Human resources theme’ was disclosed by 25 or more companies (83.3% or above) and ‘energy theme’ by 17 or more companies (56.7% or above) throughout the period of study.

4.1.3.1.2 Quality of CSRD across years

From the table 4.76 it is clear that percentage of qualitative disclosures by companies in government sector has consistently decreased over years from 65.4 per cent in 2008 to 21.3 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 17.8 per cent in 2008 to 50.8 per cent in 2017. Also the percentage of financial disclosures has consistently increased among public sector companies from 16.8 per cent in 2008 to 28 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (65.4%) and quantitative disclosures were the lowest (16.8%). However by the end of study period in 2017 the maximum disclosures in government sector were of qualitative nature with specific information (50.8%) followed by financial disclosures (28%) with qualitative disclosures (21.3%) becoming the lowest.

Table 4.76 Quality of disclosures across years in public sector

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	65.4	61	53.1	46	41.5	36.3	36.5	23.1	22.7	21.3
Percentage of Qualitative disclosures with specific information	17.8	21	28.5	33.7	35.4	37.8	37.7	50.7	51.3	50.8
Percentage of Quantitative disclosures	16.8	18	18.3	20.3	23.1	25.8	25.8	26.2	26	28

4.1.3.1.3 Quality of CSRD across themes

It can be observed in the table 4.77 that over the entire period of study among all the themes in public sector group, maximum number of financial disclosures were from ‘energy theme’ (37.2%) and following it was ‘community development theme’ (33.3%). No financial disclosures related to ‘other CSR activities theme’ were made in any of the years. Of the total disclosures ‘customer theme’ had only 3.1 per cent financial disclosures which are second lowest in the category. ‘Customer theme’ had most of its disclosures in the form of non-

financial with particular information and ranked one in this category with 54.4 per cent. Following it were ‘environment theme’ (48.3%) at second spot and ‘product, services-safety and innovation theme’ (46.3%) at third place. ‘Energy theme’ had only 6.4 per cent disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘other CSR activities theme’ contributed the maximum with 68.3 per cent followed by ‘emission of carbon and harmful gases theme’ with 66.2 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 23.8 per cent of its disclosures.

Table 4.77 Quality of disclosures across themes in public sectors

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	25.9	40.8	33.3
Human Resource Theme	36.5	34.4	29
Energy Theme	56.4	6.4	37.2
Environment Theme	41	48.3	10.7
Product, Services-Safety and Innovation Theme	23.8	46.3	30
Customer Theme	42.4	54.4	3.1
Emission of Carbon and Harmful gases Theme	66.2	21.6	12.2
Other CSR activities Theme	68.3	31.7	0

4.1.3.1.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.78 that there has been an increase in average number of sentences in government sector aggregated over all themes from 234.7 sentences in 2008 to 472.7 sentences in 2017. Across all the themes there has been a lot of increase in amount of disclosures from year 2008 to 2017 with slight ups and downs in between. Like ‘community development theme’ saw consistent increase in average number of sentences from year 2008 with 55.1 sentences to 120.4 sentences in 2015 which slightly fell down to 119 were observed to be repeated across all other themes among companies in the public sector. However in case of ‘human resources theme’ and ‘product, services-safety and innovation theme’ a continuous increase in average number of sentences was observed from 2008 to 2017. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 65.5 sentences followed by ‘community development theme’ with 55.1 sentences and then ‘product, services-safety and innovation theme’ with 35 sentences.

Table 4.78 Amount and trend of disclosures in public sector

Year	Community Development	Human Resource	Energy	Environment
2008	55.1	65.5	12.3	26.1
2009	61.4	70.2	13.7	25.5
2010	72.4	77	14.1	28.6
2011	83.4	79.3	16.4	31.9
2012	88.3	85.9	18.5	34.5
2013	102.4	91.1	20.7	36.7
2014	117.9	100.4	23.5	39.4
2015	120.4	108.2	22.8	42.8
2016	119.9	113.8	24	43.9
2017	126.8	118.1	25.6	46.9
Trend Equation	TE=47.72+8.6T, R ² =0.96, t=14.76 (p=.000)	TE=57.59+6.1T, R ² =0.99, t=29 (p=.000)	TE=10.53+1.6T, R ² =0.97, t=15.43 (p=.000)	TE=21.9+2.5T, R ² =0.99, t=24.6 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	35	22.7	11.1	7	234.7
2009	39.3	24.3	11.9	7.6	253.8
2010	44.4	28.8	14.8	9.5	289.6
2011	47	29.9	16.1	11.7	316.1
2012	47.9	31.8	19.5	13.8	340.2
2013	51.5	34.8	25.1	18.3	380.6
2014	54.1	37.7	28.6	20.4	422
2015	56.9	38.1	29.3	22.5	441.1
2016	57.6	35.7	28.5	21.9	445.4
2017	59.3	41.3	30.3	24.5	472.7
Trend Equation	TE=34.81+2.6T, R ² =0.97, t=15.51 (p=.000)	TE=21.83+1.9T, R ² =0.92, t=9.87 (p=.000)	TE=2.4T+8.03, R ² =0.94, t=10.92 (p=.000)	TE=2.1T+3.92, R ² =0.97, t=15.71 (p=.000)	TE=206.3+27.9T, R ² =0.98, t= 22.57(p=.000)

Least amount of disclosures was observed in ‘other CSR activities theme’ in 2008 with average 7 sentences. ‘Human resources theme’ shared maximum amount of disclosures only till 2010 with loosing first slot to ‘community development theme’ from 2011 till 2017. From 2011 to 2017 ‘human resources’ ranked second while ‘product, services-safety and innovation theme’ remained at third slot throughout study period. However ‘other CSR activities theme’ remained to be the least disclosed theme throughout the period of study. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in public sector over the entire study period.

4.1.3.1.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in public sector using average number of sentences disclosed as the base. It can be seen in table 4.79 that the mean value is highest for ‘community development theme’ (94.793) followed by ‘human resources theme’ (90.99). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (15.71) and ‘energy theme’ (19.163). The calculated F-value came out to be 59.831, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in public sector industries at 1 per cent level of significance.

Table 4.79 Comparison across all themes in public sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	94.793	26.387	59.831 (0.000)
Human Resources	90.990	18.473	
Energy	19.163	4.832	
Environment	35.627	7.605	
Product, Services-Safety and Innovation	49.290	8.102	
Customers	32.513	6.118	
Emission of Carbon and Harmful Gases	21.533	7.679	
Other CSR activities	15.710	6.596	
Total	44.9525	32.06909	

(Significant at 1% level of significance)

4.1.3.2 CSR disclosures within private sector companies

In the selected sample under study there are total 107 companies belonging to private ownership. Some of these included companies are Reliance Industries Ltd, Tata Consultancy Services Ltd, Infosys Ltd, Ambuja Cements Ltd, Britannia Industries Ltd, Bajaj Finserv Ltd, Glaxosmithkline Consumer Healthcare Ltd, Emami Ltd, Grasim Industries Ltd, Kansai Nerolac Paints Ltd etc. The analysis of CSR disclosures of companies from this group is presented under the following subheadings:

Table 4.80 Number of companies in private sector making disclosures on CSR

Year	Total CSR disclosing companies	Community Development	Human Resource	Energy	Environment	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities
2008	106 (99.1)	88 (82.2)	83 (77.6)	78 (72.9)	81 (75.7)	94 (87.8)	106 (99.1)	34 (31.8)	31 (29)
2009	107 (100)	94 (87.8)	79 (73.8)	77 (72)	75 (70.1)	97 (90.6)	107 (100)	38 (35.5)	34 (31.8)
2010	107 (100)	97 (90.6)	91 (85)	85 (79.4)	81 (75.7)	98 (91.6)	107 (100)	34 (31.8)	53 (49.5)
2011	104 (97.2)	95 (88.8)	87 (81.3)	83 (77.6)	81 (75.7)	100 (93.4)	104 (97.2)	40 (37.4)	72 (67.3)
2012	107 (100)	97 (90.6)	87 (81.3)	84 (78.5)	81 (75.7)	103 (96.3)	107 (100)	48 (44.9)	91 (85)
2013	107 (100)	101 (94.4)	95 (88.8)	89 (83.2)	85 (79.4)	99 (92.5)	107 (100)	60 (56.1)	97 (90.6)
2014	107 (100)	103 (96.3)	98 (91.6)	89 (83.2)	90 (84.1)	101 (94.4)	107 (100)	76 (71)	102 (95.3)
2015	107 (100)	104 (97.2)	105 (98.1)	97 (90.6)	95 (88.8)	105 (98.1)	107 (100)	79 (73.8)	103 (96.3)
2016	107 (100)	105 (98.1)	105 (98.1)	97 (90.6)	100 (93.4)	107 (100)	107 (100)	81 (75.7)	104 (97.2)
2017	107 (100)	103 (96.3)	105 (98.1)	94 (87.8)	98 (91.6)	105 (98.1)	107 (100)	81 (75.7)	105 (98.1)

Note: The numbers denote number of companies making disclosures and numbers within bracket denote percentage of companies

4.1.3.2.1 Number of total companies making CSRD across each year and theme

The table 4.80 depicts that the number of selected companies in private sector making disclosures in their annual reports over period of 2008 to 2017 has always been high. Across selected time period every company in the sector has made CSR disclosures in their annual reports except in 2008 when 106 companies (99.1%) made disclosures. The activities from ‘customer theme’ were mostly reported by the companies in this group. ‘Emission of carbon and harmful gases theme’ was disclosed by only 34 companies (31.8%) in 2008 which increased gradually over years to 81 companies (75.7%) in 2017. ‘Other CSR activities theme’ with only 31 companies (29%) making disclosure in 2008 increased over year’s upto 105 companies (98.1%) by 2017. The disclosures on ‘community development’ were quite high with 88 companies (82.2%) making disclosures in 2008 which steadily rose to 103 companies (96.3%) in 2017. The disclosures on ‘human resources theme’ increased from 83 companies (77.6%) in 2008 to 105 companies (98.1%) in 2017. Only 78 companies (72.9%) made disclosures on ‘energy theme’ in 2008 which incremented over years to 94 companies (87.8%) in 2017. The ‘environment theme’ was disclosed by 81 companies (75.7%) in 2008 which increased along with a dip in 2009 with 75 companies (70.1%) to 98 companies (91.6%) in 2017. The disclosures on ‘product, services-safety and innovation theme’ increased from 94 companies (87.8%) in 2008 to 105 companies (98.1%) in 2017.

4.1.3.2.2 Quality of CSRD across years

From the table 4.81 it is clear that percentage of qualitative disclosures by companies in private sector has consistently decreased over years from 68.6 per cent in 2008 to 22.6 per cent in 2017. While the percentage of qualitative disclosures with specific information have increased from 17.1 per cent in 2008 to 52.5 per cent in 2017 in the private sector. Also the percentage of financial disclosures has consistently increased among private sector companies

Table 4.81 Number of companies in private sector making disclosures on CSR

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Percentage of Qualitative disclosures	68.6	59.9	47.4	45.3	41.9	38.9	36.8	23.9	23.2	22.6
Percentage of Qualitative disclosures with specific information	17.1	26.1	37.5	37.6	40	40.3	40.9	52.8	53.5	52.5
Percentage of Quantitative disclosures	14.2	14.1	15	17.1	18.2	20.7	22.3	23.2	23.4	24.9

from 14.2 per cent in 2008 to 24.9 per cent in 2017. In the year 2008 maximum disclosures being made were qualitative in nature (68.6%) with quantitative disclosures being the lowest (14.2%). However by the end of study period in 2017 the maximum disclosures in private sector were of qualitative nature with specific information (52.5%) followed by financial disclosures (24.9%) with qualitative disclosures (22.6%) becoming the lowest.

4.1.3.2.3 Quality of CSRD across themes

It can be observed in the table 4.82 that over the entire period of study among all the themes in private sector group, maximum number of financial disclosures were from ‘energy theme’ (43.6%) with first place and following it was ‘community development theme’ with second position (27.1%). No financial disclosures related to ‘other CSR activities’ were made in any of the years. Of the total disclosures ‘customer theme’ had only 3.2 per cent financial disclosures which are second lowest in the category. ‘Customer theme’ had most of its disclosures in the form of non-financial with particular information and ranked one in this category with 53.6 per cent. Following it were ‘product, services-safety and innovation theme’ (52.8%) at second spot and ‘environment theme’ (47%) at third place. ‘Energy theme’ had only 14 per cent disclosures in the category of qualitative disclosures with specific information. In terms of qualitative disclosures with no special information ‘emission of carbon and harmful gases’ theme contributed the maximum with 74.9 per cent followed by ‘other CSR activities theme’ with 63.3 per cent. The least disclosures in this category were from ‘product, services-safety and innovation theme’ with 23.9 per cent of its disclosures.

Table 4.82 Quality of disclosures across theme in private sector

CSR Themes	Percentage of Qualitative disclosures	Percentage of Qualitative disclosures with specific information	Percentage of Quantitative disclosures
Community Development Theme	30.6	42.3	27.1
Human Resource Theme	37.3	39.7	23
Energy Theme	42.4	14	43.6
Environment Theme	44.1	47	8.8
Product, Services-Safety and Innovation Theme	23.9	52.8	23.3
Customer Theme	43.2	53.6	3.2
Emission of Carbon and Harmful gases Theme	74.9	15.1	9.9
Other CSR activities Theme	63.3	36.7	0

4.1.3.2.4 Amount and trend of CSRD across each year and theme

It can be observed in the table 4.83 that there has been a continuous increase in average number of sentences in private sector aggregated over all themes from 208.3 sentences in 2008 to 442.2 sentences in 2017. In the year 2008 maximum amount of disclosures were observed in ‘human resources theme’ with 61.5 sentences followed by ‘community development theme’ with 47 sentences at second rank and then ‘product, services-safety and innovation theme’ with 36.6 sentences at third spot. Least amount of disclosures was observed in ‘other CSR activities theme’ with average 3 sentences in 2008. ‘Human resources theme’ shared maximum amount of disclosures till 2013 with losing first slot to ‘community development theme’ from 2014 to 2017. ‘Product, services-safety and innovation theme’ remained at third slot throughout the period of study. However ‘other CSR activities theme’ remained the least disclosed activity followed by ‘emission of carbon and harmful gases theme’ as second least disclosed activity during the study period in terms of amount of disclosures. The results of trend analysis indicated a highly significant and positive trend among all the CSRD themes in private sector over the entire study period.

Table 4.83 Amount and trend of disclosures in private sector

Year	Community Development	Human Resource	Energy	Environment
2008	47	61.5	10.7	22.5
2009	56.2	67.5	13	25.1
2010	69.3	78.2	14.8	28.3
2011	78.9	83.3	16.2	30.5
2012	85.8	88	18.4	31.9
2013	96.4	97.2	20.9	34.8
2014	110.5	106.2	24.6	39.9
2015	113.1	112.1	23	44.2
2016	114.5	114.2	22.7	44.4
2017	116.6	115.3	22.7	45.3
Trend Equation	TE=43.55+8.2T, R ² =0.96, t=13.25 (p=.000)	TE=57.12+6.4T, R ² =0.98, t=17.9 (p=.000)	TE=10.56+1.5T, R ² =0.87, t=7.4 (p=.000)	TE=19.68+2.7T, R ² =0.98, t=18.04 (p=.000)

Note: The unit of measurement of disclosures is average number of sentences disclosed.

TE represents Trend Equation; t-value for trend coefficients is given with their respective p-values.

Year	Product, Services-Safety and Innovation	Customers	Emission of Carbon and Harmful Gases	Other CSR activities	Total disclosures
2008	36.6	21.3	5.7	3	208.3
2009	40.7	23.2	6.6	3.8	236.1
2010	46.9	27.2	9.5	6.3	280.7
2011	47.1	30.4	11.3	8.4	306.2
2012	51.3	31.8	12.8	11.9	332
2013	55.6	34.7	15.4	13.6	368.6
2014	60.9	39.2	19	15.4	415.7
2015	60.2	40	20.3	19.4	432.1
2016	60.9	40.4	20	19.5	436.7
2017	59.2	41.6	21.3	20.4	442.2
Trend Equation	TE=36.72+2.8T, R ² =0.90, t=8.33 (p=.000)	TE=19.76+2.4T, R ² =0.96, t=14.54 (p=.000)	TE=1.9T+3.73, R ² =0.97, t=15.78 (p=.000)	TE=2.1T+0.35, R ² =0.98, t=19.94 (p=.000)	TE=191.48+28.1T, R ² =0.96, t=14.89 (p=.000)

4.1.3.2.5 Significance of variations across all CSRD themes

Analysis of Variance (ANOVA) was applied to investigate variation across different themes of CSRD in private sector using average number of sentences disclosed as the base. It can be seen in table 4.84 that the mean value is highest for ‘human resources theme’ (92.356)

Table 4.84 Comparison across all themes in private sector

Themes	Mean	Std. Deviation	F-Value (p-value)
Community Development	88.841	25.492	61.088 (0.000)
Human Resources	92.356	19.636	
Energy	18.711	4.806	
Environment	34.697	8.369	
Product, Services-Safety and Innovation	51.935	8.842	
Customers	32.965	7.403	
Emission of Carbon and Harmful Gases	14.188	5.848	
Other CSR activities	12.168	6.573	
Total	43.233	32.535	

(Significant at 1% level of significance)

followed by ‘community development theme’ (88.841). Hence these two themes are most disclosed themes of corporate social responsibility. The mean value came out to be lowest for ‘other CSR activities theme’ (12.168) and ‘emission of carbon and harmful gases theme’ (14.188). The calculated F-value came out to be 61.088, with p-value 0.000 which indicates that there is a significant variation across different themes of CSRD in private sector industries at 1 per cent level of significance.

4.1.3.3 Significance of variations of CSRD across different forms of ownership

To analyze the variation of CSRD across companies under different ownership, on the basis of average number of sentences disclosed, Analysis of Variance (ANOVA) was applied. It can be seen in table 4.85 that the mean value is very low for both sectors and standard deviation is very large. The calculated F-value came out to be 0.129, with p-value 0.724 which is insignificant indicating that there is no significant variation in amount of disclosures made across all themes within these two sectors at 1 per cent level of significance.

Table 4.85 Comparison across both sectors

Sector	Mean	Std. Deviation	F-Value (p-value)
Public	3.5962E2	85.046	0.129 (0.724)
Private	3.4586E2	86.505	
Total	3.5274E2	83.789	

(Significant at 1% level of significance)

4.1.4 Total and average CSR expenditure made by selected companies

The Ministry of Corporate Affairs made it mandatory for every company, private limited or public limited, which either has a net worth of INR 500 crore or more or a turnover of INR 1,000 crore or more or a net profit of INR 5 crore or more, to spend at least 2 per cent of its average net profit for the immediately preceding three financial years on CSR activities. Hence with amendment in Companies Act, 2013 this new CSR rule came into effect from April, 2014. Companies started reporting their CSR expenditure in annual reports from 2015. Hence information on money spent by selected companies on their social responsibility activities is available from financial year 2014-15 to 2016-17 for three years. Using this available data on CSR expenditure for three years total and average CSR expenditure made by each selected company has been presented in table 4.86. As observed from table that out of selected sample largest CSR expenditure was made by Reliance Industries Limited over three years period. Oil and Natural Gas Corporation Ltd which is public sector company ranked second and NTPC Limited got third position out of the selected sample in terms of money spent of social responsibility initiatives.

Table 4.86 Total and average CSR expenditure made by selected companies

Company	Total CSR Expenditure (INR in Millions)	Average CSR Expenditure (INR in Millions)
Reliance Industries Ltd.	20713.5	6904.5
Oil & Natural Gas Corpn. Ltd.	14421.3	4807.1
N T P C Ltd.	9747.9	3249.3
Tata Consultancy Services Ltd.	8932.3	2977.433333
I T C Ltd.	7375.2	2458.4
Infosys Ltd.	7312.8	2437.6
H D F C Bank Ltd.	6104.3	2034.766667
Tata Steel Ltd.	5690.7	1896.9
N M D C Ltd.	5561.1	1853.7
I C I C I Bank Ltd.	5100	1700
Wipro Ltd.	4788.2	1596.066667
Axis Bank Ltd.	3960.2	1320.066667
State Bank Of India	3695.4	1231.8
Bharat Petroleum Corpn. Ltd.	3477.5	1159.166667
Oil India Ltd.	3338.9	1112.966667
Power Grid Corpn. Of India Ltd.	3104.7	1034.9
Rural Electrification Corpn. Ltd.	3012.5	1004.166667
Housing Development Finance Corpn. Ltd.	2814.3	938.1
Larsen & Toubro Ltd.	2787.7	929.2333333
Hindustan Unilever Ltd.	2761.8	920.6
Bharat Heavy Electricals Ltd.	2579.8	859.9333333
G A I L (India) Ltd.	2521.6	840.5333333
Mahindra & Mahindra Ltd.	2515.5	838.5
Coal India Ltd.	2260.3	753.4333333
Bajaj Auto Ltd.	2246.1	748.7
Power Finance Corpn. Ltd.	2197.9	732.6333333
Hindustan Zinc Ltd.	2170.4	723.4666667
Hindustan Petroleum Corpn. Ltd.	2139.4	713.1333333
Maruti Suzuki India Ltd.	2051.6	683.8666667
Bharti Airtel Ltd.	1921.3	640.4333333
Tech Mahindra Ltd.	1624.5	541.5
Ultratech Cement Ltd.	1495	498.3333333
N H P C Ltd.	1397.5	465.8333333
Ambuja Cements Ltd.	1387.5	462.5
J S W Steel Ltd.	1376.9	458.9666667
Hero Motocorp Ltd.	1312.1	437.3666667

Adani Ports & Special Economic Zone Ltd.	1244.9	414.9666667
N L C India Ltd.	1191.2	397.0666667
Indian Oil Corpn. Ltd.	1137.9	379.3
Dr. Reddy'S Laboratories Ltd.	1130.4	376.8
Asian Paints Ltd.	1012.9	337.6333333
Hindalco Industries Ltd.	949.3	316.4333333
Steel Authority Of India Ltd.	922.4	307.4666667
S J V N Ltd.	918.3	306.1
Indiabulls Housing Finance Ltd.	917.7	305.9
Reliance Infrastructure Ltd.	906.3	302.1
Yes Bank Ltd.	868.9	289.6333333
Mahindra & Mahindra Financial Services Ltd.	844.2	281.4
National Aluminium Co. Ltd.	843.5	281.1666667
Tata Power Co. Ltd.	830.4	276.8
Indusind Bank Ltd.	786.7	262.2333333
A C C Ltd.	776.2	258.7333333
Piramal Enterprises Ltd.	766.6	255.5333333
Container Corpn. Of India Ltd.	744.4	248.1333333
Tata Motors Ltd.	651.3	217.1
Cipla Ltd.	621.6	207.2
Torrent Pharmaceuticals Ltd.	594.7	198.2333333
Oracle Financial Services Software Ltd.	585.7	195.2333333
Bajaj Finance Ltd.	555.4	185.1333333
Idea Cellular Ltd.	554.4	184.8
H C L Technologies Ltd.	552.1	184.0333333
Lupin Ltd.	527.7	175.9
Shree Cement Ltd.	525.3	175.1
Dabur India Ltd.	525.2	175.0666667
Grasim Industries Ltd.	498.2	166.0666667
Titan Company Ltd.	497.8	165.9333333
Glaxosmithkline Consumer Healthcare Ltd.	480	160
Godrej Consumer Products Ltd.	471.7	157.2333333
Aurobindo Pharma Ltd.	462.5	154.1666667
U P L Ltd.	459.7	153.2333333
Kotak Mahindra Bank Ltd.	457.1	152.3666667
Cadila Healthcare Ltd.	456.3	152.1
Colgate-Palmolive (India) Ltd.	431.9	143.9666667
Bharat Electronics Ltd.	419.1	139.7
Punjab National Bank	409.4	136.4666667
Sun Pharmaceutical Inds. Ltd.	404.1	134.7

Amara Raja Batteries Ltd.	376.1	125.3666667
Shriram Transport Finance Co. Ltd.	374.9	124.9666667
Glenmark Pharmaceuticals Ltd.	367.2	122.4
Havells India Ltd.	346.4	115.4666667
Marico Ltd.	343.6	114.5333333
Britannia Industries Ltd.	336.1	112.0333333
I D B I Bank Ltd.	328.8	109.6
Cummins India Ltd.	321	107
Pidilite Industries Ltd.	320.6	106.8666667
L I C Housing Finance Ltd.	316.5	105.5
Bharat Forge Ltd.	310.3	103.4333333
Sun T V Network Ltd.	308.9	102.9666667
Cholamandalam Investment & Finance Co. Ltd.	306.4	102.1333333
D L F Ltd.	300.7	100.2333333
Divi'S Laboratories Ltd.	291.6	97.2
Siemens Ltd.	284.5	94.83333333
Mphasis Ltd.	275.4	91.8
Glaxosmithkline Pharmaceuticals Ltd.	268.1	89.36666667
Procter & Gamble Hygiene & Health Care Ltd.	257.6	85.86666667
Castrol India Ltd.	257.1	85.7
Emami Ltd.	251.1	83.7
Mindtree Ltd.	242.8	80.93333333
Torrent Power Ltd.	236.7	78.9
T V S Motor Co. Ltd.	227.5	75.83333333
N B C C (India) Ltd.	217.9	72.63333333
Ajanta Pharma Ltd.	190	63.33333333
United Breweries Ltd.	183.1	61.03333333
Zee Entertainment Enterprises Ltd.	168	56
Kansai Nerolac Paints Ltd.	162.6	54.2
Welspun India Ltd.	154.2	51.4
Petronet L N G Ltd.	145.8	48.6
Bajaj Holdings & Invst. Ltd.	144.4	48.13333333
Berger Paints India Ltd.	140.9	46.96666667
Ashok Leyland Ltd.	138	46
Shriram City Union Finance Ltd.	134.8	44.93333333
Reliance Power Ltd.	112.5	37.5
Gillette India Ltd.	99	33
A B B India Ltd.	91.1	30.36666667
Apollo Hospitals Enterprise Ltd.	87.3	29.1
Exide Industries Ltd.	82.6	27.53333333

Rajesh Exports Ltd.	77	25.66666667
Indian Hotels Co. Ltd.	69	23
G E T & D India Ltd.	68.2	22.73333333
Crisil Ltd.	61.2	20.4
Page Industries Ltd.	54.6	18.2
Vakrangee Ltd.	49.8	16.6
3M India Ltd.	48.4	16.13333333
Bajaj Finserv Ltd.	42.9	14.3
Mangalore Refinery & Petrochemicals Ltd.	41.1	13.7
Motherson Sumi Systems Ltd.	38.1	12.7
Wabco India Ltd.	5.8	1.933333333
United Spirits Ltd.	0.8	0.266666667

4.2 Relationship between corporate social responsibility and financial performance of companies

The purpose of this objective is to investigate the relationship between corporate social responsibility and selected financial performance measures of top 137 companies listed on CNX 500 over selected period of time from the year 2008 to 2017. By using the technique of content analysis qualitative data from annual reports of the selected companies was converted into quantitative form by using research instrument named Corporate Social Responsibility Disclosure Index (CSRDI), thus constructed for the purpose. As discussed earlier, CSRDI consisted of eight themes or dimensions namely ‘community development theme’, ‘human resources theme’, ‘energy theme’, ‘environment theme’, ‘product, services-safety and innovation theme’, ‘customers theme’, ‘emission of carbon and harmful gases theme’ and ‘other CSR activities theme’.

For calculating corporate social responsibility disclosures (CSRDI) methodology used by Saleh *et al* (2011) was adopted. Each disclosure made was classified as either non-financial (non-quantitative) or non-financial (non-quantitative) with particular information or financial (quantitative) in nature and was assigned weights accordingly. The greatest weight of 3 was assigned to financial (quantitative) disclosure(s), the next highest weight of 2 was assigned to non-financial (non-quantitative) disclosure(s) but with particular information, weight of 1 was assigned to non-financial (non-quantitative) disclosure(s) which were described in general and no specific information was given for these disclosures, weight of 0 was given in case of no disclosure(s). The overall CSRDI score of each company was calculated as summation of scores of all the CSRDI activities of that company. The method to scoring is additive of un-weighted indexes that is calculated to the sum of the final CSRDI score:

$$\text{CSRDI score}_j = \frac{\sum_j^n x_{ij=1}}{n_j}$$

where,

CSR score_j is corporate social responsibility disclosure score for jth company

n_j is total number of CSR activities estimated for jth company

X_{ij} is 3 if ith activity is quantitatively disclosed in annual report

X_{ij} is 2 if ith activity is disclosed non-quantitatively but with specific information in annual report

X_{ij} is 1 if ith activity is qualitatively disclosed in annual report

X_{ij} is 0 if ith activity is not disclosed in annual report

Similarly the CSR score of each theme of each company was calculated as summation of scores of all the CSR activities of each individual theme of that company. The CSR score thus calculated for each company has been used as a proxy to assess company's performance in terms of CSR initiatives (Gelb and Strawser, 2001; Hughes *et al.*, 2001; Al-Tuwaijri *et al.*, 2004; Turker, 2009; Saleh *et al.*, 2011; Kansal *et al.*, 2014). Owing to non-availability of a CSR index or database in India (Mishra and Suar, 2010), this study employed CSR score thus calculated as measure of CSR. The measures of financial performance included in study for purpose of statistical analysis are Return on Assets (ROA), Return on Equity (ROE) and Net Profit Margin (NPM). Various control variables employed in the study are size of the firm, age of the firm and debt equity ratio.

For in-depth analysis this section is further organized into following subsections and sub-parts.

4.2.1 Descriptive Statistics of all themes and variables

4.2.2 Relationship between financial performance and total CSR

4.2.2.1 Testing for Multicollinearity

4.2.2.2 Testing for Homoscedasticity

4.2.2.3 Testing for panel stationarity

4.2.2.4 Relationship between CSR and Return on Assets (ROA as dependent variable)

4.2.2.5 Relationship between CSR and Return on Equity (ROE as dependent variable)

4.2.2.6 Relationship between CSR and Net Profit Margin (NPM as dependent variable)

4.2.3 Relationship between financial performance and lagged values of total CSR

4.2.3.1 Testing for Multicollinearity

4.2.3.2 Testing for Homoscedasticity

4.2.3.3 Relationship between lagged values of total CSR and Return on Assets (ROA as dependent variable)

4.2.3.4 Relationship between lagged values of total CSR and Return on Equity (ROE as dependent variable)

4.2.3.5 Relationship between lagged values of total CSR and Net Profit Margin (NPM as dependent variable)

4.2.4 Relationship between financial performance and each CSR theme

4.2.4.1 Testing for Multicollinearity

4.2.4.2 Testing for Homoscedasticity

4.2.4.3 Testing for panel stationarity

4.2.4.4 Relationship between each theme of CSR and Return on Assets (ROA as dependent variable)

4.2.4.5 Relationship between each theme of CSR and Return on Equity (ROE as dependent variable)

4.2.4.6 Relationship between each theme of CSR and Net Profit Margin (NPM as dependent variable)

4.2.5 Relationship between financial performance and lagged values of each theme of CSR

4.2.5.1 Testing for Multicollinearity

4.2.5.2 Testing for Homoscedasticity

4.2.5.3 Relationship between lagged values of each theme of CSR and Return on Assets (ROA as dependent variable)

4.2.5.4 Relationship between lagged values of each theme of CSR and Return on Equity (ROE as dependent variable)

4.2.5.5 Relationship between lagged values of each theme of CSR and Net Profit Margin (NPM as dependent variable)

4.2.6 Relationship between financial performance and total CSR (Total CSR as dependent variable)

4.2.6.1 Testing for Multicollinearity

4.2.6.2 Testing for Homoscedasticity

4.2.6.3 Relationship between CSR and Return on Assets

4.2.6.4 Relationship between CSR and Return on Equity

4.2.6.3 Relationship between CSR and Net Profit Margin

4.2.1 Descriptive statistics of all themes and variables

This section describes the descriptive statistics which include mean, median, standard deviation, minimum and maximum of all themes of corporate social responsibility disclosures and all selected financial performance variables and control variables. These descriptive statistics have been calculated for all variables across all selected companies for a total time period of ten years. As displayed in table 4.87 the mean value of return on assets is observed to be 9.65 for selected time period with 73.79 as maximum value. Return on assets assumed mean value of 20.58 with 18.43 as median and standard deviation of 18.38. Similarly debt equity ratio assumed mean value of 0.99 and minimum value of 0 and maximum value of 12.87 for the selected sample.

Table 4.87 Descriptive statistics of selected variables

	ROA	ROE	NPM	AGE (years)	SIZE (INR in Millions)	Debt/Equity Ratio
Mean	9.65	20.58	14.36	40.94	642587.6	0.99
Median	7.33	18.43	12.04	32	127359.8	0.36
Standard Deviation	9.17	18.38	15.8	26.1	1775996.5	1.8
Minimum	-31.79	-65.64	-203.53	1	1737.1	0
Maximum	73.79	151.85	94.32	122	27059663.1	12.87

In table 4.88 it can be observed that maximum mean value for ‘product, services-safety and innovation theme’ is 2.01 and for ‘other CSR activities theme’ is 1.13. The maximum value for each theme over selected time period is 3 while minimum value is 0. For total CSRD disclosures mean value is 1.79 with median value of 1.83 and standard deviation of 0.25. The minimum value for total CSRD disclosures is 0 and maximum value is 3. Among all the themes ‘emission of carbon and harmful gases theme’ had lowest median value of 1 and ‘product, services-safety and innovation theme’ had maximum median value of 2.25.

Table 4.88 Descriptive statistics of CSRD score across themes

	Mean	Median	Standard Deviation	Minimum	Maximum
Community Development	1.95	2	0.47	1	3
Human Resource	1.87	1.87	0.35	1	3
Energy	1.91	2	0.85	0	3
Environment	1.58	1.67	0.55	0	3
Product, Services-Safety and Innovation	2.01	2.25	0.33	1	3
Customers	1.61	1.67	0.31	1	3
Emission of Carbon and Harmful Gases	1.15	1	0.61	0	3
Other CSR activities	1.13	1.25	0.64	0	2
Total CSRD score	1.79	1.83	0.25	0	3

4.2.2 Relationship between financial performance and total CSRD

This section presents the results of relationship between various selected indicators of financial performance and corporate social responsibility disclosures for 137 companies over period of ten years. There are total 137 companies in each year from 2008 to 2017. The variables of financial performance selected for the purpose of study are return on assets, return on equity and net profit margin. The control variables employed are age of firm, size of firm and debt equity ratio. Multivariate analysis is employed to examine the relationship

between corporate social responsibility and three measures of financial performance. In order to study the relationship between corporate social responsibility and selected indicators of financial performance, model from McWilliams and Siegel (2000) and Lee *et al* (2013) has been adopted. In these models the dependent variables are the selected indicators of financial performance which are ROA, ROE and NPM consecutively and independent variable is Total CSR score with age of firm, size of firm and leverage as the control variables. Hence the three individual models adopted to study the relationship between Total CSR and financial performances have been presented as follows:

1. $Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$
2. $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
3. $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$

where Y_{ROA} = Return on Assets

Y_{ROE} = Return on Equity

Y_{NPM} = Net Profit Margin

$TOCSR D_{jt}$ = Total CSR score for j^{th} firm in t year

LEV_{jt} = Leverage or Debt Equity ratio of firm j in year t

AGE_{jt} = Age of firm j in year t

$SIZE_{jt}$ = Size of firm j in year t

u_{jt} = Error term

In order to undertake multiple regression analysis several underlying assumptions of regression models had to be satisfied. These assumptions have been tested one by one and in case of any deviances corrective measures have been employed.

4.2.2.1 Testing for Multicollinearity

The multicollinearity was tested to detect if independent variables are not extremely correlated and no multicollinearity exists among independent variables. To control this problem the variance inflation factor (VIF) and Pearson correlation coefficient were investigated. Multicollinearity test was applied on all independent variables namely total CSR score, Leverage, age of firm and size of firm.

Table 4.89 Testing for multicollinearity by using the variance inflation factor

Variable	VIF
TOCSR D	1.059
LEV	1.148
AGE	1.065
SIZE	1.203

The VIF ranged from 1.059 to 1.203 as observed in table 4.89. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is

said to be highly collinear. As observed in the above table, the variance inflation factor (VIF) for all independent variables is less than 1.2 which means multicollinearity is not a serious problem in these three models.

Also the results Pearson correlation as observed in table 4.90 showcase that the value of correlation coefficient is less than 0.3 in case of all independent variables and all these values are statistically significant at 5 per cent level of significance. According to Gujarati *et al* (2012) if correlation coefficient between two regressors is high, say in excess of 0.8, then multicollinearity is a serious problem. The highest value of correlation coefficient was observed between leverage and size of firm (0.302965) which is very less than 0.8. Hence multicollinearity is not a problem for the estimation of these models.

Table 4.90 Correlation coefficients matrix between independent variables

Correlation (p-value)	TOCSR	AGE	SIZE	LEV
TOCSR	1.000000			
	-			
AGE	0.116678	1.000000		
	(0.0000)	-		
SIZE	0.191755	0.168835	1.000000	
	(0.0000)	(0.0000)	-	
LEV	-0.058719	-0.108378	0.302965	1.000000
	(0.0298)	(0.0001)	(0.0000)	-

4.2.2.2 Testing for Homoscedasticity

Another assumption which is to be tested is homoscedasticity which is the condition of constant variance by error term for a particular value of explanatory variable. If the variance of error term varies for different values of independent variable then the problem of heteroscedasticity exists. According to Gujarati *et al* 2012 if we persist on using the usual testing procedures despite heteroscedasticity then whatever conclusions we draw may be very misleading. In this study Breusch-Pagan-Godfrey test has been employed to detect the problem of heteroscedasticity in regression models.

Table 4.91 Breusch-Pagan-Godfrey test of heteroscedasticity for ROA as dependent variable

F-statistic	3.222	Prob. F(4,1365)	0.012
Obs*R-squared	12.814	Prob. Chi-Square(4)	0.012
Scaled explained SS	65.841	Prob. Chi-Square(4)	0.000

As observed in table 4.91 which tests the presence of heteroscedasticity for regression model with ROA as dependent variable that value of Obs*R-squared for this model is 12.814 for probability value of Chi square 0.0122 which is significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected and presence of heteroscedasticity is confirmed in this model.

Table 4.92 Breusch-Pagan-Godfrey test of heteroscedasticity for ROE as dependent variable

F-statistic	9.501	Prob. F(4,1365)	0.000
Obs*R-squared	37.109	Prob. Chi-Square(4)	0.000
Scaled explained SS	196.274	Prob. Chi-Square(4)	0.000

As observed in table 4.92 which tests the presence of heteroscedasticity for regression model with ROE as dependent variable that value of Obs*R-squared for this model is 37.109 for probability value of Chi square 0.000 which is significant at 5 per cent level of significance. So null hypothesis of homoscedasticity is rejected and presence of heteroscedasticity is confirmed in this model.

Table 4.93 Breusch-Pagan-Godfrey test of heteroscedasticity for NPM as dependent variable

F-statistic	0.743	Prob. F(4,1365)	0.563
Obs*R-squared	2.977	Prob. Chi-Square(4)	0.562
Scaled explained SS	50.689	Prob. Chi-Square(4)	0.000

In table 4.93 which tests the presence of heteroscedasticity for regression model with NPM as dependent variable that value of Obs*R-squared for this model is 2.977 for probability value of Chi square 0.562 which is insignificant at 5 per cent level of significance. So null hypothesis of homoscedsticity is accepted and absence of heteroscedasticity is confirmed in this model.

As detected that problem of heteroscedasticity exists in case of models with ROA and ROE as dependent variables, so in these models standard errors may be biased. To control the problem of heteroscedasticity in these two models robust standard errors are used to provide a better fit to these models. These robust standard errors are also known as White's heteroscedasticity-corrected standard errors. In case of model with NPM as dependent variable no heteroscedasticity was observed.

4.2.2.3 Testing for panel stationarity

According to Gujarati *et al* (2012) a stochastic process is said to be stationary if it's mean, variance and auto covariance are constant over time; that is they are time invariant. If a series has time varying mean or a time varying variance or both then it is said to be non-

stationary and we call it unit root problem. In this study Levin-Lin-Chu test has been employed to detect the panel unit root problem.

Table 4.94 Testing for panel unit root by Levin-Lin-Chu test

Variable	Test Statistic	p-value
ROA	-8.200	0.000
ROE	-5.957	0.000
NPM	-10.099	0.000
TOCSRD	-19.861	0.000
LEV	-1494.620	0.000
AGE	-53.237	0.000
SIZE	-10.233	0.000

As observed in table 4.94 the probability value for Levin-Lin-Chu test statistic is highly significant at 5 per cent level of significance. So null hypothesis stating the presence of unit root problem is rejected and alternate hypothesis assuming the stationarity of data is accepted. Hence all the panel series are stationary and no problem of panel unit root is detected in any of the series.

4.2.2.4 Relationship between CSRD and Return on Assets (ROA as dependent variable)

The impact of Return on Assets on CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by ROA as dependent variable. The model as already discussed is shown below

$$Y_{ROA} = b_{0ROA} + b_{1ROA} TOCSRD_{jt} + b_{2ROA} SIZE_{jt} + b_{3ROA} AGE_{jt} + b_{4ROA} LEV_{jt} + u_{jt}$$

It can be seen in table 4.95 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Return on Assets is negatively and not significantly related to CSR at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing Fixed-effects and Random-effects models using Correlated Random Effects - Hausman Test, the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is negatively and not significantly related to Total CSR disclosures. Also the coefficients of size and leverage were found to be significant but negatively related to ROA while coefficient of age was insignificant and positive at 5 per cent level of significance.

Table 4.95 Regression analysis for model with ROA as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	35.55839* (0.0000)	23.16019* (0.0085)	29.05775* (0.0000)
TOCSR	-1.553556 (0.1883)	-1.490280 (0.2870)	-0.742434 (0.4528)
AGE	0.329507 (0.6825)	3.416396 (0.2347)	1.407505 (0.1265)
SIZE	-1.928037* (0.0000)	-1.845360 (0.0731)	-1.846330* (0.0000)
LEV	-1.425040* (0.0000)	-0.917188 (0.0544)	-1.113256* (0.0006)
R-square	0.275833	0.752696	0.090802
Adjusted R-square	0.273711	0.724525	0.088137
F-statistic	129.9812* (0.0000)	26.71857* (0.0000)	34.08062* (0.0000)
Durbin-Watson statistic	0.453089	1.078004	0.965851

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	17.425144	(136,1229)	0.0000
Cross-section Chi-square	1471.934919	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.300215	4	0.8613

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

4.2.2.5 Relationship between CSR and Return on Equity (ROE as dependent variable)

The impact of Return on Equity on CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by ROE as dependent variable. The model as already discussed is shown below

$$Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR_{jt} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$$

It can be seen in table 4.96 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Return on Equity is negatively and significantly related to CSR at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing Fixed-effects and Random-effects models using Correlated Random Effects - Hausman Test the null

hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is negatively and significantly related to Total CSR disclosures. Also the coefficient of leverage was found to be insignificant and negatively related to ROE while coefficient of age was insignificant and positive. However the coefficient of size was found to be significant and negatively related to ROE at 5 per cent level of significance.

4.2.2.6 Relationship between CSRD and Net Profit Margin (NPM as dependent variable)

The impact of Net Profit Margin on CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by NPM as dependent variable.

Table 4.96 Regression analysis for model with ROE as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	70.24357* (0.0000)	63.41731* (0.0016)	65.15258* (0.0000)
TOCSR	-9.936766* (0.0001)	-7.579669* (0.0076)	-7.566786* (0.0001)
AGE	2.218634 (0.2776)	3.13084 (0.5021)	2.602007 (0.1790)
SIZE	-3.271710* (0.0000)	-3.367969 (0.0759)	-3.341388* (0.0005)
LEV	-0.853281 (0.2174)	-0.287192 (0.8599)	-0.512297* (0.6371)
R-square	0.146696	0.692117	0.086659
Adjusted R-square	0.144195	0.657045	0.083983
F-statistic	58.666* (0.0000)	19.73415* (0.0000)	32.37845* (0.0000)
Durbin-Watson statistic	0.474281	1.247534	1.089026

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	16.008852	(136,1229)	0.0000
Cross-section Chi-square	1396.574724	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.168461	4	0.9966

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

Table 4.97 Regression analysis for model with NPM as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	25.00889* (0.0000)	18.21708* (0.0061)	22.44028* (0.0000)
TOCSR	-2.052362 (0.2359)	-4.602479* (0.0011)	-3.935043* (0.0017)
AGE	-2.184159* (0.0006)	1.189246 (0.5737)	-0.882979 (0.5116)
SIZE	0.118937 (0.6604)	0.107944 (0.8707)	0.253649 (0.6030)
LEV	-0.753224* (0.0029)	-1.076709* (0.0159)	-0.970412* (0.0106)
R-square	0.015114	0.743800	0.016529
Adjusted R-square	0.012227	0.714615	0.013647
F-statistic	5.236645* (0.000347)	25.48596* (0.0000)	5.735189* (0.000141)
Durbin-Watson statistic	0.563207	1.781487	1.603158

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	25.702458	(136,1229)	0.0000
Cross-section Chi-square	1844.798387	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.393015	4	0.6639

*indicates statistically significant at 5% level of significance.

The model as already discussed is shown below

$$Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR_{jt} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$$

The table 4.97 shows that using Fixed effects Model and Random effects Model, Net Profit Margin is negatively and significantly related to CSR disclosures at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test, the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and significantly related to Total CSR disclosures. Also the coefficient of leverage was found to be significant

and negatively related to NPM while coefficient of age was insignificant and negative. However the coefficient of size was found to be insignificant and positively related to NPM at 5 per cent level of significance.

4.2.3 Relationship between financial performance and lagged values of total CSRD

This section presents the results of relationship between various selected indicators of financial performance and lagged values of corporate social responsibility disclosures for 137 companies' upto three years lagged values. There are total 137 companies' in each year from 2008 to 2017. The variables of financial performance selected for this purpose are return on assets, return on equity and net profit margin. The control variables employed are age of firm, size of firm and debt equity ratio. Multivariate analysis is employed to examine the relationship between lagged values of corporate social responsibility disclosures and three measures of financial performance. In these models the dependent variables are the selected indicators of financial performance which are ROA, ROE and NPM consecutively and independent variable is Total CSRD score with one year lag, two year lag and three year lag, along with age of firm, size of firm and leverage as the control variables. Hence the nine individual models adopted to study the relationship between Total CSRD and financial performances have been presented as follows:

- 4 (i) $Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-1} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$
- (ii) $Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-2} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$
- (iii) $Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-3} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$
- 5 (i) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-1} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
- (ii) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-2} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
- (iii) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-3} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
- 6 (i) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-1} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$
- (ii) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-2} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$
- (iii) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-3} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$

where Y_{ROA} = Return on Assets

Y_{ROE} = Return on Equity

Y_{NPM} = Net Profit Margin

$TOCSR D_{jt-1}$ = Total CSRD score for j^{th} firm in year t-1

$TOCSR D_{jt-2}$ = Total CSRD score for j^{th} firm in year t-2

$TOCSR D_{jt-3}$ = Total CSRD score for j^{th} firm in year t-3

LEV_{jt} = Leverage or Debt Equity ratio of firm j in year t

AGE_{jt} = Age of firm j in year t

$SIZE_{jt}$ = Size of firm j in year t

u_{jt} = Error term

In order to undertake multiple regression analysis several underlying assumptions of regression models had to be satisfied. These assumptions have been tested one by one in case of each individual model and in case of any deviances appropriate corrective measures have been employed.

4.2.3.1 Testing for multicollinearity

The multicollinearity was tested to detect if independent variables are not extremely correlated and no multicollinearity exists among independent variables. To control this problem the variance inflation factor (VIF) was investigated. So multicollinearity test was conducted on independent variables namely CSR score with one year lag, two year lag, three year lag, leverage, age of firm and size of firm respectively.

Table 4.98 Testing for multicollinearity by using the variance inflation factor

Variable	Model having CSR score with 1 year lg	Model having CSR score with 2 year lg	Model having CSR score with 3 year lg
TOCSR	1.0179	1.003	1.004
AGE	1.060	1.059	1.060
SIZE	1.166	1.153	1.153
LEV	1.141	1.136	1.134

The VIF ranged from 1.003 to 1.166 as observed in table 4.98. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 1.166 which means multicollinearity is not a serious problem in these nine models.

4.2.3.2 Testing for homoscedasticity

Another assumption which is to be tested is homoscedasticity which is the condition of constant variance by error term for a particular value of explanatory variable. If the variance of error term varies for different values of independent variable then the problem of heteroscedasticity exists. According to Gujarati *et al* 2012 if we persist in using the usual testing procedures despite heteroscedasticity then whatever conclusions we draw may be very misleading. In this study Breusch-Pagan-Godfrey test has been employed to detect the problem of heteroscedasticity in regression models.

As observed in table 4.99 which tests the presence of heteroscedasticity for regression model with ROA as dependent variable that value of Obs*R-squared for model with CSR score having one year lag is 13.28913 for probability value of Chi square 0.0099 which is significant at 5 per cent level of significance. The of Obs*R-squared for model with CSR score having two year lag is 13.19021 for probability value of Chi square 0.0104 and for model with CSR score having three year lag is 14.31260 for p-value of 0.0064 both of

which are significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected in all these three cases and presence of heteroscedasticity is confirmed in these three models with ROA as dependent variable.

Table 4.99 Breusch-Pagan-Godfrey test of heteroscedasticity for ROA as dependent variable

With CSR score having one year lag

F-statistic	3.342596	Prob. F(4,1364)	0.0098
Obs*R-squared	13.28913	Prob. Chi-Square(4)	0.0099
Scaled explained SS	67.78738	Prob. Chi-Square(4)	0.0000

With CSR score having two year lag

F-statistic	3.317487	Prob. F(4,1363)	0.0103
Obs*R-squared	13.19021	Prob. Chi-Square(4)	0.0104
Scaled explained SS	67.31945	Prob. Chi-Square(4)	0.0000

With CSR score having three year lag

F-statistic	3.602784	Prob. F(4,1362)	0.0063
Obs*R-squared	14.31260	Prob. Chi-Square(4)	0.0064
Scaled explained SS	72.68348	Prob. Chi-Square(4)	0.0000

As observed in table 4.100 which tests the presence of heteroscedasticity for regression model with ROE as dependent variable that value of Obs*R-squared for model

Table 4.100 Breusch-Pagan-Godfrey test of heteroscedasticity for ROE as dependent variable

With CSR score having one year lag

F-statistic	9.658215	Prob. F(4,1364)	0.0000
Obs*R-squared	37.70651	Prob. Chi-Square(4)	0.0000
Scaled explained SS	199.8860	Prob. Chi-Square(4)	0.0000

With CSR score having two year lag

F-statistic	9.368325	Prob. F(4,1363)	0.0000
Obs*R-squared	36.60439	Prob. Chi-Square(4)	0.0000
Scaled explained SS	196.9948	Prob. Chi-Square(4)	0.0000

With CSR score having three year lag

F-statistic	8.526865	Prob. F(4,1362)	0.0000
Obs*R-squared	33.39635	Prob. Chi-Square(4)	0.0000
Scaled explained SS	179.3278	Prob. Chi-Square(4)	0.0000

with CSR score having one year lag is 37.70651 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. The of Obs*R-squared for model with CSR score having two year lag is 36.60439 for probability value of Chi square 0.0000 and for model with CSR score having three year lag is 33.39635 for p-value of 0.0000 both of which are significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected in all these three cases and presence of heteroscedasticity is confirmed in these three models with ROE as dependent variable.

In table 4.101 which tests the presence of heteroscedasticity for regression model with NPM as dependent variable that value of Obs*R-squared for model with CSR score having one year lag is 3.809945 for probability value of Chi square 0.4323 which is insignificant at 5 per cent level of significance. The of Obs*R-squared for model with CSR score having two year lag is 4.285074 for probability value of Chi square 0.3688 and for model with CSR score having three year lag is 4.414380 for p-value of 0.3528 both of which are insignificant at 5 per cent level of significance. So null hypothesis of homoscedsticity is accepted in all these three cases and presence of heteroscedasticity is rejected in these three models with NPM as dependent variable.

Table 4.101 Breusch-Pagan-Godfrey test of heteroscedasticity for NPM as dependent variable

With CSR score having one year lag

F-statistic	0.951656	Prob. F(4,1364)	0.4332
Obs*R-squared	3.809945	Prob. Chi-Square(4)	0.4323
Scaled explained SS	64.83471	Prob. Chi-Square(4)	0.0000

With CSR score having two year lag

F-statistic	1.070707	Prob. F(4,1363)	0.3695
Obs*R-squared	4.285074	Prob. Chi-Square(4)	0.3688
Scaled explained SS	72.89223	Prob. Chi-Square(4)	0.0000

With CSR score having three year lag

F-statistic	1.103121	Prob. F(4,1362)	0.3535
Obs*R-squared	4.414380	Prob. Chi-Square(4)	0.3528
Scaled explained SS	74.63927	Prob. Chi-Square(4)	0.0000

4.2.3.3 Relationship between lagged values of total CSR and Return on Assets (ROA as dependent variable)

The impact of Return on Assets on lagged values of total CSR disclosures is discussed in this section. The models used for examining this relationship proxy's financial

performance by ROA as dependent variable. These models utilize CSR score having one year lag, two year lag and three year lag simultaneously as independent variable in each model. These models as already discussed are shown below

$$(i) \quad Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-1} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$$

$$(ii) \quad Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-2} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$$

$$(iii) \quad Y_{ROA} = b_{0ROA} + b_{1ROA}TOCSR D_{jt-3} + b_{2ROA}SIZE_{jt} + b_{3ROA}AGE_{jt} + b_{4ROA}LEV_{jt} + u_{jt}$$

It can be seen in table 4.102 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSR score having one year lag, two year lag and three year lag respectively. The relationship between CSR score having one year lag and Return on Assets is negative and insignificant at 5 per cent level of significance for each of three models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is negatively and insignificantly related to Total CSR disclosures having one year lag and negatively related to ROA. However the coefficient of age was found to be insignificant and positively related to ROA.

In case of CSR score having two years lag, Return on Assets is negatively and insignificantly related to CSR disclosures at 5 per cent level of significance in case of fixed effects and random effects models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing Fixed-effects and Random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is negatively and insignificantly related to Total CSR disclosures score having 2 year lag . Also the coefficient of leverage and size were found to be significant and negatively related to ROA. However the coefficient of size was found to be insignificant and positively related to ROA.

In case of CSR score having three year lag, Return on Assets is negatively and insignificantly related to CSR disclosures at 5 per cent level of significance in case of fixed effects and random effects models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on

Table 4.102 Regression analysis for model with ROA as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	35.73225* (0.0000)	21.55559* (0.0313)	28.22499* (0.0000)	39.27457* (0.0000)	22.78116* (0.0292)	30.3988* (0.0000)	41.25679* (0.0000)	22.59696* (0.0357)	30.79355* (0.0000)
TOCSR	-1.417407 (0.2287)	-0.768049 (0.5660)	-0.103184 (0.9068)	-2.65776* (0.0336)	-1.742679 (0.1295)	-1.083094 (0.1794)	-3.50009* (0.0149)	-1.852894 (0.1167)	-1.306911 (0.1441)
AGE	0.157346 (0.8585)	3.024634 (0.2733)	0.933947 (0.2672)	-0.060899 (0.9484)	0.962515 (0.7997)	0.261566 (0.8012)	-0.205345 (0.8334)	-0.373238 (0.9402)	-0.177124 (0.8728)
SIZE	-1.92271* (0.0000)	-1.676435 (0.1899)	-1.71701* (0.0002)	-1.97093* (0.0000)	-1.003019 (0.4472)	-1.53804* (0.0004)	-1.98549* (0.0000)	-0.545542 (0.6983)	-1.396619* (0.0003)
LEV	-1.42228* (0.0000)	-1.42509* (0.0096)	-1.42027* (0.0001)	-1.43569* (0.0001)	-1.79237* (0.0019)	-1.63378* (0.0000)	-1.40747* (0.0001)	-2.373737* (0.0003)	-1.886691* (0.0000)
R-square	0.275948	0.787125	0.088641	0.285058	0.818103	0.099226	0.281183	0.843926	0.101987
Adjusted R-square	0.273590	0.759834	0.085672	0.282437	0.791438	0.095923	0.278169	0.817214	0.098222
F-statistic	117.0029* (0.0000)	28.84126* (0.0000)	29.85949* (0.0000)	108.7496* (0.0000)	30.6802* (0.0000)	30.04503* (0.0000)	93.29509* (0.0000)	31.59368* (0.0000)	27.08640* (0.0000)
Durbin-Watson stat	0.266103	0.896927	0.793193	0.2389799	0.942197	0.817060	0.208889	0.934934	0.795554
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	19.281051* (0.0000)			20.577993* (0.0000)			21.686790* (0.0000)		
Cross-section Chi-square (p-value)	1509.387583* (0.0000)			1500.162265* (0.0000)			1464.660534* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	1.411482 (0.8422)			0.904221 (0.9240)			1.945537 (0.7458)		

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

the basis of Random effects model it can be concluded that Return on Assets is negatively and insignificantly related to Total CSR disclosures score having 3 year lag . Also the coefficient of leverage and size were found to be significant and negatively related to ROA. However the coefficient of size was found to be insignificant and negatively related to ROA.

4.2.3.4 Relationship between lagged values of total CSRD and Return on Equity (ROE as dependent variable)

The impact of Return on Equity on lagged values of total CSR disclosures is discussed in this section. The models used for examining this relationship proxy's financial performance by ROE as dependent variable. These models utilize CSRD score having one year lag, two year lag and three year lag respectively as independent variable in each model. These models as already discussed are shown below

- (i) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-1} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
- (ii) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-2} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$
- (iii) $Y_{ROE} = b_{0ROE} + b_{1ROE}TOCSR D_{jt-3} + b_{2ROE}SIZE_{jt} + b_{3ROE}AGE_{jt} + b_{4ROE}LEV_{jt} + u_{jt}$

It can be observed in table 4.103 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSRD score having one year lag, two year lag and three year lag respectively. The relationship between CSRD score having one year lag and Return on Equity is negative and significant at 5 per cent level of significance in case of each of three models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is negatively and significantly related to total CSR disclosures score having one year lag . Also the coefficient of leverage was found to be insignificant and negatively related to ROE while size was significant and negative. However the coefficient of age was found to be insignificant and positively related to ROE.

In case of CSRD score having two year lag, Return on Equity is negatively and significantly related at 5 per cent level of significance in case of all the three models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is negatively and significantly related to Total CSR disclosures score having two year lag . Also the coefficients of leverage, age and size were all

Table 4.103 Regression analysis for model with ROE as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	67.54614* (0.0000)	52.17955* (0.0337)	57.26227* (0.0000)	71.65849* (0.0000)	59.95603* (0.0286)	60.78135* (0.0000)	73.83766* (0.0000)	68.38033* (0.0023)	63.84011* (0.0000)
TOCSR	-9.10744* (0.0021)	-7.61658* (0.0196)	-7.05039* (0.0007)	-10.2212* (0.0014)	-8.19356* (0.0092)	-8.0744* (0.0001)	-10.4749* (0.0025)	-7.169265* (0.0176)	-7.673087* (0.0005)
AGE	2.055356 (0.3624)	-0.252942 (0.9686)	1.615068 (0.5320)	1.508750 (0.5101)	-7.761649 (0.4098)	-0.33977 (0.9062)	1.355757 (0.5514)	-10.52980 (0.2666)	-0.639767 (0.8036)
SIZE	-3.18278* (0.0000)	-1.358028 (0.6260)	-2.44766* (0.0343)	-3.23900* (0.0000)	0.399005 (0.8972)	-1.975749 (0.0977)	-3.42731* (0.0000)	0.306016 (0.9053)	-2.286121* (0.0090)
LEV	-0.866699 (0.2435)	-1.803665 (0.3485)	-1.441039 (0.2601)	-0.872136 (0.2712)	-3.649891 (0.1487)	-2.383280 (0.1320)	-0.503346 (0.4286)	-3.550365 (0.0791)	-1.976018 (0.0789)
R-square	0.136581	0.744210	0.071844	0.143140	0.773496	0.087980	0.143365	0.805536	0.079974
Adjusted R-square	0.133768	0.711417	0.068821	0.139999	0.740291	0.084636	0.139773	0.772253	0.076117
F-statistic	48.56306* (0.0000)	22.69381* (0.0000)	23.76351* (0.0000)	45.56346* (0.0000)	23.29473* (0.0000)	26.31144* (0.0000)	39.91489* (0.0000)	24.20307* (0.0000)	20.73189* (0.0000)
Durbin-Watson stat	0.318603	1.056083	0.939691	0.295814	1.073082	0.938040	0.278689	1.146908	0.998676
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	19.073911* (0.0000)			19.542243* (0.0000)			20.480705* (0.0000)		
Cross-section Chi-square (p-value)	1500.000048* (0.0000)			1458.240978* (0.0000)			1421.970756* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	0.314999 (0.9888)			1.262857 (0.8676)			2.675498 (0.6135)		

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

found to be insignificant and negatively related to ROE.

In case of CSRD score having three year lag, Return on Equity is negatively and significantly related to CSR disclosures at 5 per cent level of significance in case of all the three models used. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is negatively and significantly related to Total CSR disclosures score having three year lag . Also the coefficient of leverage and age were found to be insignificant and negatively related to ROE. However the coefficient of size was found to be significant and negatively related to ROE.

4.2.3.5 Relationship between lagged values of total CSRD and Net Profit Margin (NPM as dependent variable)

The impact of Net Profit Margin on lagged values of total CSR disclosures is discussed in this section. The models used for examining this relationship proxy's financial performance by NPM as dependent variable. These models utilize CSRD score having one year lag, two year lag and three year lag simultaneously as independent variable in each model. These models as already discussed are shown below

- (i) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-1} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$
- (ii) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-2} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$
- (iii) $Y_{NPM} = b_{0NPM} + b_{1NPM}TOCSR D_{jt-3} + b_{2NPM}SIZE_{jt} + b_{3NPM}AGE_{jt} + b_{4NPM}LEV_{jt} + u_{jt}$

It can be seen from table 4.104 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSRD score having one year lag, two year lag and three year lag respectively. The relationship between CSRD score having one year lag and Net Profit Margin is negative and insignificant at 5 per cent level of significance in case of each of three models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and insignificantly related to Total CSR disclosures score having one year lag . Also the coefficient of leverage was found to be significant and negatively related to NPM while age is significant and negative. However the coefficient of size was found to be insignificant and positively related to NPM.

Table 4.104 Regression analysis for model with NPM as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	24.96978* (0.0000)	21.78992* (0.0127)	24.01245* (0.0001)	28.41932* (0.0000)	27.81079* (0.0128)	28.21759* (0.0001)	29.97587* (0.0000)	28.67486* (0.0460)	28.35620* (0.0006)
TOCSR	-1.141084 (0.5406)	-2.485619 (0.1079)	-2.181976 (0.1001)	-1.977796 (0.3328)	-3.168940 (0.0600)	-3.01296* (0.0344)	-1.666846 (0.4753)	-2.960095 (0.1290)	-2.808446 (0.0868)
AGE	-2.408208* (0.0006)	-0.366328 (0.9019)	-2.114092 (0.1722)	-2.69728* (0.0005)	-2.839675 (0.4704)	-3.240783 (0.0567)	-0.28648* (0.00009)	-7.510445 (0.1426)	-3.722712* (0.0427)
SIZE	0.035057 (0.9042)	-0.004609 (0.9959)	0.241878 (0.6678)	-0.055445 (0.8607)	0.402623 (0.7132)	0.370528 (0.5447)	-0.221653 (0.5210)	1.614428 (0.2375)	0.402306 (0.5432)
LEV	-0.746075* (0.0063)	-1.92413* (0.0004)	-1.46837* (0.0008)	-0.70859* (0.0184)	-3.09507* (0.0000)	-1.94008* (0.0002)	-0.501859 (0.1279)	-2.734975* (0.0025)	-1.466565* (0.0120)
R-square	0.015189	0.743922	0.014800	0.017024	0.744338	0.022769	0.016124	0.746226	0.014803
Adjusted R-square	0.011981	0.711091	0.011591	0.013420	0.706858	0.019186	0.011999	0.702793	0.010672
F-statistic	4.734799* (0.000856)	22.65946* (0.0000)	4.611799* (0.00107)	4.723711* (0.00088)	19.85997* (0.0000)	6.354906* (0.00005)	3.908640* (0.00373)	17.18098* (0.0000)	3.583450* (0.006561)
Durbin-Watson stat	0.498028	1.912840	1.705474	0.527943	2.026088	1.771147	0.369998	1.415896	1.220505
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	22.849669* (0.0000)			19.976503* (0.0000)			17.304148* (0.0000)		
Cross-section Chi-square (p-value)	1660.811162* (0.0000)			1476.012969* (0.0000)			1299.497533* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	2.524563 (0.6402)			6.122163 (0.1902)			4.900815 (0.2976)		

*indicates statistically significant at 5% level of significance.

In case of CSRD score having two year lag, Net Profit Margin is negatively and insignificantly related at 5 per cent level of significance in case of pooled effects and fixed effects model. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and significantly related to Total CSR disclosures score having two year lag . Also the coefficient of leverage was found to be significant and negatively related to NPM while age is insignificant and negative. However the coefficient of size was found to be insignificant and positively related to NPM.

In case of CSRD score with three year lag, Net Profit Margin is negatively and insignificantly related at 5 per cent level of significance in case of all the three models. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and insignificantly related to Total CSR disclosures score having three year lag . Also the coefficient of leverage and age were found to be significant and negatively related to NPM. However the coefficient of size was found to be insignificant and positively related to NPM.

4.2.4 Relationship between financial performance and each CSRD theme

This section presents the results of relationship between various selected indicators of financial performance and all the themes of corporate social responsibility disclosures for 137 companies over a period of ten years. There are total 137 companies in each year from 2008 to 2017. The variables of financial performance selected for the purpose of study are return on assets, return on equity and net profit margin. The control variables employed are age of firm, size of firm and debt equity ratio. There are total eight themes of CSRD namely 'community development theme', 'human resources theme', 'energy theme', 'environment theme', 'product, services-safety and innovation theme', 'customers theme', 'emission of carbon and harmful gases theme' and 'other CSR activities theme'. Multivariate analysis is employed to examine the relationship between all themes of corporate social responsibility disclosures and three measures of financial performance. In the models to investigate this relationship, the dependent variables are the selected indicators of financial performance which are ROA, ROE

and NPM consecutively and independent variables are community development score, human resources score, energy score, environment score, product; services-safety and innovation score, customers score, emission of carbon and harmful gases score and other CSR activities score; with age of firm, size of firm and leverage as the control variables.

The three individual models adopted to study the relationship between all themes of CSR and financial performances have been presented as follows:

7. $Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSRD_{jt} + b_{2ROA}HRCSR D_{jt} + b_{3ROA}ECSR D_{jt} + b_{4ROA}ENVCSR D_{jt} + b_{5ROA}PROCSR D_{jt} + b_{6ROA}CUCSR D_{jt} + b_{7ROA}EMCSR D_{jt} + b_{8ROA}OTCSR D_{jt} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$
8. $Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSRD_{jt} + b_{2ROE}HRCSR D_{jt} + b_{3ROE}ECSR D_{jt} + b_{4ROE}ENVCSR D_{jt} + b_{5ROE}PROCSR D_{jt} + b_{6ROE}CUCSR D_{jt} + b_{7ROE}EMCSR D_{jt} + b_{8ROE}OTCSR D_{jt} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$
9. $Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSRD_{jt} + b_{2NPM}HRCSR D_{jt} + b_{3NPM}ECSR D_{jt} + b_{4NPM}ENVCSR D_{jt} + b_{5NPM}PROCSR D_{jt} + b_{6NPM}CUCSR D_{jt} + b_{7NPM}EMCSR D_{jt} + b_{8NPM}OTCSR D_{jt} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$

where Y_{ROA} = Return on Assets

Y_{ROE} = Return on Equity

Y_{NPM} = Net Profit Margin

$CDCSRD_{jt}$ = Community Development CSR Score for j^{th} firm in t year

$HRCSR D_{jt}$ = Human Resources CSR Score for j^{th} firm in t year

$ECSR D_{jt}$ = Energy CSR Score for j^{th} firm in t year

$ENVCSR D_{jt}$ = Environment CSR Score for j^{th} firm in t year

$PROCSR D_{jt}$ = Product, Services-Safety and Innovation CSR Score for j^{th} firm in t year

$CUCSR D_{jt}$ = Customers CSR Score for j^{th} firm in t year

$EMCSR D_{jt}$ = Emission of Carbon and harmful gases CSR Score for j^{th} firm in t year

$OTCSR D_{jt}$ = Other CSR activities CSR Score for j^{th} firm in t year

LEV_{jt} = Leverage or Debt Equity ratio of firm j in year t

AGE_{jt} = Age of firm j in year t

$SIZE_{jt}$ = Size of firm j in year t

u_{jt} = Error term

In order to undertake multiple regression analysis several underlying assumptions of regression models had to be satisfied. These assumptions have been tested one by one and in case of any deviances corrective measures have been employed.

4.2.4.1 Testing for multicollinearity

The test for multicollinearity was conducted to detect if independent variables are not extremely correlated and no multicollinearity exists among independent variables. To control this problem the variance inflation factor (VIF) and Pearson correlation coefficient were investigated. So multicollinearity test was conducted on all independent variables namely community development score, human resources score, energy score, environment score, product; services-safety and innovation score, customers score, emission of carbon and harmful gases score and other CSR activities score, leverage, age of firm and size of firm. The VIF ranged from 1.078 to 2.395 as observed in table 4.105. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 2.3 which means multicollinearity is not a serious problem in these three models.

Table 4.105 Testing for multicollinearity by using the variance inflation factor

Variable	VIF
CDCSRD	2.053117
HRCSRD	2.394898
ECSRD	1.227025
ENVCSR	1.682871
PROCSR	2.182654
CUCSR	1.163215
EMCSR	1.394908
OTCSR	1.574552
LEV	1.285929
AGE	1.077582
SIZE	1.378404

Also the results Pearson correlation as observed in table 4.106 showcase that the value of correlation coefficient is less than 0.67 in case of all independent variables and all these values are statistically significant at 5 per cent level of significance. According to Gujarati *et al* (2012) if correlation coefficient between two regressors is high, say in excess of 0.8, then multicollinearity is a serious problem. The highest value of correlation coefficient was observed between human resources score and product, services-safety and innovation score (0.679462) which is very less than 0.8. Hence multicollinearity is not a problem for the estimation of these models.

Table 4.106 Correlation coefficients matrix between independent variables

Correlation (p-value)	CDCSRD	HRCSR	ECSR	ENCSR	PRCSR	CUCSR	EMCSR	OTCSR	LEV	AGE	SIZE
CDCSRD	1.000000										
HRCSR	0.615166 (0.0000)	1.000000									
ECSR	-0.07918 (0.0034)	0.046202 (0.0876)	1.000000								
ENCSR	0.509340 (0.0000)	0.520651 (0.0000)	0.096968 (0.0003)	1.000000							
PRCSR	0.516214 (0.0000)	0.679462 (0.0000)	0.113049 (0.0000)	0.525526 (0.0000)	1.000000						
CUCSR	0.314466 (0.0000)	0.310476 (0.0000)	0.064369 (0.0173)	0.217165 (0.0000)	0.274866 (0.0000)	1.000000					
EMCSR	0.277457 (0.0000)	0.367420 (0.0000)	0.190143 (0.0000)	0.368367 (0.0000)	0.420337 (0.0000)	0.198829 (0.0000)	1.000000				
OTCSR	0.539228 (0.0000)	0.499209 (0.0000)	0.017938 (0.5074)	0.372313 (0.0000)	0.472100 (0.0000)	0.237632 (0.0000)	0.270053 (0.0000)	1.000000			
LEV	-0.01055 (0.6966)	-0.086379 (0.0014)	-0.327390 (0.0000)	-0.089158 (0.0010)	-0.113741 (0.0000)	0.016919 (0.5318)	-0.150098 (0.0000)	-0.026462 (0.3281)	1.000000		
AGE	0.131848 (0.0000)	0.124460 (0.0000)	-0.015229 (0.5736)	0.092885 (0.0006)	0.141194 (0.0000)	0.026125 (0.3343)	0.091646 (0.0007)	0.096194 (0.0004)	-0.113085 (0.0000)	1.000000	
SIZE	0.214914 (0.0000)	0.208836 (0.0000)	-0.220639 (0.0000)	0.021960 (0.4170)	0.159199 (0.0000)	0.138198 (0.0000)	0.214317 (0.0000)	0.224230 (0.0000)	0.306253 (0.0000)	0.170878 (0.0000)	1.000000

4.2.4.2 Testing for homoscedasticity

Another assumption which is to be tested is homoscedasticity which is the condition of constant variance by error term for a particular value of explanatory variable. If the variance of error term varies for different values of independent variable then the problem of heteroscedasticity exists. According to Gujarati *et al* 2012 if we persist in using the usual testing procedures despite heteroscedasticity then whatever conclusions we draw may be very misleading. In this study Breusch-Pagan-Godfrey test has been employed to detect the problem of heteroscedasticity in regression models.

Table 4.107 Breusch-Pagan-Godfrey test of heteroscedasticity for ROA as dependent variable

F-statistic	3.427568	Prob. F(11,1356)	0.0001
Obs*R-squared	37.00791	Prob. Chi-Square(11)	0.0001
Scaled explained SS	178.3343	Prob. Chi-Square(11)	0.0000

As observed in table 4.107 which tests the presence of heteroscedasticity for regression model with ROA as dependent variable that value of Obs*R-squared for this model is 37.00791 for probability value of Chi square 0.0001 which is significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected and presence of heteroscedasticity is confirmed in this model.

As in table 4.108 which tests the presence of heteroscedasticity for regression model with ROE as dependent variable that value of Obs*R-squared for this model is 59.00483 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. So null hypothesis of homoscedasticity is rejected and presence of heteroscedasticity is confirmed in this model.

Table 4.108 Breusch-Pagan-Godfrey test of heteroscedasticity for ROE as dependent variable

F-statistic	5.556695	Prob. F(11,1356)	0.0000
Obs*R-squared	59.00483	Prob. Chi-Square(11)	0.0000
Scaled explained SS	297.5652	Prob. Chi-Square(11)	0.0000

As observed in table 4.109 which tests the presence of heteroscedasticity for regression model with NPM as dependent variable that value of Obs*R-squared for this model is 18.88030 for probability value of Chi square 0.0633 which is insignificant at 5 per cent level of significance. So null hypothesis of homoscedsticity is accepted and absence of heteroscedasticity is confirmed in this model.Hence the problem of heteroscedasticity exists in case of models with ROA and ROE as dependent variables, so in these models standard

errors may be biased. To control the problem of heteroscedasticity in these two models robust standard errors are used to provide a better fit to these models. These robust standard errors are also known as White's heteroscedasticity-corrected standard errors. In case of model with NPM as dependent variable no heteroscedasticity was observed.

Table 4.109 Breusch-Pagan-Godfrey test of heteroscedasticity for NPM as dependent variable

F-statistic	1.725145	Prob. F(11,1356)	0.0628
Obs*R-squared	18.88030	Prob. Chi-Square(11)	0.0633
Scaled explained SS	307.3545	Prob. Chi-Square(11)	0.0000

4.2.4.3 Testing for panel stationarity

According to Gujarati *et al* (2012) a stochastic process is said to be stationary if it's mean, variance and auto covariance are constant over time; that is they are time invariant. If a series has time varying mean or a time varying variance or both then it is said to be non-stationary and we call it unit root problem. In this study Levin-Lin-Chu test has been employed to detect the panel unit root problem.

Table 4.110 Testing for Panel unit root by Levin-Lin-Chu test

Variable	Test Statistic	p-value
ROA	-8.19981	0.0000
ROE	-5.95617	0.0000
NPM	-10.0987	0.0000
LEV	-1494.62	0.0000
AGE	-53.2368	0.0000
SIZE	-10.2331	0.0000
CDCSR	-15.3804	0.0000
HRCSD	-103.780	0.0000
ECSR	-25.2963	0.0000
ENVCSR	-10.7793	0.0000
PRCSR	-37.9109	0.0000
CUCSR	-30.8063	0.0000
EMCSR	-14.7221	0.0000
OTCSR	-131.008	0.0000

As observed in table 4.110 the probability value for Levin-Lin-Chu test statistic is highly significant at 5 per cent level of significance. So null hypothesis stating the presence of unit root problem is rejected and alternate hypothesis assuming the stationarity of data is accepted. Hence all the panel series are stationary and no problem of panel unit root is detected in any of the series.

4.2.4.4 Relationship between each theme of CSRD and Return on Assets (ROA as dependent variable)

The impact of Return on Assets on CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by ROA as dependent variable. The model as already discussed is shown below

$$Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR D_{jt} + b_{2ROA}HRCSR D_{jt} + b_{3ROA}ECSR D_{jt} + b_{4ROA}ENVCSR D_{jt} + b_{5ROA}PROCSR D_{jt} + b_{6ROA}CUCSR D_{jt} + b_{7ROA}EMCSR D_{jt} + b_{8ROA}OTCSR D_{jt} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$$

It can be seen in table 4.111 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Return on Assets is not significantly related to any of the themes of CSR disclosures at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is not significantly related to any theme of CSR disclosures. However the coefficients of size and leverage were found to be significant but negatively related to ROA while coefficient of age was insignificant and positive.

4.2.4.5 Relationship between each theme of CSRD and Return on Equity (ROE as dependent variable)

The impact of Return on Equity on CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by ROE as dependent variable.

The model as already discussed is shown below

$$Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt} + b_{2ROE}HRCSR D_{jt} + b_{3ROE}ECSR D_{jt} + b_{4ROE}ENVCSR D_{jt} + b_{5ROE}PROCSR D_{jt} + b_{6ROE}CUCSR D_{jt} + b_{7ROE}EMCSR D_{jt} + b_{8ROE}OTCSR D_{jt} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$$

It can be observed in table 4.112 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Return on Equity is not significantly related to most of the themes of CSR disclosures at 5 per cent level of significance. However by using pooled OLS model and random effects model, the ROE was found to be significantly and negatively related to 'community development theme' of CSRD. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is

Table 4.111 Regression analysis for model with ROA as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	34.64533* (0.0000)	21.51016* (0.0339)	28.79568* (0.0000)
CDCSRD	-1.846815 (0.1156)	-0.552237 (0.4564)	-0.479591 (0.4786)
HRCSRD	2.441985 (0.1975)	-0.086748 (0.9512)	0.400291 (0.7417)
ECSR	-0.481737 (0.3886)	-0.212562 (0.6856)	-0.272306 (0.5497)
ENVCSR	0.989134 (0.2886)	0.056503 (0.9318)	0.190951 (0.7616)
PRCSR	-1.810725 (0.1959)	-0.190294 (0.8385)	-0.276244 (0.7529)
CUCSR	0.377621 (0.7396)	-0.239951 (0.7654)	-0.185206 (0.8073)
EMCSR	0.147667 (0.8193)	0.19682 (0.6839)	0.206427 (0.6124)
OTCSR	-0.719623 (0.1849)	-0.392143 (0.3866)	-0.348625 (0.4085)
LEV	-1.477127* (0.0000)	-1.226938* (0.0091)	-1.310895* (0.0001)
SIZE	-1.912834* (0.0000)	-1.702757 (0.1166)	-1.775918* (0.0001)
AGE	0.346268 (0.6695)	3.458834 (0.2045)	1.319637 (0.1519)
R-square	0.287833	0.755456	0.097026
Adjusted R-square	0.282056	0.72599	0.089701
F-statistic	49.82246* (0.0000)	25.63859* (0.0000)	13.24587* (0.0000)
Durbin-Watson statistic	0.468511	1.089203	0.979608

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	17.153763	(136,1220)	0.0000
Cross-section Chi-square	1462.277950	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	11	1.0000

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

Table 4.112 Regression analysis for model with ROE as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	62.98431* (0.0000)	50.54155* (0.0395)	57.32124* (0.0000)
CDCSRD	-5.625442* (0.021)	-3.116463 (0.1029)	-3.152179* (0.0443)
HRCSRD	3.263006 (0.3717)	-2.748681 (0.2820)	-1.895579 (0.4047)
ECSRD	-0.354887 (0.7151)	-0.073945 (0.9447)	-0.148872 (0.8692)
ENVCSR	0.064373 (0.9706)	0.643737 (0.6086)	0.600029 (0.6123)
PRCSR	-4.436771 (0.1557)	-2.356835 (0.2562)	-2.507539 (0.2049)
CUCSR	2.383077 (0.2586)	1.67821 (0.2934)	1.788653 (0.2332)
EMCSR	0.150878 (0.9037)	0.886533 (0.4238)	0.79288 (0.4066)
OTCSR	-0.933769 (0.4373)	-0.833581 (0.3859)	-0.775631 (0.3878)
LEV	-0.877885 (0.2052)	-0.875888 (0.6048)	-0.861591* (0.4400)
SIZE	-3.263757* (0.0000)	-2.729139 (0.1766)	-2.964197* (0.0038)
AGE	2.458881 (0.2362)	4.462567 (0.321)	2.978226 (0.1378)
R-square	0.156625	0.696611	0.095813
Adjusted R-square	0.149784	0.660055	0.088478
F-statistic	22.89330* (0.0000)	19.05603* (0.0000)	13.06272* (0.0000)
Durbin-Watson statistic	0.476999	1.254941	1.096791

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	15.966245	(136,1220)	0.0000
Cross-section Chi-square	1398.635946	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	11	1.0000

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is significantly and negatively related to only ‘community development theme’ of CSR disclosures. There is no significant relationship between ROE and other themes of CSRD. However the coefficient of size was found to be significant but negatively related to ROE while coefficient of age was insignificant and positive. Leverage again was negative and insignificantly related to ROE.

4.2.4.6 Relationship between each theme of CSRD and Net Profit Margin (NPM as dependent variable)

The impact of Net Profit Margin on CSR disclosures is discussed in this section. The model used for examining this relationship proxy’s financial performance by NPM as dependent variable. The model as already discussed is shown as follows.

The model is

$$Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSRD_{jt} + b_{2NPM}HRCSRD_{jt} + b_{3NPM}ECSRD_{jt} + b_{4NPM}ENVCSR_{jt} + b_{5NPM}PROCSR_{jt} + b_{6NPM}CUCSR_{jt} + b_{7NPM}EMCSR_{jt} + b_{8NPM}OTCSR_{jt} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$$

It can be observed in table 4.113 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Net Profit Margin is not significantly related to most of the themes of CSR disclosures at 5 per cent level of significance. However by using fixed effect model and random effects the NPM was found to be significantly though negatively related to ‘community development theme’ of CSRD. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is significantly and negatively related to only ‘community development theme’ of CSR disclosures. It is insignificantly linked to other themes of CSRD. However the coefficient of leverage was found to be significant but negatively related to NPM while coefficient of age was insignificant and negative. Size was found to be positive and insignificantly related to NPM.

4.2.5 Relationship between financial performance and lagged values of each theme of CSRD

This section presents the results of relationship between various selected indicators of financial performance and lagged values of each theme of corporate social responsibility disclosures for 137 companies up to 3 years lags. There are total 137 companies in each year from 2008 to 2017. The variables of financial performance selected for the purpose of study are return on assets, return on equity and net profit margin. The control variables employed

Table 4.113 Regression analysis for model with NPM as dependent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	32.19044* (0.0000)	9.364218 (0.2327)	17.82919* (0.0037)
CDCSRD	-2.303263 (0.0721)	-2.824016* (0.003)	-2.496354* (0.0066)
HRCSR	-1.621545 (0.3905)	-0.146386 (0.9140)	-0.028296 (0.9829)
ECSR	-1.304512* (0.0184)	0.27831 (0.5573)	0.040291 (0.9298)
ENVCSR	-0.899973 (0.3672)	-1.223147 (0.1008)	-1.160673 (0.1115)
PRCSR	-0.187842 (0.9199)	0.509263 (0.6733)	0.497135 (0.6779)
CUCSR	-0.164953 (0.9105)	-0.139483 (0.8784)	-0.134701 (0.8816)
EMCSR	0.594014 (0.4675)	0.557189 (0.3857)	0.507561 (0.4183)
OTCSR	2.85102* (0.0006)	0.125721 (0.8044)	0.355641 (0.4778)
LEV	-0.900023* (0.0008)	-1.651894* (0.0005)	-1.319326* (0.0009)
SIZE	-0.091905 (0.7503)	0.540939 (0.4292)	0.482264 (0.3396)
AGE	-2.189998* (0.0006)	1.666254 (0.4363)	-0.853026 (0.5277)
R-square	0.029217	0.748630	0.025988
Adjusted R-square	0.021342	0.718342	0.018087
F-statistic	3.710117* (0.000031)	24.71698* (0.0000)	3.289094* (0.000181)
Durbin-Watson stat	0.573825	1.805358	1.617945

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	25.673469	(136,1220)	0.0000
Cross-section Chi-square	1848.407341	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.604896	11	0.2556

*indicates statistically significant at 5% level of significance.

are age of firm, size of firm and debt equity ratio. There are total eight themes of CSRD namely ‘community development theme’, ‘human resources theme’, ‘energy theme’, ‘environment theme’, ‘product, services-safety and innovation theme’, ‘customers theme’, ‘emission of carbon and harmful gases theme’ and ‘other CSR activities theme’.

Multivariate analysis is employed to examine the relationship between lagged values of each theme of corporate social responsibility disclosures and three measures of financial performance. In the models to investigate this relationship, the dependent variables are the selected indicators of financial performance which are ROA, ROE and NPM consecutively and independent variables are community development score, human resources score, energy score, environment score, product; services-safety and innovation score, customers score, emission of carbon and harmful gases score and other CSR activities score each with one year lag, two year lag and three year lag respectively; along with age of firm, size of firm and leverage as the control variables. Hence the nine individual models adopted to study the relationship between Total CSRD and financial performances have been presented as follows:

- 10 (i) $Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR D_{jt-1} + b_{2ROA}HRCSR D_{jt-1} + b_{3ROA}ECSR D_{jt-1} + b_{4ROA}ENVCSR D_{jt-1} + b_{5ROA}PROCSR D_{jt-1} + b_{6ROA}CUCSR D_{jt-1} + b_{7ROA}EMCSR D_{jt-1} + b_{8ROA}OTCSR D_{jt-1} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$
- (ii) $Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR D_{jt-2} + b_{2ROA}HRCSR D_{jt-2} + b_{3ROA}ECSR D_{jt-2} + b_{4ROA}ENVCSR D_{jt-2} + b_{5ROA}PROCSR D_{jt-2} + b_{6ROA}CUCSR D_{jt-2} + b_{7ROA}EMCSR D_{jt-2} + b_{8ROA}OTCSR D_{jt-2} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$
- (iii) $Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR D_{jt-3} + b_{2ROA}HRCSR D_{jt-3} + b_{3ROA}ECSR D_{jt-3} + b_{4ROA}ENVCSR D_{jt-3} + b_{5ROA}PROCSR D_{jt-3} + b_{6ROA}CUCSR D_{jt-3} + b_{7ROA}EMCSR D_{jt-3} + b_{8ROA}OTCSR D_{jt-3} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$
- 11 (i) $Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-1} + b_{2ROE}HRCSR D_{jt-1} + b_{3ROE}ECSR D_{jt-1} + b_{4ROE}ENVCSR D_{jt-1} + b_{5ROE}PROCSR D_{jt-1} + b_{6ROE}CUCSR D_{jt-1} + b_{7ROE}EMCSR D_{jt-1} + b_{8ROE}OTCSR D_{jt-1} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$
- (ii) $Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-2} + b_{2ROE}HRCSR D_{jt-2} + b_{3ROE}ECSR D_{jt-2} + b_{4ROE}ENVCSR D_{jt-2} + b_{5ROE}PROCSR D_{jt-2} + b_{6ROE}CUCSR D_{jt-2} + b_{7ROE}EMCSR D_{jt-2} + b_{8ROE}OTCSR D_{jt-2} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$
- (iii) $Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-3} + b_{2ROE}HRCSR D_{jt-3} + b_{3ROE}ECSR D_{jt-3} + b_{4ROE}ENVCSR D_{jt-3} + b_{5ROE}PROCSR D_{jt-3} + b_{6ROE}CUCSR D_{jt-3} + b_{7ROE}EMCSR D_{jt-3} + b_{8ROE}OTCSR D_{jt-3} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$
- 12 (i) $Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSR D_{jt-1} + b_{2NPM}HRCSR D_{jt-1} + b_{3NPM}ECSR D_{jt-1} + b_{4NPM}ENVCSR D_{jt-1} + b_{5NPM}PROCSR D_{jt-1} + b_{6NPM}CUCSR D_{jt-1} + b_{7NPM}EMCSR D_{jt-1} + b_{8NPM}OTCSR D_{jt-1} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$
- (ii) $Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSR D_{jt-2} + b_{2NPM}HRCSR D_{jt-2} + b_{3NPM}ECSR D_{jt-2} + b_{4NPM}ENVCSR D_{jt-2} + b_{5NPM}PROCSR D_{jt-2} + b_{6NPM}CUCSR D_{jt-2} + b_{7NPM}EMCSR D_{jt-2}$

$$\begin{aligned}
& +b_{8NPM}OTCSR D_{jt-2} +b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} +b_{11NPM}LEV_{jt} + u_{jt} \\
\text{(iii)} Y_{NPM} = & b_{0NPM} +b_{1NPM}CDCSR D_{jt-3} +b_{2NPM}HRCSR D_{jt-3} +b_{3NPM}ECSR D_{jt-3} \\
& +b_{4NPM}ENVCSR D_{jt-3} +b_{5NPM}PROCSR D_{jt-3} +b_{6NPM}CUCCSR D_{jt-3} +b_{7NPM}EMCSR D_{jt-3} \\
& +b_{8NPM}OTCSR D_{jt-3} +b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} +b_{11NPM}LEV_{jt} + u_{jt}
\end{aligned}$$

where Y_{ROA} = Return on Assets

Y_{ROE} = Return on Equity

Y_{NPM} = Net Profit Margin

$CDCSR D_{jt-1}$ = Community Development CSR D Score for j^{th} firm in the year t-1

$HRCSR D_{jt-1}$ = Human Resources CSR D Score for j^{th} firm in the year t-1

$ECSR D_{jt-1}$ = Energy CSR D Score for j^{th} firm in the year t-1

$ENVCSR D_{jt-1}$ = Environment CSR D Score for j^{th} firm in the year t-1

$PROCSR D_{jt-1}$ = Product, Services-Safety and Innovation CSR D Score for j^{th} firm in the year t-1

$CUCCSR D_{jt-1}$ = Customers CSR D Score for j^{th} firm in the year t-1

$EMCSR D_{jt-1}$ = Emission of Carbon and harmful gases CSR D Score for j^{th} firm in the year t-1

$OTCSR D_{jt-1}$ = Other CSR activities CSR D Score for j^{th} firm in the year t-1

$CDCSR D_{jt-2}$ = Community Development CSR D Score for j^{th} firm in the year t-2

$HRCSR D_{jt-2}$ = Human Resources CSR D Score for j^{th} firm in the year t-2

$ECSR D_{jt-2}$ = Energy CSR D Score for j^{th} firm in the year t-2

$ENVCSR D_{jt-2}$ = Environment CSR D Score for j^{th} firm in the year t-2

$PROCSR D_{jt-2}$ = Product, Services-Safety and Innovation CSR D Score for j^{th} firm in the year t-2

$CUCCSR D_{jt-2}$ = Customers CSR D Score for j^{th} firm in the year t-2

$EMCSR D_{jt-2}$ = Emission of Carbon and harmful gases CSR D Score for j^{th} firm in the year t-2

$OTCSR D_{jt-2}$ = Other CSR activities CSR D Score for j^{th} firm in the year t-2

$CDCSR D_{jt-3}$ = Community Development CSR D Score for j^{th} firm in the year t-3

$HRCSR D_{jt-3}$ = Human Resources CSR D Score for j^{th} firm in the year t-3

$ECSR D_{jt-3}$ = Energy CSR D Score for j^{th} firm in the year t-3

$ENVCSR D_{jt-3}$ = Environment CSR D Score for j^{th} firm in the year t-3

$PROCSR D_{jt-3}$ = Product, Services-Safety and Innovation CSR D Score for j^{th} firm in the year t-3

$CUCCSR D_{jt-3}$ = Customers CSR D Score for j^{th} firm in the year t-3

$EMCSR D_{jt-3}$ = Emission of Carbon and harmful gases CSR D Score for j^{th} firm in the year t-3

$OTCSR D_{jt-3}$ = Other CSR activities CSR D Score for j^{th} firm in the year t-3

LEV_{jt} = Leverage or Debt Equity ratio of firm j in year t

AGE_{jt} = Age of firm j in year t

$SIZE_{jt}$ = Size of firm j in year t

u_{jt} = Error term

In order to undertake multiple regression analysis several underlying assumptions of regression models had to be satisfied. These assumptions have been tested one by one and in case of any deviances corrective measures have been employed.

4.2.5.1 Testing for multicollinearity

The test for multicollinearity was conducted to detect if independent variables are not extremely correlated and no multicollinearity exists among independent variables. To control this problem the variance inflation factor (VIF) and Pearson correlation coefficient were investigated. So multicollinearity test was conducted on all independent variables which include values of community development score, human resources score, energy score, environment score, product; services-safety and innovation score, customers score, emission of carbon and harmful gases score and other CSR activities score ; each having one year lag, two year lag and three year lag respectively. Also included are debt equity ratio, age of firm and size of firm as control variables. The VIF ranged from 1.064778 to 2.383749 as observed in table 4.114. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 2.4 which means multicollinearity is not a serious problem in these selected nine models.

Table 4.114 Testing for multicollinearity by using the variance inflation factor

Variable	VIF for Lag 1	VIF for Lag 2	VIF for lag 3
CDCSR	2.044341	2.045038	2.048423
HRCSD	2.378150	2.378101	2.383749
ECSR	1.195038	1.172415	1.151269
ENVCSR	1.685050	1.681306	1.678968
PROCSR	2.179866	2.175521	2.172060
CUCSR	1.159860	1.160444	1.163152
EMCSR	1.380576	1.374012	1.369404
OTCSR	1.578273	1.577307	1.576798
LEV	1.255012	1.235008	1.218851
AGE	1.065855	1.064778	1.068226
SIZE	1.302793	1.269774	1.259523

4.2.5.2 Testing for homoscedasticity

Another assumption which is to be tested is homoscedasticity which is the condition of constant variance by error term for a particular value of explanatory variable. If the variance of error term varies for different values of independent variable then the problem of heteroscedasticity exists. According to Gujarati *et al* 2012 if we persist in using the usual testing procedures despite heteroscedasticity then whatever conclusions we draw may be very misleading. In this study Breusch-Pagan-Godfrey test has been employed to detect the problem of heteroscedasticity in regression models.

As observed in table 4.115 which tests the presence of heteroscedasticity for regression model with ROA as dependent variable that value of Obs*R-squared for model with CSR scores having one year lag is 40.28260 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. The of Obs*R-squared for model with CSR scores having two year lag is 36.15513 for probability value of Chi square 0.0002 and for CSR scores having three year lag is 34.88319 for p-value of 0.0003 both of which are significant at 5 per cent level of significance. So null hypothesis of homoscedasticity is rejected in all these three cases and presence of heteroscedasticity is confirmed in these models with ROA as dependent variable.

Table 4.115 Breusch-Pagan-Godfrey test of heteroscedasticity for ROA as dependent variable

With CSR score having one year lag

F-statistic	3.740121	Prob. F(11,1355)	0.0000
Obs*R-squared	40.28260	Prob. Chi-Square(11)	0.0000
Scaled explained SS	190.1911	Prob. Chi-Square(11)	0.0000

With CSR score having two year lag

F-statistic	3.346532	Prob. F(11,1354)	0.0001
Obs*R-squared	36.15513	Prob. Chi-Square(11)	0.0002
Scaled explained SS	172.7934	Prob. Chi-Square(11)	0.0000

With CSR score having three year lag

F-statistic	3.225756	Prob. F(11,1353)	0.0002
Obs*R-squared	34.88319	Prob. Chi-Square(11)	0.0003
Scaled explained SS	171.2009	Prob. Chi-Square(11)	0.0000

As observed in table 4.116 which tests the presence of heteroscedasticity for regression model with ROE as dependent variable that value of Obs*R-squared for model with CSR scores having one year lag is 57.15109 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. The of Obs*R-squared for model with CSR scores having two year lag is 47.58219 for probability value of Chi square 0.0000 and for CSR scores having three year lag is 40.19253 for p-value of 0.0000 both of which are significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected in all these three cases and presence of heteroscedasticity is confirmed in these models with ROE as dependent variable.

Table 4.116 Breusch-Pagan-Godfrey test of heteroscedasticity for ROE as dependent variable

With CSR score having one year lag

F-statistic	5.374647	Prob. F(11,1355)	0.0000
Obs*R-squared	57.15109	Prob. Chi-Square(11)	0.0000
Scaled explained SS	292.7919	Prob. Chi-Square(11)	0.0000

With CSR score having two year lag

F-statistic	4.442397	Prob. F(11,1354)	0.0000
Obs*R-squared	47.58219	Prob. Chi-Square(11)	0.0000
Scaled explained SS	251.5763	Prob. Chi-Square(11)	0.0000

With CSR score having three year lag

F-statistic	3.731622	Prob. F(11,1353)	0.0000
Obs*R-squared	40.19253	Prob. Chi-Square(11)	0.0000
Scaled explained SS	210.7891	Prob. Chi-Square(11)	0.0000

As observed in table 4.117 which tests the presence of heteroscedasticity for regression model with NPM as dependent variable that value of Obs*R-squared for model with CSR scores having one year lag is 22.68521 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. The of Obs*R-squared for model having CSR scores with two year lag is 47.58219 for probability value of Chi square 0.0000 and for CSR scores with three year lag is 40.19253 for p-value of 0.0000 both of which are significant at 5 per cent level of significance. So null hypothesis of homoscedsticity is rejected in all these three cases and presence of heteroscedasticity is confirmed in these models with ROE as dependent variable.

Table 4.117 Breusch-Pagan-Godfrey test of heteroscedasticity for NPM as dependent variable

With CSR score having one year lag

F-statistic	2.078684	Prob. F(11,1355)	0.0192
Obs*R-squared	22.68521	Prob. Chi-Square(11)	0.0196
Scaled explained SS	372.3360	Prob. Chi-Square(11)	0.0000

With CSR score having two year lag

F-statistic	1.768976	Prob. F(11,1354)	0.0545
Obs*R-squared	19.35306	Prob. Chi-Square(11)	0.0550
Scaled explained SS	314.1490	Prob. Chi-Square(11)	0.0000

With CSR score having three year lag

F-statistic	2.088783	Prob. F(11,1353)	0.0185
Obs*R-squared	22.79332	Prob. Chi-Square(11)	0.0189
Scaled explained SS	370.9813	Prob. Chi-Square(11)	0.0000

4.2.5.3 Relationship between lagged values of each theme of CSR and Return on Assets (ROA as dependent variable)

The impact of Return on Assets on lagged values of total CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial performance by ROA as dependent variable. These models utilize CSR score having one year lag, two year lag and three year lag respectively for each theme as independent variable in each model. These models as already discussed are shown below

- (i)
$$Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR_{jt-1} + b_{2ROA}HRCSR_{jt-1} + b_{3ROA}ECSR_{jt-1} + b_{4ROA}ENVCSR_{jt-1} + b_{5ROA}PROCSR_{jt-1} + b_{6ROA}CUCSR_{jt-1} + b_{7ROA}EMCSR_{jt-1} + b_{8ROA}OTCSR_{jt-1} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$$
- (ii)
$$Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR_{jt-2} + b_{2ROA}HRCSR_{jt-2} + b_{3ROA}ECSR_{jt-2} + b_{4ROA}ENVCSR_{jt-2} + b_{5ROA}PROCSR_{jt-2} + b_{6ROA}CUCSR_{jt-2} + b_{7ROA}EMCSR_{jt-2} + b_{8ROA}OTCSR_{jt-2} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$$
- (iii)
$$Y_{ROA} = b_{0ROA} + b_{1ROA}CDCSR_{jt-3} + b_{2ROA}HRCSR_{jt-3} + b_{3ROA}ECSR_{jt-3} + b_{4ROA}ENVCSR_{jt-3} + b_{5ROA}PROCSR_{jt-3} + b_{6ROA}CUCSR_{jt-3} + b_{7ROA}EMCSR_{jt-3} + b_{8ROA}OTCSR_{jt-3} + b_{9ROA}SIZE_{jt} + b_{10ROA}AGE_{jt} + b_{11ROA}LEV_{jt} + u_{jt}$$

It can be seen in table 4.118 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSR score having one year lag, two year lag and three year lag respectively. The relationship between CSR score having one year lag of each theme and Return on Assets

was observed to be insignificant at 5 per cent level of significance in case of each of three models used. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is not significantly related to CSR disclosures score having one year lag for each theme of CSR. Also the coefficients of leverage and size were found to be significant and negatively related to ROA while age is insignificant and positive.

In case of CSR score having two year lag of each theme, Return on Assets is insignificantly related to each theme of CSR disclosures at 5 per cent level of significance in case of each of three models used. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is not significantly related to Total CSR disclosures score having two year lag for each theme of CSR. Also the coefficients of leverage and size were found to be significant and negatively related to ROA while age is insignificant and positive.

In case of CSR score having three year lag of each theme, Return on Assets is negatively and insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of all the three models used. However only in case of pooled OLS model it is significantly and negatively related to disclosure scores of 'community development theme'. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Thus on the basis of random effects model it can be concluded that Return on Assets is not significantly related to total CSR disclosures score having three year lag for each theme of CSR. Also the coefficients of leverage and size were found to be significant and negatively related to ROA while age is insignificant and negative.

4.2.5.4 Relationship between lagged values of each theme of CSR and Return on Equity (ROE as dependent variable)

The impact of Return on Equity on lagged values of total CSR disclosures is discussed in this section. The model used for examining this relationship proxy's financial

Table 4.118 Regression analysis for model with ROA as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	35.67388* (0.0000)	23.35269* (0.0388)	30.39510* (0.0000)	39.04890* (0.0000)	26.86494* (0.0185)	33.43957* (0.0000)	40.64278* (0.0000)	26.94022* (0.0146)	33.73858* (0.0000)
CDCSRD	-1.856128 (0.1236)	-0.621968 (0.4282)	-0.562390 (0.4439)	-1.767808 (0.1160)	-0.288147 (0.7201)	-0.260220 (0.7069)	-2.17313* (0.0479)	-0.980543 (0.2080)	-0.913158 (0.1474)
HRCSRD	2.500834 (0.1912)	0.376429 (0.7826)	0.761467 (0.5068)	1.974966 (0.3510)	-0.222022 (0.8470)	0.105309 (0.9161)	1.714345 (0.5062)	-0.167103 (0.8746)	0.128836 (0.8901)
ECSR	-0.700605 (0.1992)	-0.507158 (0.3441)	-0.556367 (0.2254)	-0.625292 (0.2352)	-0.439996 (0.3516)	-0.489265 (0.2167)	-0.589228 (0.2645)	-0.327545 (0.4307)	-0.419312 (0.2154)
ENVCSR	1.094585 (0.2976)	0.509228 (0.5240)	0.598619 (0.4307)	0.815869 (0.4710)	0.372667 (0.7170)	0.437376 (0.6525)	0.459626 (0.6756)	0.718494 (0.5032)	0.679747 (0.4971)
PRCSR	-1.860924 (0.1609)	-0.211272 (0.8092)	-0.298069 (0.7104)	-2.468011 (0.0654)	-1.092245 (0.2592)	-1.151285 (0.1905)	-2.124326 (0.1213)	-0.830324 (0.3476)	-0.894492 (0.2625)
CUCSR	0.204286 (0.8509)	-0.543772 (0.4088)	-0.482807 (0.4412)	0.243446 (0.8016)	-0.303126 (0.5906)	-0.245005 (0.6458)	0.337640 (0.7252)	-0.167109 (0.7809)	-0.116420 (0.8290)
EMCSR	-0.075595 (0.9133)	-0.174118 (0.7123)	-0.155502 (0.7092)	-0.221116 (0.7595)	-0.421460 (0.2951)	-0.380266 (0.2795)	-0.246319 (0.7621)	-0.543494 (0.2193)	-0.511458 (0.1709)
OTCSR	-0.376774 (0.5029)	-0.153789 (0.7335)	-0.101912 (0.8088)	0.077685 (0.8976)	0.240019 (0.5953)	0.286670 (0.4903)	0.535956 (0.4079)	0.500144 (0.2098)	0.583583 (0.1097)

AGE	0.193967 (0.8246)	2.820635 (0.2724)	0.829555 (0.3179)	-0.001443 (0.9988)	0.375006 (0.9200)	0.084383 (0.9354)	-0.124279 (0.8972)	-1.035161 (0.8355)	-0.390637 (0.7205)
SIZE	-1.92366* (0.0000)	-1.682763 (0.1988)	-1.75782* (0.0001)	-1.98346* (0.0000)	-1.083156 (0.4090)	-1.61273* (0.0001)	-2.05448* (0.0000)	-0.672395 (0.6260)	-1.498654* (0.0000)
LEV	-1.49608* (0.0000)	-1.42407* (0.0071)	-1.44765* (0.0001)	-1.51754* (0.0000)	-1.76773* (0.0016)	-1.67378* (0.0000)	-1.45969* (0.0001)	-2.326885* (0.0006)	-1.907011* (0.0000)
R-square	0.289158	0.788919	0.095607	0.295070	0.819555	0.106339	0.289560	0.845884	0.112370
Adjusted R-square	0.282743	0.760268	0.087446	0.287903	0.791516	0.097253	0.281291	0.817881	0.102038
F-statistic	45.07881* (0.0000)	27.53556* (0.0000)	11.71509* (0.0000)	41.17302* (0.0000)	29.22862* (0.0000)	11.7045* (0.0000)	35.0148* (0.0000)	30.2062* (0.0000)	10.8757* (0.0000)
Durbin-Watson	0.280226	0.902891	0.802439	0.257929	0.957748	0.837682	0.215980	0.948187	0.814648
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	18.853959* (0.0000)			20.218184 * (0.0000)			21.472897* (0.0000)		
Cross-section Chi-square (p-value)	1494.689913* (0.0000)			1490.766874* (0.0000)			1462.468887* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	0.000000 (1.0000)			0.000000 (1.0000)			0.000000 (1.0000)		

performance by ROE as dependent variable. These models utilize CSRD score for each theme with one year lag, two year lag and three year lag simultaneously as independent variable in each model. These models as already discussed are shown below

$$(i) Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-1} + b_{2ROE}HRCSR D_{jt-1} + b_{3ROE}ECSR D_{jt-1} + b_{4ROE}ENVCSR D_{jt-1} + b_{5ROE}PROCSR D_{jt-1} + b_{6ROE}CUCSR D_{jt-1} + b_{7ROE}EMCSR D_{jt-1} + b_{8ROE}OTCSR D_{jt-1} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$$

$$(ii) Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-2} + b_{2ROE}HRCSR D_{jt-2} + b_{3ROE}ECSR D_{jt-2} + b_{4ROE}ENVCSR D_{jt-2} + b_{5ROE}PROCSR D_{jt-2} + b_{6ROE}CUCSR D_{jt-2} + b_{7ROE}EMCSR D_{jt-2} + b_{8ROE}OTCSR D_{jt-2} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$$

$$(iii) Y_{ROE} = b_{0ROE} + b_{1ROE}CDCSR D_{jt-3} + b_{2ROE}HRCSR D_{jt-3} + b_{3ROE}ECSR D_{jt-3} + b_{4ROE}ENVCSR D_{jt-3} + b_{5ROE}PROCSR D_{jt-3} + b_{6ROE}CUCSR D_{jt-3} + b_{7ROE}EMCSR D_{jt-3} + b_{8ROE}OTCSR D_{jt-3} + b_{9ROE}SIZE_{jt} + b_{10ROE}AGE_{jt} + b_{11ROE}LEV_{jt} + u_{jt}$$

It can be seen in table 4.119 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSRD score having one year lag, two year lag and three year lag respectively. In case of CSRD score with one year lag for each theme, Return on Equity is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to only ‘community development theme’ of CSR disclosures. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is only significantly though negatively related to disclosures score with 1 year lag for ‘community development theme’ of CSR. Also the coefficients of leverage, age and size were found to be insignificant and negatively related to ROE.

In case of CSRD score having two year lag of each theme, Return on Equity is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to only ‘community development theme’ of CSR disclosures. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is only significantly though negatively related disclosures score with 2 year lag for

‘community development theme’ of CSR. Also the coefficients of leverage, age and size were found to be insignificant and negatively related to ROE.

In case of CSRD score having three year lag of each theme, Return on Equity is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to only ‘community development theme’ of CSR disclosures. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is only significantly though negatively related disclosures score with 3 year lag for ‘community development theme’ of CSR. Also the coefficients of leverage and age were found to be insignificant and negatively related to ROE though size was significant and negative.

4.2.5.5 Relationship between lagged values of each theme of CSRD and Net Profit Margin (NPM as dependent variable)

The impact of Net profit margin on lagged values of total CSR disclosures is discussed in this section. The model used for examining this relationship proxy’s financial performance by NPM as dependent variable. These models utilize CSRD score for each theme with one year lag, two year lag and three year lag simultaneously as independent variable in each model. These models as already discussed are shown below

- (i)
$$Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSR_{jt-1} + b_{2NPM}HRCSR_{jt-1} + b_{3NPM}ECSR_{jt-1} + b_{4NPM}ENVCSR_{jt-1} + b_{5NPM}PROCSR_{jt-1} + b_{6NPM}CUCSR_{jt-1} + b_{7NPM}EMCSR_{jt-1} + b_{8NPM}OTCSR_{jt-1} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$$
- (ii)
$$Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSR_{jt-2} + b_{2NPM}HRCSR_{jt-2} + b_{3NPM}ECSR_{jt-2} + b_{4NPM}ENVCSR_{jt-2} + b_{5NPM}PROCSR_{jt-2} + b_{6NPM}CUCSR_{jt-2} + b_{7NPM}EMCSR_{jt-2} + b_{8NPM}OTCSR_{jt-2} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$$
- (iii)
$$Y_{NPM} = b_{0NPM} + b_{1NPM}CDCSR_{jt-3} + b_{2NPM}HRCSR_{jt-3} + b_{3NPM}ECSR_{jt-3} + b_{4NPM}ENVCSR_{jt-3} + b_{5NPM}PROCSR_{jt-3} + b_{6NPM}CUCSR_{jt-3} + b_{7NPM}EMCSR_{jt-3} + b_{8NPM}OTCSR_{jt-3} + b_{9NPM}SIZE_{jt} + b_{10NPM}AGE_{jt} + b_{11NPM}LEV_{jt} + u_{jt}$$

It can be seen in table 4.120 that all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model were used on each of the above discussed equation with CSRD score having one year lag, two year lag and three year lag respectively. In case of CSRD score with one year lag for each theme, Net Profit Margin is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to ‘community development

Table 4.119 Regression analysis for model with ROE as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	62.27533* (0.0000)	41.24753 (0.1421)	52.40586* (0.0001)	66.65749* (0.0000)	53.16550 (0.1019)	58.20635* (0.0000)	69.61956* (0.0000)	64.74361* (0.0112)	63.32983* (0.0000)
CDCSRD	-5.77639* (0.0218)	-4.26390* (0.0128)	-4.03351* (0.0074)	-5.44255* (0.0205)	-3.55967* (0.0404)	-3.4537* (0.0146)	-5.79413* (0.0083)	-3.888938* (0.0112)	-3.950603* (0.0011)
HRCSRD	3.066131 (0.4001)	-2.533209 (0.3112)	-1.728913 (0.4183)	2.396045 (0.5195)	-2.769471 (0.2618)	-2.254795 (0.2866)	2.463539 (0.5639)	-2.319392 (0.3245)	-1.959798 (0.3323)
ECSR	-0.876082 (0.3565)	-0.687123 (0.4861)	-0.791118 (0.3432)	-0.858316 (0.3581)	-0.811585 (0.3830)	-0.952746 (0.2009)	-1.072827 (0.2581)	-1.198120 (0.2253)	-1.310771 (0.0875)
ENVCSR	-0.065799 (0.9743)	0.851414 (0.5840)	0.823698 (0.5708)	-0.574758 (0.7880)	0.304554 (0.8613)	0.179524 (0.9115)	-0.835443 (0.7011)	0.571881 (0.7371)	0.309061 (0.8432)
PRCSR	-3.876503 (0.2040)	-1.412193 (0.4328)	-1.567875 (0.3518)	-4.301877 (0.1455)	-1.994188 (0.2301)	-2.141987 (0.1621)	-3.330581 (0.2525)	-0.541263 (0.7412)	-0.735144 (0.6213)
CUCSR	2.661727 (0.2105)	1.462239 (0.2951)	1.587440 (0.2274)	2.668205 (0.1759)	1.757005 (0.1529)	1.880735 (0.1027)	1.987772 (0.3166)	1.142272 (0.4119)	1.171228 (0.3524)
EMCSR	-0.030853 (0.9815)	0.096153 (0.9219)	0.086979 (0.9215)	-0.431026 (0.7542)	-0.698374 (0.4172)	-0.653964 (0.3762)	-0.500534 (0.7487)	-1.330237 (0.1628)	-1.299757 (0.0994)
OTCSR	-0.207624 (0.8629)	-0.250983 (0.7706)	-0.134139 (0.8649)	0.415724 (0.7301)	0.263215 (0.7468)	0.319936 (0.6471)	0.947078 (0.4807)	0.500600 (0.5225)	0.598230 (0.3738)
AGE	2.309715 (0.3104)	1.188488 (0.8552)	1.990244 (0.4563)	1.791817 (0.4360)	-6.566081 (0.5061)	-0.132568 (0.9644)	1.624240 (0.4799)	-9.599305 (0.3246)	-0.620237 (0.8131)

SIZE	-3.24250* (0.0000)	-0.853662 (0.7594)	-2.198748 (0.0542)	-3.32675* (0.0000)	0.630239 (0.8377)	-1.839608 (0.1220)	-3.60300* (0.0000)	0.386884 (0.8794)	-2.234809* (0.0094)
LEV	-0.939712 (0.2067)	-1.967287 (0.2832)	-1.590947 (0.2064)	-0.963221 (0.2284)	-3.783059 (0.1250)	-2.579184 (0.1003)	-0.570443 (0.3839)	-3.642906 (0.0701)	-2.190263 (0.0509)
R-square	0.147713	0.747824	0.082352	0.152873	0.776418	0.098884	0.152819	0.808921	0.094111
Adjusted R-square	0.140022	0.713595	0.074072	0.144261	0.741675	0.089723	0.142958	0.774201	0.083566
F-statistic	19.20632* (0.0000)	21.84775* (0.0000)	9.945126* (0.0000)	17.75080* (0.0000)	22.34764* (0.0000)	10.79396* (0.0000)	15.49680* (0.0000)	23.29832* (0.0000)	8.924922* (0.0000)
Durbin-Watson statistic	0.331998	1.084025	0.965480	0.308702	1.104008	0.966123	0.286457	1.168423	1.019078
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	18.950348* (0.0000)			19.399123* (0.0000)			20.425274* (0.0000)		
Cross-section Chi-square (p-value)	1499.106576* (0.0000)			1457.285144* (0.0000)			1425.190426* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	0.000000 (1.0000)			0.000000 (1.0000)			0.000000 (1.0000)		

Table 4.120 Regression analysis for model with NPM as dependent variable

Variable	Lag 1			Lag 2			Lag 3		
	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	33.64322* (0.0001)	14.01189 (0.4947)	21.28913* (0.0188)	38.80599* (0.0000)	26.04633* (0.0436)	29.61070* (0.0002)	40.70818* (0.0001)	22.50166 (0.1421)	27.80557* (0.0000)
CDCSRD	-2.061498 (0.2949)	-2.21172* (0.0461)	-1.948960 (0.0544)	-1.547420 (0.2863)	-0.909477 (0.4175)	-0.730192 (0.4945)	-2.718245 (0.1227)	-3.190282 (0.0517)	-2.814039* (0.0290)
HRCSRD	-0.701248 (0.8535)	0.477589 (0.8442)	0.499337 (0.8099)	-0.124379 (0.9537)	1.253445 (0.4364)	1.046264 (0.5013)	0.674014 (0.8888)	2.584914 (0.2990)	2.231800 (0.3372)
ECSRD	-1.469354 (0.1047)	0.021792 (0.9695)	-0.236435 (0.6345)	-1.40343* (0.0218)	-0.099871 (0.8595)	-0.379582 (0.4783)	-1.501438 (0.0929)	-0.198382 (0.7757)	-0.524324 (0.3838)
ENVCSR	-1.110811 (0.5821)	-0.743631 (0.2890)	-0.762566 (0.2774)	-1.664453 (0.1465)	-1.075759 (0.2230)	-1.164548 (0.1744)	-1.751293 (0.3397)	-0.768844 (0.4378)	-0.965140 (0.2604)
PRCSR	0.345611 (0.9039)	1.408230 (0.2498)	1.391068 (0.2275)	-2.234318 (0.2587)	-2.447482 (0.0685)	-2.403962 (0.0695)	-0.865480 (0.7575)	0.056380 (0.9619)	-0.010076 (0.9925)
CUCSR	-1.117753 (0.6182)	-0.710513 (0.6508)	-0.723560 (0.6175)	-0.644933 (0.6895)	0.576223 (0.5773)	0.478700 (0.6396)	-0.887647 (0.6601)	0.831834 (0.4024)	0.663166 (0.4683)
EMCSR	0.090889 (0.9478)	-0.398353 (0.6335)	-0.414650 (0.5938)	0.251971 (0.7809)	-0.163287 (0.8311)	-0.185576 (0.8013)	-0.116950 (0.9420)	-0.860675 (0.4503)	-0.828652 (0.3918)
OTCSR	2.849970 (0.1744)	-0.072125 (0.9330)	0.167509 (0.8322)	3.435808* (0.0001)	0.205852 (0.7214)	0.474472 (0.3984)	4.055564* (0.0498)	0.167708 (0.8560)	0.597380 (0.4660)
AGE	-2.411745 (0.1731)	0.249288 (0.9658)	-1.998987 (0.2010)	-2.64300* (0.0007)	-2.419755 (0.5488)	-3.203491 (0.0580)	-2.806341 (0.1471)	-6.222282 (0.3445)	-3.650982* (0.0258)

SIZE	-0.205415 (0.6910)	0.377699 (0.8643)	0.372734 (0.6681)	-0.387261 (0.2518)	0.392301 (0.7269)	0.274554 (0.6616)	-0.656242 (0.2314)	1.510258 (0.4591)	0.266519 (0.6450)
LEV	-0.905009 (0.1214)	-1.940502 (0.1318)	-1.467019 (0.0971)	-0.88623* (0.0052)	-3.10442* (0.0000)	-1.94932* (0.0001)	-0.606507 (0.2883)	-2.854227 (0.1521)	-1.455150 (0.1109)
R-square	0.030545	0.746628	0.020743	0.037463	0.746471	0.028536	0.042638	0.749893	0.023799
Adjusted R-square	0.021797	0.712237	0.011906	0.027678	0.707075	0.018659	0.031494	0.704447	0.012436
F-statistic	3.491641* (0.0000)	21.70982* (0.0000)	2.347397* (0.0000)	3.828469* (0.0000)	18.94780* (0.0000)	2.889313* (0.00093)	3.826161* (0.00002)	16.50075* (0.0000)	2.094435* (0.018433)
Durbin-Watson	0.519713	1.932811	1.714403	0.552330	2.036227	1.769823	0.399625	1.418315	1.21480
Redundant Fixed Effects- Likelihood Test									
Cross-section F (p-value)	22.505752* (0.0000)			19.452487* (0.0000)			16.821261* (0.0000)		
Cross-section Chi-square (p-value)	1651.846878* (0.0000)			1459.498083* (0.0000)			1284.572166* (0.0000)		
Correlated Random Effects - Hausman Test									
Cross-section random	0.000000 (1.0000)			17.047842 (0.1065)			0.000000 (1.0000)		

theme' of CSR disclosures in case of fixed effects model. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate.

Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is not significantly related to CSR disclosures score having one year lag for each theme of CSR. Also the coefficients of leverage and age were found to be insignificant and negatively related to NPM while size is insignificant and positive.

In case of CSR score with two year lag for each theme, Net Profit Margin is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to only 'energy theme' and 'other CSR activities theme' of CSR disclosures in case of pooled OLS model. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and insignificantly related to CSR disclosures score with 2 year lag for each theme of CSR. Also the coefficient of leverage was found to be significant and negatively related to NPM while age is insignificant and negative. However the coefficient of size was found to be insignificant and positively related to NPM.

In case of CSR score with three year lag for each theme, Net Profit Margin is insignificantly related to most of themes of CSR disclosures at 5 per cent level of significance in case of each of three models used. However it is negatively and significantly related to only 'community development theme' with random effects model and 'other CSR activities theme' of CSR disclosures in case of pooled OLS model. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and significantly related to CSR disclosures score with 3 year lag for only 'community development theme' of CSR. Also the coefficient of leverage was found to be insignificant and negatively related to NPM while age is significant and negative. However

the coefficient of size was found to be insignificant and positively related to NPM.

4.2.6 Relationship between financial performance and total CSRD (Total CSRD as dependent variable)

This section presents the results of relationship between various selected indicators of financial performance and corporate social responsibility disclosures for 137 companies over period of ten years. There are total 137 companies in each year from 2008 to 2017. The variables of financial performance selected for the purpose of study are return on assets, return on equity and net profit margin. The control variables employed are age of firm, size of firm and debt equity ratio. Multivariate analysis is employed to examine the relationship between corporate social responsibility disclosures and three measures of financial performance. In order to study the relationship between corporate social responsibility disclosures and selected indicators of financial performance, model from McWilliams and Siegel (2000) and Lee *et al* (2013) has been adopted. In these models the dependent variables are the selected indicators of financial performance which are ROA, ROE and NPM consecutively and independent variable is Total CSRD score; with age of firm, size of firm and leverage as the control variables. Hence the three individual models adopted to study the relationship between Total CSRD and financial performances have been presented as follows:

$$13. Y_{TOCSR D} = b_{0TOCSR D} + b_{1TOCSR D}ROA_{jt} + b_{2TOCSR D}SIZE_{jt} + b_{3TOCSR D}AGE_{jt} + b_{4TOCSR D}LEV_{jt} + u_{jt}$$

$$14. Y_{TOCSR D} = b_{0TOCSR D} + b_{1TOCSR D}ROE_{jt} + b_{2TOCSR D}SIZE_{jt} + b_{3TOCSR D}AGE_{jt} + b_{4TOCSR D}LEV_{jt} + u_{jt}$$

$$15. Y_{TOCSR D} = b_{0TOCSR D} + b_{1TOCSR D}NPM_{jt} + b_{2TOCSR D}SIZE_{jt} + b_{3TOCSR D}AGE_{jt} + b_{4TOCSR D}LEV_{jt} + u_{jt}$$

where $Y_{TOCSR D}$ = Total CSRD score

ROA_{jt} = Return on Assets for j^{th} firm in t year

ROE_{jt} = Return on Equity for j^{th} firm in t year

NPM_{jt} = Net Profit Margin for j^{th} firm in t year

LEV_{jt} = Leverage or Debt Equity ratio of firm j in year t

AGE_{jt} = Age of firm j in year t

$SIZE_{jt}$ = Size of firm j in year t

u_{jt} = Error term

In order to undertake multiple regression analysis several underlying assumptions of regression models have to be satisfied. These assumptions have been tested one by one and in case of any deviances corrective measures have been employed.

4.2.6.1 Testing for multicollinearity

The multicollinearity was tested to detect if independent variables are not extremely correlated and no multicollinearity exists among independent variables. To control this problem the variance inflation factor (VIF) and Pearson correlation coefficient were investigated. So multicollinearity test was conducted on independent variables namely total

CSR score, leverage, age of firm and size of firm. The VIF ranged from 1.060577 to 1.377611 as observed in table 4.121. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 1.37 which means multicollinearity is not a serious problem in model number 13.

**Table 4.121 Testing for multicollinearity by using the variance inflation factor
(when ROA is independent)**

Variable	VIF
ROA	1.377611
LEV	1.238037
AGE	1.060577
SIZE	1.342814

Also the results Pearson correlation as observed in table 4.122 showcase that the value of correlation coefficient is less than 0.45 in case of all independent variables and most of the values are statistically significant at 5 per cent level of significance. According to Gujarati *et al* (2012) if correlation coefficient between two regressors is high, say in excess of 0.8, then multicollinearity is a serious problem. The highest value of correlation coefficient was observed between ROA and size of firm (-0.450521) which is very less than 0.8. Hence multicollinearity is not a problem for the estimation of model number 13.

**Table 4.122 Correlation coefficients matrix between independent variables
(when ROA is independent)**

Correlation (p-value)	ROA	LEVERAGE	AGE	SIZE
ROA	1.000000			
	-			
LEVERAGE	-0.389858	1.000000		
	0.0000	-		
AGE	-0.010853	-0.108378	1.000000	
	0.6882	0.0001	-	
SIZE	-0.450521	0.302965	0.168835	1.000000
	0.0000	0.0000	0.0000	-

The VIF ranged from 1.066234 to 1.148260 as observed in table 4.123. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 1.48 which means multicollinearity is not a serious

problem in model number 14.

**Table 4.123 Testing for multicollinearity by using the variance inflation factor
(when ROE is independent)**

Variable	VIF
ROE	1.148260
LEV	1.139033
AGE	1.066234
SIZE	1.282591

Also the results Pearson correlation as observed in table 4.124 showcase that the value of correlation coefficient is less than 0.34 in case of all independent variables and most of the values are statistically significant at 5 per cent level of significance. According to Gujarati *et al* (2012) if correlation coefficient between two regressors is high, say in excess of 0.8, then multicollinearity is a serious problem. The highest value of correlation coefficient was observed between ROE and size of firm (-0.343513) which is very less than 0.8. Hence multicollinearity is not a problem for the estimation of model number 14.

**Table 4.124 Correlation coefficients matrix between independent variables
(when ROE is independent)**

Correlation (p-value)	ROE	LEVERAGE	AGE	SIZE
ROE	1.000000	-	-	-
LEVERAGE	-0.177415	1.000000	-	-
AGE	0.024883	-0.108378	1.000000	-
SIZE	-0.343513	0.302965	0.168835	1.000000
	0.0000	0.0000	0.0000	-

**Table 4.125 Testing for multicollinearity by using the variance inflation factor
(when NPM is independent)**

Variable	VIF
NPM	1.014301
LEV	1.140598
AGE	1.069604
SIZE	1.153361

The VIF ranged from 1.014301 to 1.153361 as observed in table 4.125. It is mentioned in Gujarati *et al* (2012) that as a rule of thumb if VIF of a variable exceeds 10, that variable is said to be highly collinear. As seen in the table, the variance inflation factor (VIF) for all independent variables is less than 1.15 which means multicollinearity is not a serious problem in model number 15.

**Table 4.126 Correlation coefficients matrix between independent variables
(when NPM is independent)**

Correlation (p-value)	NPM	LEVERAGE	AGE	SIZE
NPM	1.000000	-		
LEVERAGE	-0.069699	1.000000		
	0.0099	-		
AGE	-0.087855	-0.108378	1.000000	
	0.0011	0.0001	-	
SIZE	-0.035496	0.302965	0.168835	1.000000
	0.1892	0.0000	0.0000	-

Also the results Pearson correlation as observed in table 4.126 showcase that the value of correlation coefficient is less than 0.30 in case of all independent variables and most of the values are statistically significant at 5 per cent level of significance. According to Gujarati *et al* (2012) if correlation coefficient between two regressors is high, say in excess of 0.8, then multicollinearity is a serious problem. The highest value of correlation coefficient was observed between leverage and size of firm (0.302965) which is very less than 0.8. Hence multicollinearity is not a problem for the estimation of model number 15. Hence by testing variance inflation factor (VIF) and Pearson correlation coefficient it is clear that multicollinearity is not a serious problem in any of the three models.

4.2.6.2 Testing for homoscedasticity

Another assumption which is to be tested is homoscedasticity which is the condition of constant variance by error term for a particular value of explanatory variable. If the variance of error term varies for different values of independent variable then the problem of heteroscedasticity exists. According to Gujarati *et al* 2012 if we persist in using the usual testing procedures despite heteroscedasticity then whatever conclusions we draw may be very misleading. In this study Breusch-Pagan-Godfrey test has been employed to detect the problem of heteroscedasticity in regression models.

Table 4.127 Breusch-Pagan-Godfrey test of heteroscedasticity for ROA as independent variable

F-statistic	9.324752	Prob. F(4,1365)	0.0000
Obs*R-squared	36.43990	Prob. Chi-Square(4)	0.0000
Scaled explained SS	27.51569	Prob. Chi-Square(4)	0.0000

As observed in table 4.127 which tests the presence of heteroscedasticity for regression model 13 with ROA as independent variable that value of Obs*R-squared for this model is 36.43990 for probability value of Chi square 0.0000 which is significant at 5 per cent level of significance. So null hypothesis of homoscedasticity is rejected and presence of heteroscedasticity is confirmed in this model.

Table 4.128 Breusch-Pagan-Godfrey test of heteroscedasticity for ROE as dependent variable

F-statistic	9.424151	Prob. F(4,1365)	0.0000
Obs*R-squared	36.81790	Prob. Chi-Square(4)	0.0000
Scaled explained SS	28.71279	Prob. Chi-Square(4)	0.0000

As observed in table 4.128 which tests the presence of heteroscedasticity for regression model 14 with ROE as independent variable that value of Obs*R-squared for this model is 36.81790 for probability value of Chi square 0.0000 which is significant at 5% level of significance. So null hypothesis of homoscedasticity is rejected and presence of heteroscedasticity is confirmed in this model.

Table 4.129 Breusch-Pagan-Godfrey test of heteroscedasticity for NPM as dependent variable

F-statistic	6.823317	Prob. F(4,1365)	0.0000
Obs*R-squared	26.85625	Prob. Chi-Square(4)	0.0000
Scaled explained SS	20.18738	Prob. Chi-Square(4)	0.0005

In table 4.129 which tests the presence of heteroscedasticity for regression model 15 with NPM as independent variable that value of Obs*R-squared for this model is 26.85625 for probability value of Chi square 0.0000 which is insignificant at 5 per cent level of significance. So null hypothesis of homoscedasticity is accepted and absence of heteroscedasticity is confirmed in this model.

As detected that problem of heteroscedasticity exists in case of all the three models with ROA, ROE and NPM respectively as independent variables, so in these models standard errors may be biased. To control the problem of heteroscedasticity in these three models robust standard errors are used to provide a better fit to these models. These robust standard

errors are also known as White's heteroscedasticity-corrected standard errors.

4.2.6.3 Relationship between CSRD and Return on Assets

The impact of CSR disclosures on Return on Assets is discussed in this section. The model used for examining this relationship proxy's financial performance by ROA as independent variable. The model as already discussed is shown below

$$Y_{\text{TOCSR}} = b_{0\text{TOCSR}} + b_{1\text{TOCSR}}\text{ROA}_{jt} + b_{2\text{TOCSR}}\text{SIZE}_{jt} + b_{3\text{TOCSR}}\text{AGE}_{jt} + b_{4\text{TOCSR}}\text{LEV}_{jt} + u_{jt}$$

It can be seen in table 4.130 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Total CSRD disclosures are negatively and not significantly related to Return on Assets at 5 per cent level of significance.

Table 4.130 Regression analysis for model with ROA as independent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	1.393634* (0.0000)	-2.294144* (0.0000)	0.639447* (0.0000)
ROA	-0.001532 (0.2018)	-0.001866 (0.3412)	-0.000996 (0.5064)
AGE	0.025141 (0.0895)	0.461649* (0.0001)	0.085692* (0.0000)
SIZE	0.028637* (0.0001)	0.210777* (0.0000)	0.074281* (0.0000)
LEV	-0.018498* (0.0033)	-0.015247 (0.4582)	-0.022792* (0.0060)
R-square	0.058353	0.591490	0.145537
Adjusted R-square	0.055593	0.544955	0.143033
F-statistic	21.14686* (0.0000)	12.71069* (0.0000)	58.12355* (0.0000)
Durbin-Watson stat	0.930716	1.198435	0.977298

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.793690	(136,1229)	0.0000
Cross-section Chi-square	1144.107389	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	149.714788	4	0.0000

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Assets is negatively and not significantly related to Total CSR disclosures. Also the coefficient of leverage was found to be significantly but negatively related to CSR disclosures while coefficients of both age and size were significant and positively related to CSR disclosures.

4.2.6.4 Relationship between CSRD and Return on Equity

The impact of CSR disclosures on Return on Equity is discussed in this section. The model used for examining this relationship proxy's financial performance by ROE as independent variable.

Table 4.131 Regression analysis for model with ROE as independent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	1.457958* (0.0000)	-2.191661* (0.0000)	0.756090* (0.0000)
ROE	-0.002031* (0.0000)	-0.001875* (0.0127)	-0.002452* (0.0000)
AGE	0.028703 (0.0508)	0.455924* (0.0001)	0.089442* (0.0000)
SIZE	0.024381* (0.0016)	0.205451* (0.0000)	0.066792* (0.0000)
LEV	-0.017757* (0.0062)	-0.013918 (0.4684)	-0.022872* (0.0074)
R-square	0.075159	0.596173	0.162450
Adjusted R-square	0.072449	0.550172	0.159996
F-statistic	27.73243* (0.0000)	12.95988* (0.0000)	66.18851* (0.0000)
Durbin-Watson stat	0.927540	1.205057	0.976309

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.659153	(136,1229)	0.0000
Cross-section Chi-square	1135.230311	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	139.235825	4	0.0000

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

The model as already discussed is shown below

$$Y_{\text{TOCSR}} = b_{0\text{TOCSR}} + b_{1\text{TOCSR}}\text{ROE}_{jt} + b_{2\text{TOCSR}}\text{SIZE}_{jt} + b_{3\text{TOCSR}}\text{AGE}_{jt} + b_{4\text{TOCSR}}\text{LEV}_{jt} + u_{jt}$$

It can be seen in table 4.131 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Total CSR disclosures are negatively and significantly related to Return on Equity at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Return on Equity is negatively and significantly related to Total CSR disclosures. Also the coefficient of leverage was found to be significantly but negatively related to CSR disclosures while coefficients of both age and size were significant and positively related to CSR disclosures.

4.2.6.5 Relationship between CSR and Net Profit Margin

The impact of CSR disclosures on Net Profit Margin is discussed in this section. The model used for examining this relationship proxy's financial performance by NPM as independent variable. The model as already discussed is shown below

$$Y_{\text{TOCSR}} = b_{0\text{TOCSR}} + b_{1\text{TOCSR}}\text{NPM}_{jt} + b_{2\text{TOCSR}}\text{SIZE}_{jt} + b_{3\text{TOCSR}}\text{AGE}_{jt} + b_{4\text{TOCSR}}\text{LEV}_{jt} + u_{jt}$$

It can be seen in table 4.132 that by using all three models namely Pooled OLS Model, Fixed effects Model and Random effects Model, Total CSR disclosures are negatively and not significantly related to Net Profit Margin at 5 per cent level of significance. Based on the results of redundant fixed effects-likelihood test the probabilities of cross-section F and Chi-square are less than 0.05 making pooled OLS model inappropriate. Further on comparing fixed-effects and random-effects models using Correlated Random Effects - Hausman Test the null hypothesis is accepted as p-value is greater than 0.05. Hence random effects model is preferred over fixed effects model. Thus on the basis of Random effects model it can be concluded that Net Profit Margin is negatively and not significantly related to Total CSR disclosures. Also the coefficient of leverage was found to be significantly but negatively related to CSR disclosures while coefficients of both age and size were significant and positively related to CSR disclosures.

Table 4.132 Regression analysis for model with NPM as independent variable

Variable	Pooled OLS Model	Fixed Effects Model	Random Effects Model
Constant	1.353524* (0.0000)	-2.289885* (0.0000)	0.613692* (0.0000)
NPM	-0.000501 (0.3265)	-0.001862 (0.1458)	-0.001255 (0.0528)
AGE	0.023574 (0.1172)	0.454844* (0.0001)	0.084346* (0.0001)
SIZE	0.031693* (0.0000)	0.213179* (0.0000)	0.077538* (0.0000)
LEV	-0.016715* (0.0040)	-0.015461 (0.4484)	-0.022548* (0.0055)
R-square	0.057078	0.593861	0.151114
Adjusted R-square	0.054315	0.547597	0.148626
F-statistic	20.65700* (0.0000)	12.83615* (0.0000)	60.74729* (0.0000)
Durbin-Watson stat	0.926506	1.211693	0.975806

Redundant Fixed Effects- Likelihood Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	11.943665	(136,1229)	0.0000
Cross-section Chi-square	1153.935708	136	0.0000

Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	138.789750	4	0.0000

White period standard errors & covariance are used.

*indicates statistically significant at 5% level of significance.

4.3 Case studies on corporate social responsibility initiatives by selected companies

The purpose of this objective is to analyze the corporate social responsibility initiatives undertaken by selected five listed companies, having manufacturing facilities in North India. The companies were selected on the basis of their willingness to respond. Both primary as well as secondary data was collected to understand the perception of citizens, employees and government officials towards social responsibility initiatives of the company. Also the implications of these activities on general public were analyzed. The primary data for fulfilling this objective was collected from the company executives and other stakeholders of the company. While secondary data was collected from sources including annual reports, websites, newspapers, magazines etc. The five companies on which respective case studies were developed are Nestle India Limited, Ambuja Cements Limited, Cipla Limited,

Vardhman Textiles Limited and Dabur India Limited. This section is further organized into following subsections discussing CSR initiatives undertaken by each individual company:

4.3.1 Nestle India Limited

4.3.2 Ambuja Cements Limited

4.3.3 Cipla Limited

4.3.4 Vardhman Textiles Limited

4.3.5 Dabur India Limited

These subparts are now discussed one by one.

4.3.1 A case study on corporate social responsibility initiatives by Nestle India Limited

Introduction

India one of the fastest growing economies in the world has a number of social problems and developmental needs to be addressed. The corporate houses in India with various resources at their disposal are capable of carrying out public welfare activities more efficiently and effectively. With an aim to tame several developmental pitfalls the Government of India made it compulsory for business houses to contribute towards societal development. By introducing various amendments in Companies Act, 2013¹³, India became first country in the world to make Corporate Social Responsibility (CSR) mandatory. As per changes introduced in the Act in 2015, every company either private limited or public limited, which either has a net worth of INR¹⁴ 500 crore or more or a turnover of INR 1,000 crore or more or a net profit of INR 5 crore or more, needs to spend at least 2 per cent of its average net profit of the immediately preceding three financial years, on corporate social responsibility activities. The activities on which the companies shall spend money in order to count their expenditure as a part of CSR expenditure were also mentioned by the Government.

Fast Moving Consumer Goods (FMCG) sector is the fourth largest sector of the Indian economy which provides employment to approximately three million people in the country, thus constituting nearly five per cent of the total factory employment in India. Within this sector, household and personal care products segment constitutes almost 50 percent of total market share followed by, healthcare products with 31 per cent and food and beverages segment comprising 19 per cent of total share. This sector is expected to grow by more than double from the present level of USD 49 billion in 2016 to USD 104 billion in 2020. With strong multinational presence, the sector characterizes of intense competition between the organized and unorganized segments, along with low operational costs and a well established distribution network. The major players within this sector in India are Hindustan Unilever

¹³ Companies Act 2013 is an Act of the Indian Parliament on Indian company law which regulates incorporation, responsibilities, directors and dissolution of companies in India.

¹⁴ INR stands for Indian Rupee which is the official currency of Republic of India.

Limited, ITC, Nestle India Limited, Dabur India Limited etc.

Nestle India Limited being a leading player in FMCG industry in India has well established its market position in various product categories. Being a pioneer in culinary segment, it offers a variety of products under Maggi brand and has regained almost 59.5 per cent market share in the first half of 2017 after facing the ban on noodles in 2015. It also has 96.5 per cent share in infant cereals segment and 65.2 per cent market share in instant pasta segment. The major brands of the company in India are Nescafe, Maggi, Milkybar, Kitkat, Milkmaid, Nestea, Natural Dahi etc.

Since establishment with the aim to curb high mortality rate by introducing and selling 'Farine Lactee'¹⁵ for consumption of infants who could not be breastfed, Nestle has made a mark as a company with values and vision to serve society while fulfilling its own business goals. In the wake of new regulatory changes introduced by Government of India, this case study was developed to study the CSR activities undertaken by world renowned Nestle in Punjab region of India. This case study will also explore the implications of CSR activities by Nestle on general public in Punjab, while discussing the perception of various company stakeholders in context to its social responsibility behavior.

Nestle Group

Nestle the world's largest food and beverage, company was founded in the year 1905 as a result of merger of Anglo-Swiss Condensed Milk Company formed in 1866 and Farine Lactee Henri Nestle established in 1877. The company is headquartered in Vevey, Vaud, Switzerland. With operations in 189 countries, it provides employment to around 323000 employees all around the world. It has 413 manufacturing facilities in 85 countries of the world. The company has more than 2000 brands ranging from global icons to local favorites. Its products include baby food, healthcare nutrition, bottled water, breakfast cereals, coffee and tea, confectionery, dairy products, ice cream, frozen food, pet foods and snacks. The company reported sales of CHF¹⁶ 89.8 billion in the year 2017.

Over 150 years of existence of Nestle Group, its corporate business principles have formed the basis of company's culture. The company's corporate business principles have been in existence since its inception, but as an integrated document they were first published in 1998. These principles focus on consumer welfare, employee welfare, human rights, suppliers and environment. So compliance with these principles serve as the foundation for the Company's commitment towards environmental sustainability and creating shared value. As asserted by Paul Bulcke (CEO) and Peter Brabeck-Letmathe (Chairman): 'Since Henri Nestlé first developed his successful infant cereal "Farine Lactée", we have built our business

¹⁵ Farine Lactee is an infant food developed by Henri Nestle by combining cow's milk, flour and sugar.

¹⁶ CHF stands for Confoederatio Helvetica Franc. It is the abbreviation for Swiss franc.

on the fundamental principle that to have long-term success for our shareholders, we not only have to comply with all applicable legal requirements and ensure that all our activities are sustainable, but additionally we have to create significant value for society.’ The company’s purpose statement clearly describes the values behind the company operations: ‘Nestlé’s purpose is enhancing quality of life and contributing to a healthier future. We want to help shape a better and a healthier world. We also want to inspire people to live healthier lives. This is how we contribute to society while ensuring the long-term success of our company.’

Nestle India Limited

Nestle first came to India in the year 1912 as The Nestle Anglo Swiss Condensed Milk Company (Export) Limited for importing and selling finished products in the Indian market. With India getting independence in the year 1947, the Government started emphasizing on local production. In response to India’s aspirations of developing the milk economy, Nestle India Limited was formed in the year 1961 by setting up its first factory at Moga, Punjab. It has its head office in Gurgaon (Haryana) and has total eight manufacturing facilities located at Moga (Punjab), Pantnagar (Uttarakhand), Samalkha (Haryana), Nanjangud (Karnataka), Choladi (Tamil Nadu), Bicholim (Goa), Ponda (Goa) and Tahliwal (Himachal Pradesh). Its four Branch offices are located at Delhi, Mumbai, Chennai and Kolkata.

Under the leadership of Suresh Narayanan, the Chairman and Managing Director of Nestle India, net sales of INR 101,351.1 million were reported during the year ending on December 2017, displaying an increase of 7.7 per cent over 2016. The net profit was INR 12,251.9 million in the 2017 fiscal year, an increase of 22.35 per cent over 2016. The company employed approximately 7527 employees, as reported in the year 2017. Nestle India Limited manufactures various products with internationally famous brand names such as nescafe, maggi, milkybar, kitkat, barone, milkmaid etc. However in the recent years, the Company has introduced many local and new products for daily consumption such as nestle milk, nestle slim milk, nestle dahi and nestle jeera raita. It launched total 30 new products and variants in the year 2016.

In 2016, the company changed the name of its corporate governance and social responsibility committee to corporate social responsibility committee and appointed Dr. (Mrs.) Swati A. Piramal who is an independent non-executive director as chairperson of the committee. The current members of this corporate social responsibility committee are Dr. (Mrs.) Swati A. Piramal (Chairperson), Mr. Suresh Narayanan (Chairman and Managing Director of the Company) and Ms. Rama Bijapurkar (Independent Non-Executive Director).

Nestle India Limited – Creating Shared Value in Punjab

‘As a Company we maintain high standards and values. Stakeholders have seen that we are ethical and responsible with strong business principles. In fact, the way we do business

is to Create Shared Value.’

Etienne Benet (Managing Director)

The inception of Nestle India Limited was carried out in the year 1961 by setting up its first factory in Moga, Punjab. The company following its inherent philosophy of creating shared value started educating, advising and helping local farmers in various aspects like increasing the milk yield of their cows through improved dairy farming methods, in irrigation, in scientific crop management practices and in helping them with the procurement of bank loans. As a result Moga has been transformed not only into a prosperous and vibrant milk district, but also as a thriving hub of industrial activity. By establishing milk collection points throughout Punjab, Nestle Moga collects more than 1.3 million kgs of milk per day from over 110,000 farmers. The products manufactured at Moga plant are mainly lactogen, cerelac, milkmaid, maggi noodle, maggi tomato ketchup and everyday dairy whitener.

The concept of Creating Shared Value (CSV) which means generating economic value in a way that also produces value for society by addressing its challenges; was first introduced by Porter and Kramer in their article ‘Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility’ in the December, 2006 issue of Harvard Business Review. Though this concept gained recognition much later but it was prevalent and part of Nestlé’s philosophy way before. The way company ensured its success in India, since 1961 while improving and developing economic status of local communities brings attention to the fact that this approach of CSV was deeply ingrained in its value system and culture since incorporation. It has helped the company in fostering a relationship of trust and mutual respect with the communities in which it operates and contributed towards its growth as a global company. This approach is described as ‘Saanjhapan’ in India.

The main focus areas of CSV agenda of Nestle are nutrition, water and rural development. In order to ensure happier and healthier lives of individuals and families, the company has introduced several programmes like Nestle Healthy Kids Programme, Nutrition Awareness Support Programmes, Swasth Janani Swasth Shishu Programme and Fortification programmes. From communities’ perspective programmes like village women dairy development programme, sanitation projects in schools, global youth initiatives like Nestle needs Youth have been launched. Also supplier engagement programmes to improve the livelihood of dairy farmers and coffee farmers are carried out. Company is also making efforts to reduce water usage across all its operations.

Assimilating Sustainable Development Goals with Creating Shared Value Approach

With a vision to end poverty, inequality and tackle climate change by year 2030, 17 Sustainable Development Goals (SDGs) framed by United Nations Organization were adopted by 194 countries in September, 2015. Nestle had an opportunity to participate in development of these goals so as a part of the company’s commitment to deliver on these

goals, the company has integrated these goals in its Shared Value framework.

Nestle In line with its purpose to enhance quality of life focuses its social responsibility work on three main areas – individuals and families, communities, planet.

1. *Individuals and Families perspective* : Nestle believes that it can play a crucial role in enabling a healthier life for individuals by supporting and providing them with healthier food choices and by inspiring them to lead healthier lives through building, sharing and applying nutritional knowledge.
2. *Communities' perspective*: Nestle can support local communities in the areas of its operation by enhancing rural livelihoods, by respecting and promoting human rights and by promoting decent employment and diversity.
3. *Planet perspective*: Nestle focuses on caring for water, acting on climate change and safeguarding the environment to steward resources for future generations.

By harmonizing SDGs with its CSV approach, the company has developed three comprehensive ambitions to achieve its goals along with supporting achievement of SDGs by the year 2030. These targets are:

1. *Enable healthier and happier lives*: this will include helping 50 million children lead healthier lives;
2. *Help develop thriving, resilient communities*: this will include helping to improve 30 million livelihoods in communities directly connected to its business activities; and
3. *Steward resources for future generations*: this will include striving for zero environmental impact in its operations.

Nestle India Limited in rough weather

Maggi Noodles, the Nestle India's largest revenue earning product faced a nationwide ban for six months on 5 June, 2015 by the Food Safety and Standards Authority of India, due to the allegations that it contained monosodium glutamate (a flavour enhancer) and lead in excess of prescribed limits. So between 5 June and 1 September 2015, Nestle had to recall 38,000 tones of Maggi noodles from millions of retail shelves and destroy them. It was ironic that a company that brands itself as the 'world's leading nutrition, health, and wellness company' fell short on quality control especially with a harmful substance like lead.

On 11 June, 2015 Nestle filed a suit against Food Safety and Standards Authority of India in Bombay High Court. On 30 June 2015, Bombay High Court allowed Nestle India to resume importing Maggi. Although Maggi was still banned in India it was declared safe by regulators in Singapore, U.K., Canada and Australia. On 13 August 2015, the Court allowed Nestle to resume its sales on the condition that 90 additional samples of Maggi were cleared by properly accredited laboratories. On 16 October 2015, Bombay High Court cleared Nestle to resume manufacturing Maggi and on 9 November 2015 Maggi was relaunched in the Indian market.

The company suffered a loss of almost half a billion dollars, as a result of, the Maggi controversy in India. In a statement announcing the financial results of Nestle India Limited, the Chairman Suresh Narayanan said that ‘the impact of the Maggi crisis extended to not just factories and employees but also to partners, suppliers, farmers, retailers and customers’. During the controversial period the stocks of Nestle India Limited performed very poorly in the market. Nestle India reported a decline of 17.2 per cent in its net sales for the year ended in December 2015 as a result of the Maggi setback, also net profit for the year fell to INR 5632.7 million, from INR 1,1846.9 million in the previous year.

However the company very gracefully bounced back and Maggi managed to regain 60 per cent of market share by 2016, which is within a very short period of time and reported a net profit of INR 9265.4 million.

CSR Activities carried by Nestle India pan India

Though the company has been actively involved in CSR initiatives since its inception, it started incorporating CSR expenditure as a part of its profit and loss account in the year 2014 in response to regulatory requirements. In year 2017 as reported in its annual report the company spent INR 269.1 million on CSR activities along with giving an account of the activities or programs on which this amount was spent.

Table 4.133 Year wise CSR expenditure by Nestle India Limited

Year	CSR Expenditure (INR in Millions)
2017	269.1
2016	313.6
2015	206.1
2014	85.1

On the basis of its CSV agenda, the company has narrowed down three areas of focus namely nutrition, water and rural development to carry out its social responsibility initiatives along with persistent efforts towards maintaining environmental sustainability. Since these three areas serve as point of intersection with respect to needs of company and society, so company has rolled out several responsibility programmes to mark development by addressing various issues and loopholes in these arenas.

Nutrition: Being a food and beverage company nutrition is the core area in which company deals, so by ensuring and striving towards provision of nutritious food it serves the interests of society while fulfilling its own aims. In order to create a positive impact on society through its area of expertise, Nestle is persistently making efforts towards making its products more nutritious and affordable to the society. For instance, the entire range of Cerelac which is food for infant was renovated by fortifying with Iron to ensure provision of essential nutrients to infants.

The company launched '*Start Healthy Stay Healthy Programme*' in 2010, in order, to create awareness among mothers about nutrition from pregnancy to toddlerhood. Under this programme more than 980 breastfeeding rooms were installed in clinics, across 150 cities of the country and for assistance, a breastfeeding room locator app was developed to locate the facilities. Also in 2013 '*Super Baby*' campaign was initiated which generated half a million pledges, which was later converted into an action oriented social campaign to reinforce the importance of breastfeeding with the message 'When breast fed it shows' to encourage breast feeding of infants.

In order to create awareness about health and nutrition among school age children in rural areas the company launched the '*Nestle Healthy Kids Programme*' in year 2009 in partnership with six leading universities of the country. By year 2017, the programme has reached out to over 200000 adolescents and to further promote its effectiveness, '*Magic Bus model*' was adopted in 2014 with a view of engaging children through sports and activities as a medium to bring the change. This Magic Bus model has reached out to 200000 children across 21 states till date. It engages kids in interactive sessions to receive nutrition and health knowledge and encourages them to play regularly.

The project '*Jagriti*' was launched in collaboration with Mamta Health Institute for Mother and Child, to educate and encourage good nutrition and breastfeeding practices among community. In 2017, the project was extended across 15 districts in 7 states and 1 union territory and aims to reach out to 3 million beneficiaries by 2018. This project is a successor to project '*Swasth Jananee Swasth Shishu*' which was conducted by the company in 2015 and engaged more than 100,000 people living in slum conditions in Delhi.

'*Project Serve Safe Food*' carried out in association with Government of India to train street vendors on health, hygiene, food handling, food safety, garbage disposal and entrepreneurship was organized in New Delhi in 2016-17, thus engaging 500 street food vendors. This programme was rolled out in a phased manner since 2016 in Goa followed by Rajasthan, Uttar Pradesh and Kerala; thus conducting training programmes for over 4800 street food vendors till date. At the end of the training all the participants were also awarded with training kits and certificates. Nestle Nutrition Institute organizes conferences and seminars from time to time to share knowledge regarding nutrition with various healthcare professionals.

Water: Water is essential for both society and the operations of the company; hence making efforts in context of water conservation is mutually beneficial and major area of concern these days. Owing to the scarcity of clean and drinkable water in society, company proactively started addressing this concern by constructing clean drinking water facilities in schools around all its factories in 1999. By the year 2017, the company has built around 257 water tanks benefitting over 140,000 students in the six states of country. These water tanks source

water from deep below ground level and store it in hygienic tanks enclosed in a specially designed facilities to preserve its qualities. To ensure the maintenance of tanks and availability of safe drinking water, periodic water quality checks are carried out involving the school and surrounding community through joint ownership of the water tanks. Since 2015 the company in partnership with the NGO Enable Health Society, provides drinking water treatment plants in the locations where groundwater does not meet quality standards.

It conducts several '*Water Awareness Programmes*' reaching out to over 92,500 students with the goal to ensure hygienic and sustainable water use by showcasing water saving and purifying demos, such as the drip method, solar water disinfection process and rain water harvesting models to increase their understanding. Also in 2017, company in association with Government of Rajasthan identified 10 Public Health Sample Units to provide clean drinking water through its NGO partner Piramal Sarvajal. Under this single phase bore-wells and water tanks with efficient water filtration and delivery mechanism will be constructed.

It rolled out a programme to create water awareness in collaboration with Government of Punjab to guide farmers on direct seeding of paddy thus ensuring optimum water usage, thus engaging 25000 farmers across 16 districts in Punjab. Also a water stewardship initiative was launched in 2015, along with AgSRI at the Kabini river basin in Karnataka to promote the System of Rice Intensification and the Sustainable Sugarcane Initiative. The project aimed to reduce the agricultural water withdrawal from the Kabini catchment area, while improving agricultural productivity by setting up demonstration farms and training farmers on ecologically sustainable practices. Through the NESCAFÉ plan, Nestle is also raising awareness and providing technical assistance to coffee farmers on water conservation in irrigation, soil management, waste water recycling, and water use optimization.

In the year 2015, company implemented '*Project Zer'Eau*' in Moga factory to enable recovery of 50 per cent of water from cow milk collected everyday and then recycling it to reduce ground water withdrawal by 25 per cent. Over last 15 years the company has reduced the water usage across all its factories by 51 per cent and has reduced waste water by 57 per cent. A number of water initiatives illustratively installation of Reverse Osmosis Plant at one of its factories, recycling of effluent treatment plant water at more than one site, redesigning of CIP (Cleaning In Place) circuits for optimal water consumption, reduction of usage of bore well water and replacing it with recycled water are being carried out by the company at its manufacturing facilities in order to achieve these goals.

Rural development: The company has always focused on well being of farmers and rural communities, who are also major suppliers of raw material to the company, and whose prosperity ensures the growth and opulence of business as well. In order to support the

development of milk farmers with small holdings, company provides them with technical assistance; veterinary services and subsidized medicines to increase their milk production and quality. Till date the company trained almost 100000 milk farmers and 2200 coffee farmers on sustainable agricultural practices.

Nestlé became a member of the Roundtable on Sustainable Palm Oil (RSPO) in 2009, which has developed principles and criteria for sustainable palm oil production. The company is fully committed to the responsible sourcing of palm oil in its supply chain. Under its '*Village Women Dairy Development Programme*' it has educated women on good breeding and feeding practices for cattle along with animal care and treatment to increase milk production and quality by following sustainable agricultural practices. Till date this programme has empowered 68400 women dairy farmers.

In order to raise awareness about girl child education, company changed the packaging of its most iconic brands maggi, nescafe and kitkat in support to '*Educate the Girl Child Programme*'. This programme being one of the largest community programmes to educate underprivileged girl children across India is being carried out in association with Nanhi Kali. Also company sponsored the construction of 430 sanitation facilities at various schools, around its manufacturing facilities thus benefiting around 150000 girl students across 11 states in India.

The company also supported the Indian Cancer Society in conducting specialized checks and routine health checks for men and women in the suburban localities of Mumbai (Maharashtra). As part of its efforts in response to natural disasters, the company supplied packaged food and beverages, including milk, coffee and instant noodles to the affected people in Assam and Bihar during 2016 and in Chennai and Nepal during 2015.

Environmental Sustainability: With its commitment towards environmental sustainability, Nestle has always strived towards maximizing production while minimizing the consumption of natural resources and reducing wastage and emissions at all its production sites. Over last 15 years, company has made continuous efforts to reduce its energy usage by 43 per cent; by undertaking several initiatives which include introducing LED lighting and energy efficient fans and pumps in factories, installation of heat and energy recovery equipments, optimization of steam consumption and steam auditing of its factories.

Nestle also reduced the emission of greenhouse gases by 51 per cent by introducing several energy reduction projects over years across all its manufacturing facilities like sourcing of green power at one of its factories and installation of solar power plant at another of its factories. It also undertook an initiative of reusing spent coffee grounds as fuel for internal combustion at its Nanjangud plant, thus reducing CO₂ emissions.

Also with a goal to reduce the environmental footprint of its packaging materials, the company incorporated labeling as per the Nestlé policy on environment which includes

identifying the material type to determine its recyclability, anti-litter and recycle logos on products with a motive to remind its consumers to dispose it in an environment friendly way. In the previous year almost 35 per cent of recycled material was used in the packaging, while reducing around 800 tonnes of packaging material through packaging optimization.

Stakeholders viewpoints

In order to understand the opinion of several stakeholders regarding CSR initiatives undertaken by company at various locations, interviews and field visits were conducted. As Nestle Moga collects milk throughout Punjab so keeping in view its Creating Shared Value Agenda it conducts its CSR activities all around the Punjab. Major initiatives carried out in Punjab area are:

- *'Nestle Healthy Kids Programme'* which is carried out in partnership with College of Home Science of Punjab Agricultural University, Ludhiana in several government schools of Punjab
- *'Sanitation facilities'* are constructed in government schools for girl students throughout Punjab
- Educating and training women towards entrepreneurship by conducting seminars throughout rural Punjab under *'Village Women Dairy Development Programme'*
- Installing *'Clean Drinking Water facilities'* in government schools throughout Punjab in partnership with Piramal Sarvajal

The employees interviewed appreciated the company for creating a culture of work-life balance for its employees. They also talked about the job satisfaction they achieve as they know that under the CSV agenda of the company they are working towards the common good of the society while performing their duty towards the organization.

Nestle has, as part of its CSR initiative, contributed immensely towards the development of basic health and hygiene facilities in various schools throughout the Punjab. A field visit was conducted in the government schools of villages Ajitwal and Boparai Kalan. The need for clean drinking water is desperately felt, especially during summer months and rainy season, when shortage of water and water contamination become major issues to be faced by several schools in our country. Initially, only drinking water tanks were constructed in Ajitwal Primary School and Boparai Kalan High School, but later on, a Water Purification System, which included a Reverse Osmosis plant, was also installed, under the expert guidance of officials of Nestle. As per information gained from school staff, Nestle conducts regular visits to ensure proper maintenance and upkeep of the RO system and the water tank. Any fault or irregularity is dealt on priority basis by the proactive team of the company's CSR unit. This step of responsibility towards post-installation maintenance and repair is even more crucial. The schools do not have to worry about expenses for repair and maintenance, as a

fully functioning unit by company itself is taking care of these throughout the year. Installation of RO units has directly benefitted the health and lives of all the staff- members and students of these schools. Upon interaction with the school staff and students, it was found that with the installation of RO system, the water based health issues amongst the staff and students have considerably reduced. This facility is highly appreciated by the respective school management, as earlier; there were no proper facilities with no access to clean drinking water. Both the schools acknowledged and appreciated the positive impact of this project.

Another great project and initiative towards the betterment of schools by Nestle, is construction of separate toilet facilities for girl students. Lack of proper sanitation facilities is one of the major issues being faced in government schools throughout India. This was specially felt by the girl students as they either had to use same toilets meant for boys or defecate in the open. Apart from the humiliation, there was a serious concern regarding the health and hygiene where boys and girls used the same toilets. Also the schools with no toilet facilities offered a serious threat to the safety and security of the girl students. Ajitwal School is the first in this region where Nestle has installed the pre constructed toilets. The project took only a couple of days to install as the toilet chambers were pre-fabricated units which had to be placed and installed in the school premises with the coordination of the concerned school administration. This project has been highly appreciated by the school. Nestle is now being approached by various other schools in several villages regarding the same.

In an interview with a government official, Nestle was praised for the positive change brought in the lives of school children and village residents, by its project for clean water and sanitation in local schools. Apart from the above mentioned CSR activities, Nestle has also been involved in other activities like providing training on sustainable farming, health and nutrition, cattle care, women entrepreneurship and dairy production. Workshops are being regularly conducted in village community centers, schools, milk collection points, as well as in the main premises of the Nestle Moga Plant.

Under the Nestle Healthy Kids Programme, training is given to the school children regarding food, nutrition and hygiene, by providing them with books to help them understand the importance of a healthy lifestyle. This programme is carried out in partnership with the Department of Home Science of the Punjab Agricultural University, Ludhiana. Also, competitions are organized in village schools, by distributing certificates and prizes to successful students. This initiative helps in inculcating in them the habit of healthy eating. Apart from this, lectures on topics like avoidance of junk food, saving water and electricity etc are also delivered.

Also training is given to farmers and milk collection agents regarding the production, care and proper storage of milk. A dedicated team of doctors and agriculturists undertakes regular visit to all villages and milk collection points. They keep organizing several seminars

and training workshops for the farmers, in which they educate them about different kinds of crops/fodder for the cattle and the nutritional value of the same for them. Also, as the milk quality control is given prime importance through these seminars and training workshops, farmers are educated:

- 1) To refrain from use of certain kinds of medicines/drugs for the cattle
- 2) About the health concerns of the cattle and ways to tackle them
- 3) About the type of fodder to be used for different types and ages of cattle.

Not only this, premier quality fodder and medicines are supplied at subsidized prices to their milk supplying partners. It follows a collaborative approach while working with its suppliers which means treating farmers as partners rather than as contractors and make investments in the long-term sustainability of the supply chain instead of focusing on short term profits.

Association with Nestle has ensured fair prices and regular income for the dairy farmers. Apart from educating the local farmers, the CSR team also educates the local veterinary doctors against certain medicines, as their use might affect the quality of milk and thus make it harmful for human consumption. Farmers are educated and encouraged to organize their available resources in a way to maximize their output and income. There have been number of instances where farmers have experienced an exponential growth from ownership of just one cow to one fifty cows, simply because of the training, guidance and support of the Nestle Group.

General public appreciates the social development work done by Nestle Limited. The factory has generated employment both directly and indirectly thus contributing positively towards economic development of the local community. With its dairy development heritage in Punjab, the company has changed and uplifted the financial status of thousands of farmers. It has educated rural farmers on commercial dairy farming, sustainable agricultural practices, better calf management, shed expansion practices etc. By provision of regular training and technical assistance to local farmers the quality and productivity of milk has increased over years thus ensuring better income and standard of living for people in rural areas. Also by educating the rural women on dairy development practices it has empowered rural women by making them financially independent, confident and increased their total household income.

By construction of sanitation facilities and provision of clean drinking water at local government schools which lack in such facilities the company has fostered a feeling of trust and compassion for itself in the local community thus motivating them to associate with company. By conducting programmes and seminars on nutritional needs it has inculcated sense of hygiene and consciousness about nutritional needs thus contributing towards growth of healthy individuals and future generations. By making such efforts the company has built its reputation and marked its presence throughout Punjab thus engaging dairy farmers all

around Punjab in its milk collecting operations.

Conclusion and implications

Owing to its years of social involvement and partnership with local farmers, Nestle has established a special bond of trust with the local community. By carrying out several initiatives in health, sanitation and women empowerment domain Nestle has been serving the local community since long. However with the Government intervention of making CSR expenditure mandatory for companies, the participation of other companies is also increasing in these social responsibility areas. Thus along with implementing its currently running programmes on health, women empowerment and sanitation, Nestle should explore new issues in CSR domain as per local requirements. Also with the entry of new industry players like Verka in Punjab which is offering comparatively higher prices to the local dairy partners for their supplies, the company may face intense competition in the coming times thus it will have to make more efforts towards differentiating itself in every aspect.

Working on shared value approach, the CSR initiatives by Nestle in Punjab are creating value for both local community and strategically benefitting the company as well. In accordance with a study published in Harvard Business Review (Meier and Cassar, 2018) more visibility and respect is commanded by companies contributing selflessly towards society than by the ones using CSR instrumentally or strategically. So accordingly Nestle can undertake CSR initiatives not only for the communities that are working with it and living around its manufacturing plants but also for other needy communities living all across India. Taking inspiration from another industry player Dabur India Limited, Nestle should also consider collaborating with its packaging suppliers and third party service providers towards creating recycling stations for consumer waste. This initiative would further help the company in reducing the environmental footprints of its packaging materials.

Farming community is one of the major partners of Nestle, as main supplier of raw material for most of its products. In Punjab due to high debt burdens and low income, the rate of farmer's suicides has been continuously increasing. Nestle in partnership other companies can work towards addressing this major social issue in Punjab by establishing a Farmer Suicide Relief Fund. The partner companies can mutually agree to divert a certain percentage of their total prescribed CSR expenditure for the year towards this Farmer Suicide Relief Fund.

4.3.2 A case study on corporate social responsibility initiatives by Ambuja Cements Limited

Introduction

Indian Cement Industry is the second largest producer of cement in world accounting for nearly 6.9 per cent of worlds total cement production. By giving employment to more than one million people either directly or indirectly it serves as crucial part of Indian economy.

Due to rise in infrastructural projects and construction activities there is a continuous increase in demand of cement throughout country. With the current capacity of 425 million tones as on September, 2017 the total cement production capacity of India is expected to touch almost 550 million tons by 2025. In India, 20 major companies constitute 70 per cent of country's total cement production with major players like Ultratech Cement Limited, Shree Cement Limited, Ambuja Cements Limited, ACC Limited etc.

Ambuja Cements Limited is recognized as one of the most trusted brands in Indian Cement Industry. With ACC Limited becoming its subsidiary in August 2016, both companies together have an annual cement capacity of 63 million tons. The company reported net sales of INR¹⁷ 10.24 billion by selling around 22.95 million tons of cement and net profit of INR 12.5 billion in the fiscal year 2016-17. With its headquarters at Ambujanagar (Gujarat) it carries out its business with the help of more than 48000 dealers and retailers in India and shares its presence in 90 countries across the world.

Ambuja Cements Limited

Ambuja Cements Limited was founded by Narotam Sekhsaria and Suresh Neotia in April 1983 as Gujarat Ambuja Cement Limited. The principal activity of the company is to produce, manufacture and market cement and clinker for both domestic and export markets. It has five integrated cement manufacturing plants located at Ambujanagar (Gujarat), Darlaghat (Himachal Pradesh), Chandrapur (Maharashtra), Rabriyawas (Rajasthan) and Bhatapara (Chattisgarh) respectively. The eight cement grinding units of the company are located at Roopnagar (Punjab), Bathinda (Punjab), Sankrail (West Bengal), Farakka (West Bengal), Roorkee (Uttarakhand), Dadri (Uttar Pradesh), Nalagarh (Himachal Pradesh) and Magdalla (Gujarat).

With current cement capacity of 29.65 million tons, the company runs total 30 Ambuja Knowledge Centers (AKCs) across India which serves as knowledge sharing platform among various construction professionals. It was the first company in India to introduce the concept of bulk cement movement by sea and currently has its bulk cement terminals located at Muldwarka (Gujarat), Panvel (Maharashtra), Cochin (Kerala), Surat (Gujarat) and Mangalore (Karnataka). The company provides employment to almost 5183 employees permanently and follows 'I CAN' philosophy which gives its employees the authority to set their own targets and thus freedom to achieve their set goals.

True to its vision 'to be the most sustainable and competitive company in our industry' Ambuja Cement has proved itself as an industry leader for using resources in a responsible manner and meets almost 6.5 per cent of its energy needs through renewables. It is the only water positive cement company in India, which gives back to society almost 5

¹⁷ INR stands for Indian Rupee which is the official currency of Republic of India.

times the water used by it in its operations. By burning more than 50,000 tons of plastic waste in kilns which is equivalent to 1.54 times of total plastic used in its operations, Ambuja has become a plastic positive company. It also utilizes waste fly ash produced in its thermal power plant as a raw material for manufacturing 25 per cent of Portland Pozzolana Cement (PPC), a major product comprising almost 93 per cent of company's product portfolio.

Sustainability at Ambuja

Ambuja with an aim to make earth a better place became a life member of Global Compact Network India (GCNI) in 2016. It has already signed the declaration of India Business and Biodiversity Initiative (IBBI) and has been working towards conservation of water resources since long thus making a huge progress. To protect environment and maintain sustainability Ambuja served as an active member of Cement Sustainability Initiative (CSI) India of World Business Council for Sustainable Development (WBCSD) for implementing India specific 'Low Carbon Technology Road Map for Cement Industry'. With a vision to end poverty, inequality and tackle climate change by year 2030, 17 Sustainable Development Goals (SDGs) framed by United Nations Organization were adopted by 194 countries in September, 2015. Taking guidance from these SDGs the company has developed Sustainable Development Ambition 2030 which gives it a strategic direction to addresses challenges in four broad thematic areas namely climate, circular economy, water & nature, and people & communities.

Ambuja has also devised a triple bottom line accounting method called True Value Methodology in association with KPMG¹⁸ in 2013. This accounting methodology helps it in making a qualitative measurement of its interaction with the environment and society thus helping it in identifying various cost-effective projects and increases its earnings and true value. This method of accounting comprising of three pillars sustainability which are people, planet and profit helps the company in understanding its present position and make efforts for consolidating its position in response to social and environmental changes.

Ambuja's CSR policy and its implementation

The Corporate Social Responsibility Committee headed by Mr. N.S.Sekhsaria was constituted on May 3, 2013 at Ambuja's board meeting well before mandating it by Government of India in 2015. The committee comprising of seven members, provides guidance on formulation and monitoring of corporate social responsibility policy of the company. It also recommends the CSR activities to be undertaken by company along with ensuring compliance with the laws, rules and regulations governing the CSR. With an aim to streamline and carry out its CSR activities more efficiently and in a focused way, the company established a foundation and a trust which is discussed as under:

¹⁸ KPMG stands for 'Klynveld Peat Marwick Goerdeler' which is a professional services company.

Ambuja Cement Foundation (ACF): It was founded by Mr. Narotam Sekhsaria to carry out CSR activities on behalf of Ambuja Cement Limited. Registered in 1993 this foundation operates in 12 states encompassing 22 locations and 928 villages across India engaging almost two million people till date. This foundation carries out various programmes for uplifting social and economic status of marginalized sections of society around its manufacturing facilities. Working in line with its mission to ‘energize, involve and enable communities to realize their potential’, it carries out several rural development projects in collaboration with local masses, NGOs and government. Most of funds for running this foundation are provided by its parent company Ambuja Cements Limited along with some contribution by local communities, government and other donor agencies. Till date ACF has won several awards and recognitions both nationally and internationally for its service towards society and environment.

Ambuja Vidya Niketan Trust (AVNT): It is a non-profit making trust working towards ensuring quality education towards wards of employees of the company and other children from communities living around its manufacturing facilities. This trust operates 5 schools in 5 states and provides excellent facilities for overall growth and development of its students.

CSR activities carried by Ambuja Cements pan India

Ambuja has been receiving prestigious “CII Sustainability Award” consecutively for 8 years since 2010. As per new government regulations the company in accordance with its average net profit was supposed to spend INR 277.4 million in 2016-17 whereas it has spent INR 587.9 million which is almost double the prescribed amount on various CSR activities by the company. As seen in table 1 the amount spent by it on various CSR activities has been exceeding the stipulated amount as per Government recommendations since years.

Table 4.134 Prescribed and actual CSR expenditure by Ambuja

Financial Year	CSR expenditure prescribed as per government regulations (INR in Millions)	CSR expenditure actually made by the company (INR in Millions)
2016-17	277.4	587.9
2015-16	297.8	593.7
2014-15	346.4	409.8
2013-14	340	384

Although Ambuja has been carrying out its social responsibility initiatives through Ambuja Cement Foundation (ACF) since 1993, it started reporting expenditure in 2012. The data in table 2 proves that Ambuja has been spending more than 2 per cent of net profit on CSR activities since years in spite of the mandate brought by the Companies Act in 2015.

Table 4.135 CSR expenditure by Ambuja

Year	CSR Expenditure (INR in Millions)	Percentage of Profit after Tax (PAT) (%)
2016-17	587.9	4
2015-16	593.7	6.12
2014-15	409.8	5.07
2013-14	384	2.56
2012-13	525.7	4.06
2011-12	390.8	3.07

The company carries out its CSR initiatives across India in the following areas:

Water Resource Management: Ambuja has been declared 100 percent water positive company by saving almost 75 million liters of water at various construction sites and 14 million liters by installing rainwater harvesting systems across 519 towns in India. More than 22 water harvesting projects were constructed by it in various villages of Rajasthan. It also permanently reversed the trend of salinity on over 15600 hectares of agricultural land in 83 villages in Gir-Somnath district of Gujarat, which had occurred due to continuous ingress of saline water from droughts into groundwater and coastal agricultural land. With its motto of ‘giving more than we take’, it has carried out several initiatives in Gujarat, Rajasthan and Andhra Pradesh thus engaging more than 40000 persons. Targeting to become over six times water positive by 2030, out of every 6.6 million cubic metres (Mm³) of water used by it, recycled water constitutes almost 1 Mm³. Various initiatives undertaken by company include setting up Roof Rain Water Harvesting Structures (RRWHS), enhancement of water sources by installing percolation wells and check dams, farming low water intensive crops, and creation of a potable water distribution system.

Agro-based livelihood: As most of communities around Ambuja’s manufacturing facilities are involved in agriculture so to assist them company has developed various agro based livelihood programmes focused on sustainable agricultural practices thus reaching out to almost 130000 farmers. The company engages various State Governments, Krishi Vigyan Kendras, agricultural universities and NABARD to carry out successful implementation of these projects. As an implementing partner of ‘Better Cotton Initiative’ it supported almost 44826 farmers in Chandrapur (Maharashtra), Bathinda (Punjab), Kodinar (Gujarat), Rabriyawas (Rajasthan) and Nadikudi (Andhra Pradesh) to use sustainable practices for producing cotton and hence increasing their production by 30 per cent. In collaboration with IDH, Netherland it also initiated ‘Sustainable Spice Initiative’ to promote spice cultivation in India thus involving 3153 farmers who produced 6801 tons of cumin and 8239 tons of chillies. It has reached out to more than 10000 farmers in Bhatapara (Chhatisgarh), Farakka

(West Bengal), Sankrail (West Bengal) and Chandrapur (Maharashtra) under its 'System of Rice Intensification programme' initiated since 2009. The company has been supporting 2296 farmers in Gujarat and Rajasthan to diversify crops and cultivate vegetables across 1616 acres of land thus promoting micro irrigation and other technological interventions to improve their income. Also it creates awareness and has helped almost 1994 farmers avail the benefits of government insurance scheme named Pradhan Mantri Fasal Bima Yojana (PMFBY). It also assists farmers in establishment of Kisan Clubs for sharing knowledge and building links with market.

Ambuja introduced aquaculture in interior regions of India with the help of 20 farmers from Chandrapur, Maharashtra. Along with fish cultivation the aquaculture pond helped these farmers use water for regular Kharif crop during dry spells and helped in water recharge. This practice is also followed in Farakka, Sankrail and Kodinar in Maharashtra. Under 'Krishi Mobile Project' the company started a mobile application for sending voice messages on crop management regularly to almost 2000 farmers in Kodinar, Gujarat. It also serves as a platform for interaction between these farmers and agriculture experts. *Pashu Swasthya Sevikas* model has been initiated to train women in primary care and cattle breeding. Also 129 camps were organized to treat almost 12000 cattles in various areas and to prevent the spread of Foot and Mouth Disease 51352 cattles were vaccinated. Farmer Producer Organizations (FPOs) to improve collective bargaining power of farmers are built totaling 11 in number. These FPOs allow farmers in remote areas to procure inputs at low cost and get reasonable price for their produce. Krishi Vigyan Kendra (KVK) located at Ambujanagar conducts regular seminars and training programmes for farming community for creating awareness about latest and best technologies in agriculture. Also it introduces farmers to a variety of Alternative Fuel Resources (AFR) where they get paid by Ambuja to provide bio-wastes like sugarcane trash, leaves, cotton stalk, wheat straw and other crop residues as biomass.

Skill and Entrepreneurship Development: Skill and Entrepreneurship Development Institute (SEDI) is a functional structure to promote productive employment and micro-enterprises thus offering 30 training courses to 36000 youths across 12 sectors in remote areas through its offices in 20 locations. It facilitates on-the-job training for its students and hosts job fairs and conducts campus interviews for its students. Physically handicapped students are encouraged to start their own business after being trained with skills like smart phone repairing, front office and retail. It also helps its students in applying for and receiving loan proposals to support development of new businesses. Almost 3010 new businesses have been established by graduates from SEDI.

Healthcare promotion: The company has trained almost 352 local women as Sakhis or community health workers. These women promote and address health issues in the

community by focusing on Maternal & Child Health. As a result the mortality rate has reduced in the project areas namely Bhatapara, Chattisgarh and Farakka, West Bengal. The company also conducts regular tests for anemia and malnourishment among young mothers and their children and also distributes various nutritional supplements among patients. As a commitment towards Swachh Bharat Abhiyan the company has set a target to make all its 259 core villages Open Defecation Free, out of which 95 villages have been declared with 100% toilet coverage. Till date company covered 12000 households and 176 schools under its sanitation initiative by forming Village Development Committees (VDCs). The company also encourages villages to install RO plants; it also constructs soak pits to keep villages clean, and conducts hand washing sessions at village schools. The company also provides curative services to rural villages via mobile medical vans, which bring doctors and medicine to villagers regularly. In 2016-17 almost 18,512 beneficiaries have been served by these diagnostic centers by conducting 229,070 tests and 6416 X-rays. Ambuja's Kukudsath village in Chandrapur, Maharashtra was declared as a 'Smart Village' as per government norms in 2016-17 and awarded Rs.10 lakh cash prize.

Through various adolescent health programmes the company has trained 53 peer educators thus reaching out to 8295 adolescents and empowering them with information about issues like reproductive health, anemia prevention, HIV/AIDS and nutrition. These adolescent peer educators also organize various events like Health Day, No Tobacco Day, Rallies and other initiatives in various schools. With the goal to reduce the incidence and impact of oral, throat and lung cancer, the company makes various efforts to empower village women and communities to create tobacco free villages. Ambuja runs 'Train the Trainer programme' which is implemented in 71 villages across 10 locations to eradicate tuberculosis and has already identified 112 TB patients. In 2015-16 company launched a program to tackle various non communicable diseases like diabetes, cardiac problems, cancer (with more emphasis on oral, breast and cervical cancers), respiratory disease, women's health and mental health problems. It was carried out in 4 locations thus reaching out to 97960 people across 18464 households. Also various specialty camps are organized at various places to tackle health issues like cataract, diabetes, gynecological issues, child health, hypertension and cardiac issues.

Education promotion: The company runs schools in each of its five integrated plants to provide education to the wards of employees of Ambuja and children from nearby villages. Also it appoints Balmitras to help children understand subjects like math, science and english using varied teaching and learning methods. The company is involved with almost 390 education centers across the country in enhancing their quality of education by helping them in up-grading facilities, infrastructure development, starting reading clubs and math laboratories etc. Till date it has helped 15 Government schools and 15 Anganwadi's to

achieve ISO certification. The company also organizes various events like Balmela, Summer Camps, Sports Competition and craft activities for students of all age groups at schools in various villages. The company also runs total 50 Non Formal Education centres for Migrant Workers called Basti for teaching children left out of formal education system and then re-enrolling them into regular schools. The company also imparts education on cashless mode of financial transaction to the consumers.

Women's Empowerment: Ambuja has promoted 1975 Self Help Groups (SHGs) till date thus engaging women from 22,835 households across country. These SHGs serve as a platform for supporting women to start as entrepreneurs in dairy development, nurseries, mushroom cultivation, handicrafts, tailoring and food processing etc. by providing them with affordable credit. The company has also taken up the initiative to digitize these SHGs and has already digitized almost 1333 SHGs by 2016-17. Skill development programmes run by company offer various skills based training courses like nursing, computer hardware and software and beautician to women. Also more than 100 women have been trained as Internet Sathis' thus increasing digital literacy among rural women. These women have further trained more than 1, 00,000 rural women in internet, multimedia, social media, websites and information on the worldwide web.

Infrastructure development: The company also supports the building of infrastructure like roads, street lights, school buildings etc. for villages in consultation with the residing communities. It also supports farming community in undertaking projects related to water resource management through construction of water tanks to ensure storage of safe drinking water.

Disaster Relief: Ambuja cements serve people affected from natural calamities by distributing food packets, utensils, clothes, drinking water, oral dehydration salts and cotton blankets. To provide them with medical aid a mobile health van is also pressed into their service and various disinfection activities are carried out to prevent the outbreak of epidemics. The company was involved in relief activities following the natural calamities like Mumbai floods, the Tapi river overflow in Surat, the earthquake in Kutch and Jammu and Kashmir, the Super Cyclone in Orissa and the Tsunami in Andaman and Nicobar Islands.

Energy Conservation: With the aim to promote clean and renewable energy farmers in several villages are encouraged to adopt solar energy for irrigation pumping. Also solar power street lights and biogas plants have been installed in various villages. Ambuja is also promoting smoke energy efficient chullhas in households in Rajasthan and Gujarat to reduce fuel consumption and improve the rural kitchens. Energy conservation being major areas of concern the company fulfills 6.5 per cent of its energy needs through renewable sources. The company has also purchased renewable energy certificates equivalent to 21.66 million units. Conventional lights have been replaced with LED lights and automatic light sensors have

been installed at all its offices and plants.

Greenhouse Gas Reduction: Ambuja Cement being a part of the Cement Sustainability Initiative of the World Business Council on Sustainable Development is working on development and implementation of a Low Carbon Technology Roadmap for the Indian Cement Industry. The strategies mentioned in its roadmap were piloted at the Ambujanagar plant in 2015, with focus on energy efficiency opportunities. It has reduced the emission of greenhouse gases by 29.7 per cent by co-processing of industrial and other wastes as alternative fuels at its kilns.

Wildlife Protection: In the Gir forest adjoining Ambuja's plant in Kodinar, the company constructed parapet walls around the wells to prevent wild animals especially the endangered Asiatic lions from falling down.

Waste Management: Ambuja undertakes initiatives to manage not its own waste but also provides waste management services to other industries and waste generators through cement kiln co-processing by its Geocycle brand. The company also co-processes waste from the agricultural, industrial and public/municipal waste thus enabling it to replace traditional fuels with alternate fuels & raw materials (AFR).

Biodiversity promotion: The company follows sustainable mining practices, water bodies and pastureland development, and land rehabilitation in areas around its manufacturing facilities to protect ecosystem and conserve biodiversity. Also various biodiversity (flora and fauna) studies have been conducted by third parties for all its mining areas. Ambuja is a signatory to the India Business and Biodiversity Initiative (IBBI) of Confederation of Indian Industry (CII) and Gesellschaft für Internationale Zusammenarbeit. The company has also been actively involved in International Union for Conservation of Nature (IUCN) Leader for Nature (LFN) initiative. It also follows the Group Biodiversity Directive that requires it to prepare a biodiversity action plan (BAP) for sensitive sites.

Discussion and Stakeholders viewpoints

In order to understand the opinion of several stakeholders regarding CSR initiatives undertaken by Ambuja, various interviews and field visits to several sites were conducted. Winning accolades since years, the visit to company's social work sites speak for itself about the commitment shared by it towards social welfare. Doing full justice to its vision of sustainability it carries its developmental projects in a phased manner ensuring sustainable development. Ambuja's deep involvement and empathetic devotion towards its social welfare programmes is very much visible thus distinguishing and establishing it as a leader among all the players in industry.

In Punjab the company mainly carries out its CSR activities in the villages of Bathinda, Ropar, Mansa, Moga, Barnala, Abohar and Fazilka districts. As a process oriented company its main areas of focus are health, education, women empowerment, skill

development, water resource management and agriculture. First of all need assessment is carried out in order to chart out areas in which company's intervention is required. Then sustainability of programme is evaluated. Only those projects which are considered to be sustainable are carried and sponsored by the company. Later on implementation is carried out in a participatory manner, by engaging beneficiaries of the project in the cost sharing process. The company following a long term orientation believes in bringing behavioral changes in the beneficiaries to ensure the achievement of complete development.

Ambuja has constructed sanitation facilities in several government schools in the villages of Bathinda district. On visit to Government Senior Secondary School Buladewala, the school authorities appreciated Ambuja for its contribution towards school infrastructure. Various seminars to create awareness about road safety and providing career guidance to these students are conducted regularly in the school. The company also runs a preventive programme for eradicating Anemia among young girl students. Due to lack of awareness and discrimination for girl child the problem of iron deficiency is highly prevalent in rural areas of our country. Every year in the month of October general medical test is conducted for all the students from several government schools. Also all girl students are checked for blood hemoglobin level and are monitored for anemia by conducting blood tests. Students who are found to be anemic are provided with proper food products rich in iron. Also proper record of all girl students is maintained and tracked by company. It also conducts awareness programmes against prevention of iron deficiency from time to time in various government schools.

Hygienic waste management system was initiated in 2014 in Ropar by constructing drains in collaboration with financial investment from the village panchayats.

The women in rural areas enjoy a second citizen type of status. They are not allowed to work. Ambuja creates awareness campaigns in villages and try changing mindset of rural people. It also supports formation of Self Help Groups (SHGs) targeting landless women in villages. Women especially from economically weak background are mostly uneducated; hence they are unable to make any economic contributions to their families. By forming these SHGs, Ambuja has given wings to their potential. Each of these women are given training in hand embroidery, stitching, knitting, dairy production, food processing etc on the basis of their interest areas. Later it facilitates these women members of SHGs in getting bank loans to invest in their business activities. Currently there are 50 SHGs in Bathinda district, a member of Shakti SHG from village Behman Diwana informed that there are 17 groups in whole village with at least 10 members in each group. Each member of group is trained in a skill by conducting workshops thus guiding them to increase their income and contribute towards family income. Also regular classes are conducted by experts to give basic knowledge on various areas like mathematical calculations, signature learning etc. to assist them in carrying their business activities. Being members of these SHGs they can easily avail various loans at

very low rates of interest thus making it easier for them to invest in their business ventures and make progress in life. Similarly the women of Ropar have launched a wool distribution center cum outlet named Satluz Nari Shakti Producer Group in Ghanauli Village which serves as a platform for the sale of various knitting products.

Another marvelous feat by Ambuja for farmer's welfare is creating the local farmers producer organizations or farmer clubs in each village. Based on sustainability approach these clubs ensure provision of proper assistance and up to date technological knowledge to farmers. This has been a great initiative and has had a positive impact on overall production and productivity of the farmers. In each village around 20 farmers gather together to form a club and where the size of village is bigger, 2 or 3 such groups are made consisting of 20 farmers each. These clubs at village level combine together to form a registered club association at district level which is a sort of distinct company with a member of board of directors from each village. These farmers collectively can take bank loans to buy agricultural equipments for the association which can later be used by the member farmers of the association by paying a nominal fee, thus saving them a lot of money in comparison to renting these equipments from private owners. Also this association buys plantation seeds and cattle feed in bulk directly from the suppliers, then selling it at a reduced price to local farmers. These seeds, cattle feed etc. are made available to other member and non members with a very less margin at a very low price in comparison to market rates. Such associations promote the feeling of togetherness in the community and reduce individual high cost of machinery. A fellow member from Hari Kranti Group told us there are 10 clubs in each of 10 villages of Bathinda district which have merged together to form Bathinda Farmer Producer Group at district level thus engaging total 500 farmers. Every month a meeting is organized by each club to share information and discuss ideas by gathering all farmers together. He also discussed that due to provision of Happy Seeder machine by the Bathinda Club they did not have to burn the stubble this year and contribute to smog formation but directly sow their seeds. These farmer clubs also organize seminars by inviting experts to guide farmers on various agricultural techniques, proper use of pesticides, disease prevention and other farming related issues.

With an aim to conserve water the company is also making efforts to introduce Drip Irrigation¹⁹ System in Punjab. This method is believed to reduce water consumption, nutrient loss, growth of weeds, time wastage, usage of fertilizers and pesticides while increasing the total production. In order to instigate this project company invited all farmers from Bathinda district to a meeting where they were made aware about the pros and cons of this method

¹⁹Drip irrigation is a method of controlled irrigation in which water is slowly delivered to the root system of multiple plants. This method can help reduce evaporation and runoff, and contribute to water conservation.

along with providing guidance about its implementation. At the end of the meeting ten farmers volunteered and agreed to test and try this methodology in one acre of land by each of the ten farmers selected. The total cost of project per Acre is Rs 80000, out of which Rs 40000 is the subsidy provided by Government and Rs 30000 is agreed to be borne by company and Rs 10000 is supposed to be the farmer's contribution. Ambuja has collaborated with Netafirm Irrigation India Pvt. Ltd. for supplying all accessories like pipes and fitting to farmers for implementing this project successfully. As shared by the volunteers from Deona village the motivation behind them pairing up with this project was desire to learn a new technique and increase in production of cotton. The company believes that the success of these demonstrations will determine the future of this project in Punjab. If this method benefits these selected farmers then through word of mouth other farmers will be motivated to further adopt and implement this methodology, thus bringing a kind of water revolution in Punjab.

Ambuja is also working towards the cause of Drug de-addiction in various villages of Punjab. At village gatherings and events like melas, the company motivates youth to renounce drugs by conducting Nukkad Nataks and plays. After that announcements regarding drug de-addiction are made and interested persons are gathered, motivated and put in touch with proper rehabilitation centers to assist them in proper de-addiction process. Till date approximately 3500 young persons in various villages in Bathinda region have been linked with various rehabilitation centers. Also awareness campaigns to motivate village women to grow vegetables at home by adopting a Kitchen Garden approach are carried by the company.

Also company runs Non Formal Schools for children with backgrounds in Joginagar and Oriyabasti which are marginalized slum areas of Bathinda. Prior to company intervention none of the children from these two slum areas was going to school. In 2005, Ambuja started providing education to these children from marginalized communities by opening two Gyan Deep Kendras to give basic education and later linking them up with local Government schools. As these children being completely devoid of any education could not directly be enrolled in formal schools, so through these informal schools these children were prepared in basic subjects and then linked with formal schools so as to ensure they cope up with regular academic curriculum. Due to regular services of these Gyan Deep Kendras since 13 years, currently there is not even a single child who is not going to school. Now these centers run evening classes to facilitate students of these areas in their weak subjects. As these students cannot afford private tuitions so to guide them in various subjects like Math's, English, Science etc. free tuitions are provided in the evenings. Along with providing guidance in various subjects, children are also given training and awareness on road safety and hygiene. The duration of these evening classes is 3 hours from Monday to Saturday in the evening.

Oriyabasti is major slum area of Bathinda where migrants from Orissa and Bihar

reside. The cleanliness and hygienic condition in this slum area is commendable. Due to continuous motivation and infrastructure support in building sanitation facilities, play ground, Gyan Deep Kendras and support talent promotion by ensuring participation of local children in various company events, the Ambuja has changed the life of the residents of this locality.

Ambuja Manovikas Kendra recognized as one of the best special schools in Punjab for mentally challenged kids was taken over by Ambuja in the year 1999 with merely 10 students in Ropar, Punjab. Today this institute takes care of more than 100 mentally challenged children by providing them with environment to meet their individual developmental needs. It helps disabled students in improving their self-help skills, academic skills and social skills. It mainly trains students dealing with four types of disabilities namely intellectual disability, autism, cerebral palsy and multiple disabilities by conducting several behavioral modification programmes. Till date 9 students from AMK have participated in world Olympics winning total 13 medals and AMK has also been champion consistently since 12 years in state level competition. The achievements and reputation earned by AMK in Punjab and world speak for itself about the commitment and involvement shared by Ambuja towards its social responsibility works. Also AMK won the DEROZIO National Award for Excellence in the Field of Special Education in the year 2016.

Ambuja established a new Skill Development Center in Ropar, Punjab to train 50 special adults in mainly three trades namely bakery, pottery and artificial jewellery making. Also a workshop to create awareness about the Rights of Persons with Disability was organized at District Level in Punjab, with 80 officials and school principals in attendance. The purpose of this program was to ensure that disabled people enrolled in government schools can access the benefits of different schemes available to them. The company also conducted surveys across 131 villages in Punjab thus identifying 415 persons with different disabilities in Punjab to help them access various government benefits available to them.

Conclusion

Ambuja follows a process oriented approach and with a major focus on sustainability of social development projects it has distinguished itself from other companies in the country. Since it has been following CSR for years and with its experience in the field of social welfare it has gained expertise in this arena. With its focus on sustainable development it implements projects according to the local requirements with participation from local communities. The company's major aim while implementing these social development projects is to bring behavioral changes in the beneficiaries so as to ensure sustainability of these projects. The company is well respected in the community for its deep involvement and true to heart service to the society. This case showcases that instead of duplicating efforts made by other companies on similar areas the companies in India should think innovatively and initiate projects to ensure sustainable development to create a bigger impact on the

society. The companies should also widen up their area of intervention by taking up social responsibility projects not only for the communities that work with it and live around its manufacturing plants but also for other needy communities living in other parts of the country. Also while implementing such projects local beneficiaries are involved completely to ensure sustainable implementation of these projects.

4.3.3 A case study on corporate social responsibility initiatives by Cipla Limited

Introduction

Indian pharmaceutical industry accounts for approximately 3.1 to 3.6 per cent of global pharmaceutical sector in terms of value and almost 10 per cent in terms of volume. Driven by increasing consumer spending, rapid urbanization and inflating healthcare insurance, this market is expected to grow to USD 55 billion by 2020 thus emerging as the sixth largest pharmaceutical market in the world by absolute size. India accounting for 20 per cent of global exports of generics in terms of volume is recognized as the largest provider of generic drugs globally. Also more than 80 per cent of the antiretroviral drugs used globally to combat AIDS (Acquired Immuno Deficiency Syndrome) are supplied by Indian pharmaceutical firms. The major players within this sector in India are Sun Pharmaceutical Limited, Lupin Limited, Dr. Reddy's Laboratories Limited, Cipla Limited, Aurobindo Pharma Limited etc.

Currently Cipla is ranked as third largest player in Indian pharmaceutical sector and holds a leadership position in market across key therapy areas which include Respiratory, Urology and Antiretroviral (ARV). With its seven brands in top 100 list, the company enjoys total market share of 5.2 per cent as in March 2017. During the fiscal year 2016-17, it surpassed market growth rate of 9.8 per cent by displaying a growth of 10.5 per cent in respiratory therapy segment and by 19.4 per cent from market rate of 13.7 per cent in Urology therapy segment. Also its gastrointestinal therapy segment achieved 10.4 per cent growth in comparison to overall market growth of 8.5 per cent in the year 2016-17. Some of its major brands in India are nicotex, activkids immuno boosters, activwomen daily calcium, cofsils, nicogum etc.

Cipla Limited

Cipla one of India's most important pharmaceutical industry, was incorporated in the year 1935 by Dr. K.A. Hamied as Chemical, Industrial & Pharmaceutical Laboratories with the vision to achieve self sufficiency in the chemical and pharmaceutical industry in India. Its name was officially changed to 'Cipla Ltd.' in the year 1984. Headquartered at Mumbai, the company employs more than 23000 people and offers more than 1500 products across various therapeutic categories. The company develops medicines to treat respiratory diseases, cardiovascular problems, arthritis, diabetes, obesity, depression and several other medical problems. It also offers the largest portfolio of inhalation products in the world.

Over the last eight decades Cipla has become a global company, with its presence in over 80 countries all around the world including USA and South Africa. The company owns 43 internationally approved state-of-art manufacturing facilities across the globe and has more than 100 global partners. Recognized among the market leaders in South Africa, Sri Lanka, North Africa and Yemen, it is the third largest pharmaceutical company in India and fourth largest in South Africa respectively. Under the leadership of Dr. Y.K. Hamied, the company displayed a growth momentum of 10 per cent in India in the year 2016-17. It reported revenue from operations of INR²⁰14630.24 crore in fiscal year 2016-17, an increase by 6 per cent from INR 13790.10 crore in the year 2015-16.

True to its motto of ‘Caring for Life’, Cipla works tirelessly ensuring availability of superior and reasonably priced medicines to its patients, thus supporting them in need. It was the first company in the world to ensure provision of triple ARV therapy for HIV patients at a very nominal price and uprooted its technology to the needy countries. Being recognized by Economic Times among Best Asian Healthcare Brands of 2017 and being ranked as one of the most respected companies of 2017 in pharmaceutical sector by Business World, Cipla has always followed a commercial philosophy based on humanitarian considerations. It is the aim of the company to provide vital, essential and life saving medicines to society at affordable prices.

Values at Cipla Limited

Cipla’s Credo means core values which form the basis for dealings and basic value system. This company was formed on the foundation of Care i.e. Caring for Life. In the face of changing times in order to keep pace with the world Cipla has adopted First Principles which comprise of:

- One Cipla Credo: This core value system will guide Cipla in all its dealings with the outside world including every conversation, every decision and every employee action.
- Winning Aspiration: The basic goals whose achievement will be facilitated by belief and values as outlined by Credo of the company.
- Cipla Leadership Essentials: This outlines the essential requirements that will help and guide its employees in excelling and preparing for the dynamics in future.

These principles form the basis of what company is in the present and what company aspires to be in the future. As well said by Dr. Y K Hamied, ‘Our work is not just about making medicines; it is about making a difference.’ These first principles serve the blueprints for company in order to make a mark in the history and create something invaluable for the society.

²⁰ INR stands for Indian Rupee which is the official currency of Republic of India.

Cipla Foundation

Since its constitution, Cipla driven by its mission statement ‘None shall be denied the opportunity to build a happy, healthy and productive life’ has been working persistently towards improving the lives of vulnerable groups in the society. In the year 2010, on the occasion of Cipla’s Platinum Jubilee ; Cipla foundation was set up by contributing a sum of INR 5 crore with a view to facilitate its social works like providing care and financial support to communities in need of healthcare and education. The foundation was registered in the year 2011 and through it the company has built primary partnerships with more than 14 NGOs as implementing partners for various social initiatives. Driven by Cipla’s credo that ‘Every Life Matters’ and guided by its vision of 'Caring for Life' the foundation has been implementing the company’s social responsibility initiatives in the following areas:

- Health
- Education
- Skill Advancement
- Disaster Response

Cipla’s CSR policy

Cipla has assimilated the philosophy of ‘Caring for Life’, in its people, products and processes impeccably. By being a good corporate citizen and by contributing relentlessly towards various CSR activities, the company has continuously proved its mantle as a socially responsible company. The company’s corporate responsibility vision is *‘We strive to be an admired & trusted company by conducting our business ethically in a socially and environmentally responsible manner.’*

In order to be accepted as an admirable and trusted company, Cipla is guided by its two mission statements which are to create value for its stakeholders and make sustainable development. This mission achievement is further facilitated by four strategic pillars of corporate responsibility framework, which are:

- ‘Safe and Quality Products at Affordable Cost’
- ‘Valuing our People’
- ‘Helping the Environment and Sustainability’
- ‘Empowering our Communities’

The Corporate Social Responsibility Committee, headed by Mr. M.K. Hamied, comprises of five members who guide the formulation and monitoring of corporate social responsibility policy of the company. They also recommend the CSR activities to be undertaken by company along with proposing the expenditure to be incurred on these activities. These activities of the company are carried out by Cipla Foundation, Cipla Cancer and Aids Foundation and with the help of various NGOs working as its implementing

partners.

CSR activities at Cipla Limited

‘The developing world has to be viewed on humanitarian grounds as it requires access to medicines at affordable prices so that none shall be denied medication. This is a basic fundamental human right.’

Dr. Y. K. Hamied (Chairman)

Cipla was included in 2016 ‘Change the World’ list by Fortune Magazine, as one among 50 companies in world having positive impact on society through their activities which are part of their core business strategy. Born with a patient-centered and community-focused approach it has been carrying out its social responsibility work since incorporation and was among few companies in India which reported their CSR expenditure voluntarily. It reported money spent on CSR activities for the first time in financial year 2012-13. Later on in response to regulatory requirement, it also started reporting money spent on each activity, individually. In the year 2016-17, company spent INR 28.25 crore on various CSR activities. It carries out its social responsibility work in mainly four areas: ‘Healthcare’, ‘Skill Advancement and Education’, ‘Disaster Response’, and ‘Environment’.

Healthcare: Cipla Cancer and Aids Foundation (CCAF) established The Cipla Palliative Care and Training Centre in Pune in the year 1997 to provide free of cost care to terminally ill cancer patients. With a focus to relieve pain and distress of illness for patients and their family, this home based cancer care centre through its holistic care regime improves the quality of life of its patients. It serves by integrating palliative medicine with curative therapy and till date has touched the life of more than 12000 patients. With an ambition to reduce the overall cost of cancer treatment and make medicine affordable for cancer patients, the company has also reduced the selling price of its selected cancer drugs. In alignment to WHO’s 2030 mission to eliminate Hepatitis globally, the company is conducting several educational initiatives to create awareness about Hepatitis-C.

Cipla also supports various NGOs which are engaged towards serving the patients suffering from HIV/AIDS and Cancer all around the country. Manavaya which is a Pune based NGO receives support from the company for its activities which include engaging in care and rehabilitation of abandoned children living with HIV/AIDS and running a mobile health care unit for poor communities of 10 villages in the outskirts of Pune. Snehalaya another NGO receives financial support for construction of an English medium school to provide education to more than 400 children living with HIV/AIDS and belonging to marginalized communities in Ahmednagar (Maharashtra). SNEHA (Society for Nutrition, Education and Health Action) also receives contribution from Cipla Foundation to deliver essential medicines to more than 10000 children suffering from illnesses such as respiratory tract infections, bronchitis, bronchial asthma, acute gastroenteritis and fungal infections,

living in slums of Mumbai (including Dharavi, Govandi, Mankhurd and Kurla). The company has also partnered with Ummeed, a Mumbai based NGO, to provide early interventions to children from economically weaker sections thus promoting their development in the short term and, thus improving their employability and educational outcomes in the long term. Cipla Foundation also lends support to Indian Institute of Cerebral Palsy to provide specialized and comprehensive service to patients with cerebral palsy.

In order to contribute towards the cause of sanitation Cipla has sponsored the construction and renovation of sanitation blocks in locations around Patalganga, Goa, Bengaluru, Kurkumbh, and Vikhroli. It sponsors medical camps, run mobile health vans for marginalized communities around its manufacturing plants. Cipla also extended its financial support to underprivileged patients and children with thalassaemia needing bone marrow transplants.

It also runs Breathe Free initiative with an aim to improve the diagnosis of respiratory diseases by creating awareness through print, radio and digital media. Till date this programme has reached out to 8 million patients. Also 5000 patients were engaged under ‘Save your lungs Dilli’ campaign in NCR region of Delhi to create awareness about lung care amongst high level of air pollution there.

Skill advancement and education: Cipla supports education in schools located close to its manufacturing facilities by providing academic scholarships and awards to meritorious students, by constructing infrastructure such as science laboratories and toilets, and by conducting lectures on hygiene and adolescent health topics etc. The company rebuilt a school and distributed solar lanterns to households in Papra village in Uttarakhand. It also conducts fire safety and road safety training programmes at various schools near its manufacturing facilities.

Cipla’s Palliative Care and Training Centre runs an IAPC certified training course for doctors and nurses, and provides learning modules in palliative care for caregivers, volunteers and other interested groups. It also runs a school to train young boys and girls from economically weaker section of society, free of charge as nursing assistants which is also recognized as a training resource by the Indian Association of Palliative Care (IAPC) and has established a training centre to train caregivers for serving children with special development needs. This centre trains pediatricians, social workers, parents, and teachers to identify, diagnose, and manage the developmental needs of specially-abled children more effectively.

The company also runs various community outreach programmes to serve directly and indirectly various underprivileged communities around its plants in Maharashtra, Sikkim, Himachal Pradesh, Madhya Pradesh, Goa and Karnataka states of India. Under its Bal Vatika and Bal Shiksha Abhiyan in partnership with Mumbai Smiles, an NGO in Vikhroli (Maharashtra), two Balwadis near its manufacturing facilities have been established with an

intent to promote education, health awareness and nutrition among kids by direct involvement with their parents. In collaboration with Himalyan Social Institute, the company has implemented Balvatika in three slums of Baddi to ensure provision of pre-school education to infants.

Cipla supported Stree Mukti Sanghatana by conducting programmes to train teenage students on adolescence, stress management, career guidance, de-addiction information, value education and family life education. Also in collaboration with NIIT foundation it has established Hole-in the wall learning stations to make computer education accessible to government school students' thus spreading computer literacy, and improving quality of education in the underserved areas of Baddi, Kurkumbh and Indore. It also supports various NGOs that work towards empowering physically challenged people, by providing them with industry-relevant skill training to secure better livelihood.

Disaster response: Cipla has been very active in responding to natural disasters by reaching out to affected communities. It supports them by organizing health camps, by helping them rebuild their shelters, by assisting them in restoring their livelihood and by aiding child friendly spaces to ensure provision of secure environment for recovery of vulnerable children. It has supported disaster relief programmes in various states including Maharashtra, Tamil Nadu and Assam.

Environment: In response to global environmental issues, the company has been undertaking several initiatives to reduce its impact on environment and address major issues like global warming and climate change.

Water Conservation: Cipla works towards maintaining ecological balance by carrying out different projects in Kurkumbh, Patalganga and Goa to conserve natural resources and protect environment. These projects include various water conservation activities, development of horticulture, vermi compost and compost pit, animal husbandry, watershed development, solar and rainwater harvesting in various schools. Also company carries out environment day celebration, mass plantation of trees, organic gardening workshops near its plants at Verna and Rawanfond in Goa.

Waste Management: The company maintains modern and well-designed effluent treatment plants and waste management facilities at its manufacturing facilities. At all API manufacturing facilities of the company zero-liquid discharge status is maintained. It also utilizes treated water from these "zero discharge" facilities to maintain a green belt at all its locations. A special watershed project is also under execution to help tribals and villagers around Patalganga of Raigadh district in Maharashtra.

Energy Conservation: A number of initiatives targeting reduction in emission of Greenhouse Gases (GHG) and focusing on conserving energy and natural resources were undertaken. In companies, Goa and Sikkim manufacturing plants 'Voulte' (Japan made Fourth-Generation

ETP sludge de-watering equipment) was installed to further reduce the energy consumption by over 99 per cent. At its Kurkumbh and Bommasandra sites, environment friendly and energy efficient digesters for waste treatment are installed. Also energy efficient wastewater treatment technology named Phytorid to treat sewage is installed in Indore plant. The company has thoroughly maintained Zero Liquid discharge status at all its API manufacturing sites. Several other initiatives aimed at efficient use of energy which include installation of solar power plants at Goa, Kurkumbh and Vikhroli and fixation of LED lights at Baddi, Bommasandra, Goa, Indore, Kurkumbh, Patalganga, Sikkim and Virgonagar are undertaken. Also old motors and pumps are replaced with energy efficient ones at Kurkumbh and Patalganga plants. Due to all such efforts the company has been able to save 2 per cent energy on a year-on-year basis. The manufacturing plants of company has till date received several awards like National award for Excellence in Energy Management, Awards for best environment, health and safety practices etc.

Stakeholder's viewpoints

In order to understand the opinion of several stakeholders regarding CSR initiatives undertaken by company, interviews and field visits were conducted. The employees interviewed elaborated that in its Baddi area of operation the company mainly runs four key programmes. The first one being Balvatika which was started in the year 2014, with an aim to provide pre-school education to children from slums within an age group of 3-6 years. There are three Balvatika centers run by company in Baddi area with each center fulfilling education needs of atleast 30 kids from slum. The students in these centers are also provided with mid day meal, a set of uniform, books and stationary items free of cost by the company. Since 2014, the company has linked almost 100 students from these Balvatikas with local Government schools to provide them with formal education.

The second programme named Mobile Health Plan is being carried by Cipla in partnership with Helpage India. This programme focused on providing health services to residents of slum and rural areas provides them with free consultation and medicines. A weekly schedule is prepared thus covering an area within the radius of 10 km around company's location. A team of four members consisting of a social protection officer, a driver, a medical officer and a pharmacist travel to various villages and conduct free OPDs. Since 2014, this programme has conducted almost 80000 OPDs around Baddi area. The needy people are provided with free medicines by the company.

Cipla in partnership with Baddi University has started a degree programme in B.Sc Medical. The company sponsors the education of interested candidates from Himachal Pradesh having poor financial background. At present second batch consisting of 45 students is being supported by the company. The company has also established a skill development and rehabilitation centre for students with disabilities in Ambuja Manovikas Kender locted in

Ropar district.

Cipla has also established in collaboration with Ambuja Cement Foundation, a skill and development center at Ambuja Manovikas Kendra in Ropar, Punjab in 2016. This center provides skill training to disabled children with an aim to make them self dependent and capable of helping their families economically. The trades for training are allocated according to the interest and IQ level of each student. The three trades in which such children are trained are artificial jewellery making, pottery products making and bakery. Training is provided for one year and after completion they are assisted in job placement. Till date 56 students have been rehabilitated out of which 15 students are earning between INR 1000 to INR 10000 per month.

Emerging challenges

As per average net profit of Cipla Limited for last three years which is INR 1669.22 crore, the company was prescribed to spend INR 33.38 crore in the year 2016-17 but it spent INR 28.25 crore with a total of INR 5.13 crore were left unspent as per recommendations by Companies Act, 2013. In 2015-16, the company spent Rs 13.43 crore on CSR activities indicating a significant progress towards pursuing its social responsibility goals. Though company is highly regarded in our society but not spending appropriate amount on social responsibility projects may smear the reputation of company to certain extent, especially when other industry players are autonomously spending way more than government recommendations towards various social upliftment projects.

The company should identify other unrecognized and unaddressed avenues of the society and make efforts towards plugging those cavities. Instead of following the league and carrying out similar social interventions like health, education, sanitation etc. as other companies, new issues in CSR domain should be addressed by Cipla Limited. The most effective CSR programme, a pharmaceutical company, can implement is ensuring provision of drugs to needy ones who cannot afford them. Though Cipla has been undertaking various projects focusing on donating drugs to marginalized people but there is large scope of taking up such activities more vigorously on a wider level and thus creating a difference in the society.

Also with tightening of patent laws in India, Cipla will have to invest even more in research and development so as to create more effective and affordable drugs for the society and thus making contribution towards improving the quality of life of general public which is the major responsibility of every pharmaceutical company towards society.

4.3.4 A case study on corporate social responsibility initiatives by Vardhman Textiles Limited

Introduction

India accounts for 14 per cent of world's production of textile fibres and yarns and is

world's second largest exporter of textiles and clothing. Indian textile industry owing to its contribution towards employment generation, industrial output and foreign exchange earnings, is one of the most important industries in Indian economy. After agriculture, it is the second largest employer and provides employment to around 45 million people directly and 60 million people indirectly. It contributes 14 per cent towards total industrial production in India and 4 per cent to GDP of our country. Also it accounts for nearly 15 per cent of India's total exports. With current size of India's textile market at around USD 108.5 billion as in 2015, this market is expected to grow at a CAGR²¹ of 8.7 per cent within 2009-23, thus reaching up to USD 226 billion in 2023. The major players within this sector in India are Arvind Limited, JCT Limited, Grasim Industries Limited, Vardhman Textiles Limited etc.

Vardhman Textiles Limited, the flagship company of Vardhman Group is today one of the largest textile companies of India, manufacturing cotton yarns and fabrics which constitutes about 2 per cent of the country's total yarn production. This leading textile company manufactures cotton yarns and fabrics with a capacity of over 1.00 million spindles, utilizes 1320 looms for weaving of fabrics and has 110 million meter per annum of fabrics processing capacity. The specialized products manufactured by company are cotton lyocell, cotton bamboo, cotton tencel, cotton silk, cotton modal, cotton viscose, organic cotton, fair trade yarn and contamination-free yarn.

Vardhman Group

Vardhman Group is one of the largest textile conglomerates in India, with a portfolio including manufacturing and marketing of fiber, yarns, sewing threads, fabrics, garments and special steel. The group has 22 manufacturing units located across 6 states of our country. It gives employment to more than 28000 people and exports to more than 65 countries across the globe. Vardhman is a vertically integrated textile group which carries all its activities from cotton procurement by developing direct contact with farmers to ginning to manufacturing of yarns, fabrics, sewing threads and lastly garments all on its own. Also it is a power independent company which has installed two captive thermal power plants in Madhya Pradesh with an aggregated power generation capacity of 54 MW²² to ensure the provision of uninterrupted power supply to its manufacturing units.

The group traces back its history to year 1962 when Vardhman Spinning and General Mills Limited (VSGML) was incorporated by Shri V.S Oswal and Shri Ratan Chand Oswal in Ludhiana district of Punjab. It started its journey in 1965 by manufacturing cotton yarn with a merely 6000 spindles which over the years has grown to 1.1 million spindles and more. Vardhman group nowadays produces over 20000 tons of acrylic fiber per annum and manufactures over 43 MT of sewing thread per day. Also it produces over 580 tons of yarn

²¹ CAGR stands for Compound Annual Growth Rate

²² MW means Megawatt which is a unit of power.

per day , weaves more than 180 million metres of fabric per annum, crafts above 5000 shirts per day and makes over 120000 tons of steel per annum.

Vardhman Group is a conglomerate of various companies which include Vardhman Textiles Limited, VMT Spinning Company Limited, VTL Investments Limited, Vardhman Acrylics Limited, Vardhman Nisshinbo Garments Company Limited, Vardhman Yarns and Threads Limited, Vardhman Special Steels Limited, Vardhman Spinning & General Mills Limited. The group is strong in ethics with a vision to create world class textiles while being rooted in its values. It follows a culture of innovation and continuous improvement.

The group invests heavily on training and development of its employees. Vardhman Training and Development Centre (VTDC) conducts more than 200 training days in a year covering various managerial, functional, technical, cultural, skill-based, interpersonal & motivational topics. The group has also installed Manav Vikas Kendras at its manufacturing facilities to train its unskilled workers. The group follows a collaborative work philosophy and follows a culture of developing young talent into leaders.

Vardhman Group has always been involved in the social economic growth of the local areas around its manufacturing facilities. Nowadays it runs fully fledged programmes focusing on education, society, environment and health&safety. It has also established Smt. Banarso Devi Oswal Public Charitable Trust and Sri Aurobindo Socio-Economic and Management Research Institute to carry out its social responsibility initiatives.

Journey of Vardhman Textiles Limited till date

Vardhman Textiles Limited the flagship company of the Vardhman Group was incorporated in the year 1973 as Mahavir Spinning Mills Limited. Mahavir Spinning Mills Limited (MSML) as Vardhman Textiles Limited was addressed in those days; set up a spinning unit in Hoshiarpur (Punjab) in 1976 and another unit by the name Arihant Spinning Mills at Malerkotla (Punjab) in 1978 each with an installed capacity of 25000 spindles. In 1981 the company started manufacturing sewing threads at its Hoshiarpur unit. MSML merged with Mohta Industries Limited in 1988 and renamed its Ludhiana based steel plant from Mohta Alloys & Steel Works to Vardhman Special Steels.

In 1991 a complete export oriented unit named Anant Spinning Mills with installed capacity of 25000 spindles was set up in Mandideep, Madhya Pradesh. MSML in technical collaboration with Kyungbang Limited, South Korea established a Gas Mercerized unit in Hoshiarpur (Punjab) in 1994 with a capacity of 1.7 tons per day which later expanded to 7 tons per day. Also in 1994, the company entered into a joint venture with M/S Marubeni Corporation and Toyo Rayon Company Limited of Japan and set up VMT Spinning Company Limited in Baddi (Himachal Pradesh) to manufacture customized yarns for Japanese market. Further it entered in joint venture with M/S Barbour Campbell Group Limited of Ireland and incorporated Barbour Vardhman Threads Limited (BVTL) to manufacture industrial synthetic

threads in Baddi (Himachal Pradesh) in 1995-96. Also in the same year Vardhman Acrylics Limited (VAL) was established at Jhagadia, Bharuch in a joint venture with Marubeni Corporation and M/S Japan Exlan Company Limited.

In 1999 MSML further expanded its sewing threads business by installing more capacity in Ludhiana and VAL commenced the commercial production of Acrylic Fiber in March, 1999. MSML acquired Arisht Spinning Mills located at Baddi in the year 2002 from Vardhman Polytex Limited. In 2004, name of MSML was changed to Vardhman Textiles Limited (VTXL) after the demerging of textiles business of VSGML into MSML. In 2006, the companys' largest spinning mill was set up in Satlapur (Madhya Pradesh) with an installed capacity of 166000 spindles to meet increased demand. Nowadays this mill has a capacity of 305376 spindles. VTXL expanded its fabric capacity in Baddi by setting up a new plant called MSML Textile Division in 2008. At present the companys weaving capacity is 180 million meters and processing capacity is 114 million meters per annum. In 2011 Vardhman Special Steels was demerged from VTXL into a separate company making Vardhman Textiles Limited a pure textile company manufacturing yarn and fabric.

Where Now?

Vardhman Textiles Limited (VTXL) is the largest yarn manufacturer in India with a capacity of more than 1 million spindles and holds first spot in hand knitting yarn manufacturing in our country. It is also a leading manufacturer and exporter of cotton yarn and a prominent manufacturer of piece dyed fabric in India. Under the leadership of Shri Paul Oswal the Chairman and the Managing Director of the company, it has reported revenues of INR²³ 57282.9 million during the 2016-17 fiscal year, displaying an increase of 2.04 per cent over the revenue in the year 2015-16. The net profit in 2016-17 fiscal year was INR 10015.9 million which grew by 48.08 per cent over previous year.

Vardhman Textiles Limited has its headquarters in Ludhiana and employs 21206 people. It owns 12 state of the art production plants strategically located in Punjab, Himachal Pradesh and Madhya Pradesh and has marketing presence across more than 65 countries in the world. The company serves as a one stop shop for the entire textile needs namely fiber, yarn, sewing threads, fabric, garments. Across the globe, it has more than 350 key customers including global garment makers like Tommy Hilfiger, Esprit, GAP, Zara, Mango, H&M, Arrow and Benetton.

CSR policy of the company

Vardhman Textiles Limited formed a four member CSR committee headed by, Mr. A. K. Kundra, as the Chairman of committee to make decisions regarding amount of expenditure to be incurred by company on each of activities mentioned in their CSR Policy.

²³ INR stands for Indian Rupee which is the official currency of Republic of India.

This committee periodically reviews the implementation of projects to ensure compliance and efficient utilization of funds as per company's objectives. The company's Vision on CSR is: *'to pursue a corporate strategy that enables realization of the twin goals of shareholder value enhancement and societal value creation in a mutually reinforcing and synergistic manner.'* The company's Mission statement on CSR is: *'to be a committed Corporate Citizen alive towards Social Responsibility with a view to make a positive difference to society.'*

In accordance with section 135 of Companies Act 2013 the broad areas of Corporate Social Responsibility Policy of the company are:

- Promoting education
- Preventive healthcare
- Rural development
- Skill enhancement with special emphasis on women empowerment
- Environment
- Public private partnership initiatives to help underdeveloped communities

The company carries out its social responsibility projects either directly or through Smt. Banarso Devi Oswal Public Charitable Trust and Sri Aurobindo Socio-Economic and Management Research Institute which are founded by it to implement its social development agenda.

CSR activities by Vardhman Textiles Limited

'Our objective is to act as a change agent and help bring the fruits of economic development to the marginalized sections of India's population.'

Shri Paul Oswal (Chairman)

The company has been carrying out several CSR initiatives for needy communities close to its manufacturing facilities since years. However it started reporting its CSR expenditure since 2014-15 in response to regulatory requirements by the company. During the fiscal year 2016-17, the company spent INR 54.1 million on CSR initiatives whereas it spent INR 50.1 million on CSR in the financial year 2015-16. In order to enable proper supervision and maximum developmental impact, the major CSR projects are being pursued by the company in the areas in close proximity to its manufacturing locations. The company is contributing money towards various social responsibility activities either directly or through trusts created by it or in collaboration with other public and private organizations in order to facilitate its agenda of socio-economic growth. The company mainly develops projects catering to four CSR themes: education, healthcare, society, and environment.

Education: On the request of Himachal Pradesh government the Vardhman group established Sri Aurobindo Public School, Baddi in April, 1996 to promote quality education in the region. This school run by Smt. Banarso Devi Oswal Public Charitable Trust is

recognized as the best school in region and has produced good results along with providing opportunities to students to participate in Olympiads conducted at international levels. 10 per cent seats in nursery class are reserved for children below poverty line and such students are provided education free of cost. Also company established Shri Aurobindo Public School in Tehsil Budhni, District Sehore of Madhya Pradesh in January, 2014 with a vision to provide quality education with modern infrastructure to students from all stratas of the society. In the year 2004, Sri Aurobindo College of Commerce and Management (SACCM) was set up in village Jhande at Ludhiana by Sri Aurobindo Socio-Economic and Management Research Institute. This college being governed on sound systems and policies is another example of company's focus on provision of world class education to local communities.

During 2016-17, company undertook several projects worth INR 30 million ensuring provision of drinking water, repairing kitchens and sheds, renovating existing toilets, providing basic infrastructure, constructing of water storage tanks in various government schools close to its manufacturing facilities in the states of:

- Himachal Pradesh (Billanwali, Sandholi, Gullerwala, Dharampur and Nalagarh)
- Punjab (Khanna, Nabha, Sherpur, Sangrur, Patiala, Bugra Sakhewal and Manekwal)
- Madhya Pradesh (Khandabad, Mahukala, Pillikarar, Hoshangabad and Talpura)

It also collaborated with an NGO to provide education to tribal families in the remote areas of Orrisa. Also basic infrastructure and study material was provided to anganwadis near Vardhman units in Budhni area of Madhya Pradesh. In schools of Mandi region of Pilikarar computer labs were built and study materials were made available.

Healthcare: In order to help underprivileged sections of society to avail quality healthcare at subsidized prices the company has made monetary contributions in several hospitals, to assist them in procuring medical equipments. It has helped healthcare institutes like CMC²⁴ Ludhiana, Civil Hospital in Malerkotla, Community Health Centre in Baddi to procure machines like A-scan, keratometer, digital X-ray machine, electric fowler bed, blood gas analyser, cell counter equipment, semi-automatic analyser etc. It has also committed INR 20 million to CMC, Ludhiana for building its Physical Medicine and Rehabilitation Centre (PMRC) to aid rehabilitation of patients with cerebral palsy, stroke, polio and paraplegia. Also it built a pediatric ward and a waiting room for attendants of patients at a missionary hospital in a backward area of Madhya Pradesh.

Society: Vardhman started Village Adoption Program in response to its encounter with a farmer while surveying cotton fields of Punjab, whose cotton yield was 4 times the other fields in area. It collaborated with Punjab Agricultural University; Ludhiana to study techniques followed by this particular farmer and adopted a village by guiding and educating

²⁴ CMC stands for Christian Medical College and Hospital located in Ludhiana. It was first medical school for women in Asia

the farmers of the village on every stage right from pre-sowing to harvesting. At the season end this village reported 60 per cent higher yield than overall state average. Till now this program has covered 95 villages and company holds 7-8 camps during entire season and organizes competitions among farmers at local level.

The company also participated in Better Cotton Initiative to empower farmers of Gujarat by providing them with farming solutions and integrated pest management techniques to increase yield. Till date it has provided technical assistance to nearly 8300 farmers. Vardhman in collaboration with CII Chandigarh in year 2007 took initiative to train underprivileged and this program was held regularly till 2011. Under the 5 week long Capability Enhancement Program necessary skills were provided to candidates thus making them employable and confident. This enabled them become a part of mainstream development process and serve as a footstep towards achievement of social inclusiveness. As part of its women empowerment initiatives it contributed INR 0.2 million for training 20 beneficiaries to develop nurseries and raise fruit plants in ornamental trees in Pililkarar.

The company also contributed towards promotion of rural sports in Gullerwala and Baddi. Also it participated towards provision of safe drinking water and building of public toilets in various rural areas around its manufacturing facilities. In Mandi region of Pililkarar, the company provided solar light facilities along with potable water facility to the localities. The company has also provided financial support to the government in response to relief requests at the time of crises and disasters. The company organizes blood donation camps regularly at its premises and encourages employees from all levels to participate. The company also made contributions towards protection of national heritage, arts and handicrafts by funding a mela in Solan and by making donations to Nalagarh Heritage Society. It also contributed towards promotion of Indological studies at Bhogilal Leherchand Institute of Indology located in Alipur (Delhi).

Environment: The company regularly conducts various trainings and events like workshops on water conservation through videos, celebrating environment week and world water day, organizing water saving week etc. through its Vardhman Training & Development Centre and Manav Vikas Kendras. These trainings are organized with a goal to imbibe the culture of sustainability within the organization and targets the employees at all levels.

Water: The company is continuously working towards improving its water efficiency and has brought down its water consumption by staggering 50 per cent in spinning operations. The company follows a metering system across the water distribution system and follows EPA (Environmental Protection Agency) guidelines to save this precious asset. To save water the company has designated a water efficiency coordinator and adopts high efficiency equipments along with educating and involving its employees in water efficiency initiatives. The company has installed 48 Rain Harvesting Systems within its premises. Under this system

rainwater is directed from roof tops through channels and then collected in collection pits with filter, through which water is recharged into the ground via bore holes. The company has been following this system since 2005 and recharges almost 120000 KLDs of water annually. The group also has 8 Effluent Treatment Plants (ETPs) and 10 Sewage Treatment Plants (STPs) to make waste water reusable and recyclable. The Vardhman group has also set up three Zero-liquid-discharge plants of capacity 400 KLD each of which use Reverse Osmosis systems to clean and reuse the entire wastewater back into the manufacturing process. Apart from this, the treated water is also used for watering of green belts and the gardening system is completely powered by treated waste water.

Energy: To adopt a sustainable business model the company has been installing more energy efficient machines and equipments. The company has also setup a facility for monitoring and studying the energy consumption patterns so as to efficiently manage the energy demands. The Maintenance Health Audit of machines is done regularly by company experts across all its units to analyze the performance of the machines. If the machine does not meet the quality check parameters or consumes more energy than prescribed, remedial actions like replacement, study of machine, repair and workers training are undertaken. In the year 2016-17 the company has undertaken a number of measures to reduce energy consumption like installation of new distribution transformers at optimum locations, replacement of rewind motors with energy efficient motors, optimization of compressed air consumption, installation of LED lights on streets and boundary walls etc. Also company has adopted renewable fuel consumption devices such as solar cookers and solar heaters at various locations. In order to minimize the emission of greenhouse gases the company has installed two biogas plants at its manufacturing facilities in Baddi and Budhni.

Waste: Vardhman has been following EPA rules for hazardous waste handling since 2007. The company has a provision to handle the solid waste generated from effluent treatment plants in the form of dry sludge through sludge drying beds present in various units, where the sludge is dried and packed in plastic bags and then transported to secure landfill sites. Through this process, solid waste gets treated to neutralize their hazardous or toxic elements, ultimately helping it form a part of an eco-friendly environment. The company also promotes Nimbua Greenfield Punjab Limited which since 2007, has been working dedicatedly towards solid waste treatment, storage and disposal in Punjab. It also uses an organic composter to compost food waste from canteens, hostels and mess to use it as manure in the parks of its campus.

The company contributed towards green area development by planting trees and by developing green belt area near its manufacturing facilities in various areas. It has also carried plantation activities along the banks of Narmada river in Mahulaka and planted almost 26000 trees in the last year in Madhya Pradesh, Himachal Pradesh and Punjab. It also made

donations toward renovation of 200 years old talab along with development of green area for public excursion in Nalagarh. The company develops and promotes various sustainable products which provide environmental, social and economic benefits while protecting the environment and public health over their life cycle. It produces various sustainable products such as organic cotton yarns like grey yarn, mélange yarn, dyed yarn, slub, blends, organic cotton fabric, recycled polyester fabric, recycled waste cotton organic threads etc.

Stakeholders viewpoints and CSR initiatives in Punjab

In order to understand the opinion of several stakeholders regarding CSR initiatives undertaken by company, interviews and field visits were conducted. The employees interviewed elaborated that company mainly carries out its initiatives in areas around its manufacturing facilities, which include places where most of their factory workers come from and which contribute to their business in terms of other resources. Also at certain times investments can be made in areas other than company's catchment areas depending upon the need of implementing a social responsibility project in that particular area. The main focus areas for social projects are health, education, environment, rural development, sanitation and skill development. For skill development, classes are conducted related to stitching, computer operation skills etc. Livelihood enhancement with special focus on empowering women will be one of the major areas for implementing social responsibility projects in the coming future. The company is in process of implementing a number of projects related to this theme. This upcoming area will focus on improving total income of families from rural communities by involving women in income generation process and will aid formation of various self help groups in villages.

Implementation of CSR activities are carried out at two levels namely corporate level and unit level. At corporate level, CSR team at corporate office in Ludhiana makes final decisions on all CSR matters. At unit level, CSR teams carry out developmental agendas at local level according to their concerned location allocated as per manufacturing units of the company. There are three unit level teams in Baddi (Himachal Pradesh), Budhni (Madhya Pradesh) and Ludhiana (Punjab) respectively. Before framing and implementing a CSR projects firstly ground survey is done by the CSR team of the company at unit level and needs for a particular area with regard to education, health care and rural development are identified. Sometimes the local representatives like local MLAs, members of panchayat and some other community members of a particular area may also approach company, to carry out a social responsibility project in their area. If such a proposal looks feasible and is in accordance with the CSR policy of the company, then a copy of the proposal is made at unit level and is sent to the corporate office, where it is evaluated by CSR team at corporate level. The members of CSR team of corporate office then go and visit the site to make assessments of the needy areas before approving and giving green signal to the project. If the project is approved by

CSR team at corporate office, then it is implemented and after implementation its impact assessment is done by the unit level team to analyze any positive impact or changes brought by the project in the concerned area for at least three years. The main reason behind these impact assessments is to find out if money spent on the project has been utilized properly and has brought a positive change in the area or not. For example, when money is donated by company to schools for construction of new classrooms and furniture etc. then company makes an assessment regarding how many students are benefited from it and whether facilities provided are being put to proper use or not.

The company has also been making donations to nearby government hospitals, especially the ones frequented by their working staff from manufacturing units. The company contacts local hospitals and make enquiries regarding the need for basic life saving and emergency equipment and ambulance there. In case of lack of such equipments and facilities in the government hospitals donations are made. Later again, data is collected to assess the proper use of equipments by keeping a track on the increase in number of patients in the OPD and counting the frequency of usage of ambulance services etc. In CMC Ludhiana a rehabilitation centre is being constructed by Vardhman. Till date company has donated life saving equipments, ventilators, ultrasound machines, digital X-ray machines etc. to various hospitals. The company is also in process of signing an MOU with Oncology department in CMC Ludhiana to bear the cancer treatment expenses for patients who cannot afford their medical expenses. Also INR 0.5 million was donated by company to CANKID NGO which works for kids detected with cancer in early childhood. Another NGO DARPAN which serves mentally impaired / autistic children and carries its operations in a rented building has its annual rent being borne by the Vardhman. The company also provided sanitation facilities and donated X-ray machine in the MCH hospital which is close to its manufacturing unit in Ludhiana.

Vardhman has constructed drinking water facilities, RO system, toilets, libraries, computer labs and donated benches and computers to various local government schools. Recently in Giaspura government primary school, 40 rooms in two double storey buildings were constructed and handed over to the school management team on 29 Jan 2018 by the company. This building consisted of various modern facilities like Reverse Osmosis plant for drinking water, furniture for classrooms along with separate toilets for girls and boys and a staff room for teachers. Nishkam vidya mandir in Dugri, where children from marginalized families come for education has also been provided with RO drinking water facility and toilets, furniture etc. by Vardhman. In Sakhewal senior secondary school, 100 desks for classrooms were donated. Sri Krishna Pingalwara in Jalandhar, which is an old age home, has been provided with sewing machines, cupboards and computers etc. Toys and other basic equipments are donated to almost 20 Anganwadi schools in Malerkotla location.

The company undertakes various initiatives like tree plantation, minimizing wastage of water at its manufacturing units along with treating the water to get rid of harmful chemicals in it before releasing it. Till date, it has made various efforts towards planting trees around bank of Narmada river and in wastelands around its manufacturing facilities. In future, it is looking forward to implement a project for reducing smog pollution caused due to stubble burning in Punjab.

During field visit to Mother Child Hospital located at Chandigarh Road, Ludhiana the medical officer in the hospital acknowledged Vardhman for the donations made by it to the hospital. The company provided an ambulance van to hospital for carrying patients in emergency and an ultrasound machine for patients. It also constructed a water tank and installed pre-fabricated toilets for patients in the hospital. The hospital staff and patients cherished company for the services offered by it for welfare of patients. However due to current insufficiency of funds with the hospital, these facilities donated were not being utilized properly. For instance, there was lack of funds to pay wages to driver for running the ambulance and make payment to ultrasound machine operator. Hence due to shortage of resources on part of hospital these facilities were not being brought to public use and help needy patients. However before such internal issue in the hospital, patients appreciated Vardhman for the provision of these utilities to them free of cost.

General public appreciates the social development initiatives undertaken by Vardhman. Its plantation activities have created a positive impact on the environment and have motivated masses to grow trees. By providing infrastructure facilities in educational institutes it has benefitted a number of students and has contributed towards improving attendance level in various schools. Due to provision of basic amenities students are better motivated to focus on their studies and hence perform well. Establishment of computer labs in schools has ensured children being literate and aware of much required skill of computers knowledge in this age of technology. With its contribution towards healthcare sector it has illuminated the life of number of patients by ensuring access to life saving equipments, ambulances along with monetary help for treatment. Through its community development programmes, company has fostered a feeling of trust and compassion for itself in the local community thus motivating them to associate with it.

Emerging challenges and suggestions

As per average net profit of Vardhman Textiles Limited for last three years which is INR 7228.891 million, the company was prescribed to spend INR144.578 million in the year 2016-17 whereas it has spent INR 54.091 million which is almost 37 per cent of prescribed expenditure as per recommendations by Companies Act, 2013. The company quoted that unspent amount of Rs. 90.487 million has been kept pending by it to for upcoming CSR proposals. Earlier in year 2015-16 as well company spent Rs 50.1 million claiming to keep

Rs. 67.5 million for future CSR projects. Hence company is failing to spend stipulated amount on its social responsibility projects continuously which may malign the reputation of company considering the increasing importance gained by CSR in today's world.

It is also suggested that Vardhman can make more efforts towards identifying the real issues prevalent in the society and make necessary interventions towards addressing those challenges. Currently most of the companies are carrying out similar initiatives like sanitation, education and health etc. Vardhman can differentiate itself by choosing other areas which need redressal. It can also explore other needy arenas and projects which can be strategically aligned with its business operations. Hence by leveraging resources of company in areas of common interest for its business and society it can be of better service to the society. Also Vardhman may widen up its area of intervention by taking up more social responsibility projects not only for the communities that work with it and live around its manufacturing plants but also for other needy communities living in other parts of the country.

As Vardhman uses cotton as its major raw material, it may put more efforts towards ensuring better farm practices with reduced water usage in cotton farming. It can further make a difference in the social responsibility domain by undertaking more ambitious projects on environment sustainability. Water management can be pursued more aggressively with increase in focus on reduction in waste water generated due to dyeing process in its manufacturing plants. Also it can look forward to addressing the issue of Farmer Suicides which is a major concern these days in India by providing financial aid to debt ridden farmers through establishment of a Farmer suicide relief fund. Hence by pursuing such projects Vardhman can further improve the portfolio of its CSR projects and serve society better.

4.3.5 A case study on corporate social responsibility initiatives by Dabur India Limited

Introduction

Fast Moving Consumer Goods (FMCG) sector is the fourth largest sector of the Indian economy which provides employment to approximately three million people in the country thus constituting nearly five per cent of the total factory employment in India. Within this sector household and personal care products segment constitute almost 50 per cent of total market share followed by healthcare products with 31 per cent and food and beverages segment comprising 19 per cent of total share. This sector is expected to grow by more than double from the present level of USD 49 billion in 2016 to USD 104 billion in 2020. With strong multinational presence, this sector characterizes of intense competition between the organised and unorganised segments along with low operational costs and a well established distribution network. The major players within this sector in India are Hindustan Unilever Limited, ITC, Nestle India Limited, Dabur India Limited etc.

Dabur India Limited, with a revenue of INR²⁵ 76800 million and market capitalization of more than INR 480000 million is recognized as the fourth largest FMCG company in India. In the current year 2016-17, it filed 12 patents and launched almost 17 new products across geographies. Due to growing awareness and popularity of ayurvedic products along with support from government, the demand for ayurvedic products in India is rising day by day. With dabur being ranked as the most trusted healthcare and ayurvedic brand consecutively for the fifth time, its foods segment displayed strong growth touching INR 10000 million of sales in India. Some of its major brands are hajmola, dabur chyawanprash, real juice, dabur honey, dabur vatika, odonil, odomos, dabur red, babool, sanifresh etc.

Dabur India Limited

Dabur reputed to be world's largest ayurvedic and natural health care company, was established by Dr. S.K. Burman in 1884 in Kolkata with a purpose to provide effective and affordable treatment to ordinary people in far-flung villages. It is headquartered at New Delhi. With a market capitalization of more than INR 488000 million, the company shares a broad distribution network with strong presence in both urban and rural markets, thus dealing with almost 6 million retail outlets. The company treats its employees as its most valuable assets and provides employment to approximately 4837 employees on permanent basis and to nearly 7386 employees on temporary basis.

Under the leadership of Mr. Sunil Duggal, the Chief Executive Officer of Dabur India Limited, sales of INR 76800 million and net profit of INR 12770 million in 2016-17 fiscal year were reported. It has a portfolio of more than 400 ayurvedic products. The key consumer product categories in which the company carries out its operations are health supplements, digestives, OTC and ayurvedic ethicals, hair care, oral care, health care, skin care, home care and foods. The five flagship brands of Dabur with distinct brand identities are namely: Dabur known for its natural healthcare products, Vatika recognized for its premium personal care range, Hajmola amongst digestives category, Real known for fruit juices and beverages, Fem well known for fairness bleaches and skin care products.

Sharing massive presence, Dabur sells its products across 120 countries around the globe. Its products are highly popular in the Middle East (which includes Kingdom of Saudi Arabia, UAE, Kuwait, Oman), SAARC countries, Africa (encompassing Egypt, Nigeria, South Africa, Kenya), US, Europe (Turkey and UK) and Russia. The overseas revenue of the company accounts for more than 30 per cent of its total turnover. The company has total 30 manufacturing plants out of which 10 facilities are located overseas in UAE, Turkey, Egypt, South Africa and Nigeria. Within India, it has 20 manufacturing facilities spread across 13 locations namely Baddi (Himachal Pradesh), Pantnagar (Uttarakhand), Katni and Pithampur

²⁵ INR stands for Indian Rupee which is the official currency of Republic of India.

(Madhya Pradesh), Alwar and Newai (Rajasthan), Jammu , Silvassa, Narendrapur and Jalpaiguri (West Bengal), Nashik (Maharashtra), Sahibabad (Uttar Pradesh), Tezpur (Assam).

Dabur's Journey

It was established by Dr. S.K. Burman in 1884, as a small ayurvedic pharmacy in Kolkata. With a view to expand operations in response to its growing popularity it established its first manufacturing plant in 1896 to initiate mass production of its ayurvedic formulations. In 1919, India's first research laboratory for ayurvedic medicines was established by Dabur to ensure quality checks of its products. It further expanded its operations by opening new manufacturing facilities at Daburgram and Narendrapur in 1920 and became a fully fledged company named Dabur India (Dr. S. K. Burman) Pvt. Ltd. in the year 1936. The company shifted its operations to Delhi in 1972. In the year 1979, Dabur Research and Development Centre (DRDC) was established to carry out research in various areas of healthcare. Dabur converted into a public limited company thus renaming itself Dabur India Limited in 1986 after a reverse merger with Vidogum Limited. In 1994 the company raised its first public issue which was oversubscribed 21 times due to its good public image.

To ensure better operations and management, three separate divisions namely healthcare products division, family product division and dabur ayurvedic specialities limited were established in 1996. Dabur entered into processed food market in 1997 with the creation of a separate food division. In 1998, the company appointed a non-family professional as the CEO of the company and became one of the first companies within India to experience induction of professionals for managing operations. In 2003, pharmaceutical business of the company was demerged from its FMCG business, to provide better focus to both businesses by establishing separate Dabur Pharma Limited; and further in 2007 Dabur Foods Limited merged with Dabur India to attain operational efficiencies. In 2008, the company entered into skin care market with acquisition of Fem Care Pharma and further it acquired Ajanta Pharma in 2011. It established a completely modern and fully automated greenhouse at Uttarakhand in 2012 to grow rare herbs. In 2017 with a massive investment of Indian Rupees 250 crore, Dabur established a modern manufacturing plant for ayurvedic medicines in Assam.

Dabur's CSR Policy

'What is that life worth which cannot bring comfort to others.'

Dr. S.K. Burman (Founder)

True to its motto of being 'Dedicated to health and wellbeing of every household', Dabur has not only focused its CSR initiatives around its manufacturing facilities but also throughout the country thus attending to the needs of various other communities. The company's corporate social responsibility vision is: *'Through sustainable measures, actively contribute to the Social, Economic and Environmental Development of the community in which we operate*

ensuring participation from the community and thereby create value for the nation.’ With a goal to achieve this vision, the company has formulated two mission statements:

- *‘Ensuring socio-economic development of the community through different participatory and needbased initiatives in the best interest of the poor and deprived sections of the society to help them to become self-reliant and build a better tomorrow for themselves.’*
- *‘Ensuring environmental sustainability through ecological conservation and regeneration, protection & regrowth of endangered plant species, and promoting biodiversity.’*

The company’s CSR Committee, headed by Dr. Ajay Dua who is an Independent Director, consists of total four members thus guiding the formulation and monitoring of corporate social responsibility policy of the company. The committee also recommends the CSR activities to be undertaken by company along with proposing the expenditure to be incurred on these activities. The CSR activities undertaken by Jivanti Welfare and Charitable Trust which is promoted by Dabur are also reviewed by this committee. The main focus areas of the company for implementing its social responsibility initiatives are:

- Healthcare promotion
- Promoting sanitation
- Environmental sustainability
- Education promotion
- Sports promotion
- Women empowerment
- Skill development
- Biodiversity promotion

The company carries out its CSR activities either through its in-house team or through its registered societies²⁶ named SUNDESH and JIVANTI TRUST or by collaborating with external NGOs like Care India and government structures such as District Rural Development Agencies (DRDAs) etc.

Trusts and Welfare Societies

With an aim to streamline and carry out its CSR activities more efficiently and in a focused way, Dabur registered two voluntary Non Government Organizations named Sundesh

²⁶ Registered societies’ include a) co-operative societies which are businesses that are run for the benefit of their members by distributing profits between their members, b) community benefit societies are the businesses that are run for the benefit of the wider community by reinvesting profits in the community and c) pre-commencement societies which are industrial and provident societies, registered before 1 August 2014.

and Jivanti Trust under the Society Registration Act, 1860.

Sundesh: Sustainable Development Society or SUNDESH was established on November 19, 1993 with a goal to carry out developmental activities in rural areas by conducting various integrated community development programmes. It rolls out various programmes addressing to upliftment of most vulnerable and underprivileged sections of society namely women, children, illiterate and unemployed. Since its inception it has contributed towards educating needy children, improving healthcare services, skill development in rural areas, women empowerment, formation of self-help groups and environment sustainability.

Jivanti Welfare and Charitable Trust: It was founded by Dabur India with an aim to empower marginalized communities by helping them develop skills to become self sufficient. It supports rural schools by providing them with basic infrastructure and sanitation facilities and runs various other initiatives towards community development and environmental sustainability.

CSR activities

‘Corporate Social Responsibility, for us, goes beyond mandates; it is a part of the Dabur DNA. At Dabur, we believe that an organization’s true worth lies beyond its business, and is best reflected by the service it renders to the community and the society. Our business is committed not just towards profitable growth, but also towards leaving a deeper imprint on the society as a whole. All our actions are aimed towards meeting our corporate motto of being dedicated to the Health and Well-Being of every household.’

Sunil Duggal (Chief Executive
Officer)

In line with its vision, the company has been carrying several initiatives to achieve its objective of ensuring wellbeing of every individual and household. Out of this higher purpose, the company carries out its developmental works for needy communities throughout the country along with communities close to its units. It started reporting its CSR expenditure for the first time in financial year 2015-16 and spent INR 203.8 million on various CSR activities in the year 2016-17.

Table 4.136 Year wise CSR Expenditure by Dabur

Year	CSR Expenditure (INR In Millions)
2016-17	203.8
2015-16	174.4
2014-15	147.1
2013-14	206.3
2012-13	164.3

The various social responsibility initiatives undertaken by Dabur are discussed below:

Environmental sustainability: In response to global environmental issues, the company has been undertaking several initiatives to reduce its impact on environment and address major issues like global warming and climate change.

Energy Conservation: As a part of company's efforts towards energy conservation, the company increased the amount of its renewable energy usage and reduced the GHG²⁷ emissions by 24 per cent than before, by modifying its boilers into bio-fuel boilers thus minimizing the use of petroleum products. It has also improved energy management in its corporate office. In the year 2016-17, the company invested INR 28.99 million on energy conservation equipment and made total energy savings of INR 0.561 million at its manufacturing facilities by carrying out activities like installing energy efficient lights, replacing regular tube lights with LED lights, utilizing waste dry herbs to generate steam, installation of solar lights in manufacturing units etc. The company has also made several efforts in order to increase the production efficiency of its food packing line by 10 per cent.

With an aim of shifting to natural fuels the company has been using agricultural waste as a fuel for steam generation in some units and reduced use of diesel by replacing with Piped Natural Gas (PNG) at its Sahibabad Factory. Dabur celebrates 1st Jan each year by organizing plantation drives to increase the green cover at all its manufacturing units. Also such drives are organized outside company premises in various areas all around Uttar Pradesh, Uttarakhand and Himachal Pradesh. The company installed solar lamps equipped with LED lightning technology in various villages of Uttar Pradesh thus benefitting 837 households with this initiative.

Waste Management: Dabur has been undertaking several initiatives to minimize waste generation at its production sites. All its units are run in compliance with regulatory standards. It has installed total seven plants for treating canteen waste and sewage at its various units. The company has also been installing water efficient technology and various water effluent treatment systems, like Reverse Osmosis (RO) and Ultra-Filtration (UF) plants at its manufacturing plants to reutilize its treated water in gardening or other activities. The fully automated RO/UF plants installed at its Sahibabad and Rudrapur units, recycles almost 6, 50,000 liters of treated effluent water per day for reuse purposes. To ensure that treated water is free from any colors the company has also introduced a Color Removal Filter (CRF) at its Sahibabad unit. The company utilizes all the non-hazardous waste generated by it during production operations as a fuel for running boilers thus reducing its GHG emissions. In the year 2016-17, the company recycled 100 per cent of its herbal waste generated during

²⁷ GHG means Green House Gases like Carbon dioxide, methane etc.

production thus utilizing it as a fuel for boilers.

Also the company has established a biogas plant to generate methane gas from waste which is then used in canteen as fuel. Under E-waste Management Rule 2016, Dabur sold around two MT of its e-waste to approved e-waste recyclers. Further it is working with its packaging suppliers and third party service providers to seek opportunities so as to create recycling stations for consumer waste. It has already joined hand with Tetra Pak to recycle the packaging material of its Real juice after consumption. The company has attained zero waste water discharge at 9 of its 12 production units. Due to persistent endeavors company has reduced its hazardous waste generation by 47 per cent and generation of ozone depleting substances by 24 per cent along with an increase in the percentage of its treated effluents by 9 per cent.

Water Conservation: The company rolled project *Desert Bloom* to address the issue of water scarcity in villages of Newai block in Rajasthan and improve the sustainable livelihood of marginalized communities using cost-effective and ecofriendly community based technologies like water harvesting, water conservation, recharging of tube wells and plantation. Carried out in collaboration with Society to Uplift Rural Economy (SURE), this project aims to increase the water table in the region. A Nadi (pond) was dug up in the region with a capacity to store 65 lakh litres of water to serve as the main source of water for villagers for the domestic use and irrigation purposes. Four Tankas (wells) each with a capacity of 32000 litres were constructed in different villages to provide water for drinking purposes. A drinking water facility was also developed for the community with the construction of four Tankas (wells) in different villages. Also 15 tube wells were constructed which can be recharged with a cemented container-cum-pipeline to store rain water. This project has helped recharge ground water in the region and also ensured uninterrupted water supply to 765 families in three villages of Newai block along with the plantation of 100 trees on the periphery of the pond to foster sustainable livelihood in the district. Due to continuous supply of water; cultivation of wheat, barley and vegetables in the region has increased by 20 per cent.

Dabur invested more than INR 20 million at its Sahibabad unit in the year 2016-17, thus constructing 19 rooftop rainwater recharge harvesting pits to recharge more than 3,00,000 kilolitres of rainwater back to the ground in Sahibabad facility. The company closely monitors the water usage at all its manufacturing facilities and has developed a water management strategy to provide guidance to it on ways to increase water efficiencies and minimize water usage at its facilities. All units of the company comply with zero liquid discharge system. With public private community partnership, a water tap line was installed in Baddi. As a result, of company's continuous efforts its water consumption has been comparatively reduced by 11 per cent than before.

Construction of Green Buildings: Dabur proved to be a leader in green building initiative by qualifying amongst the first few manufacturing companies in India for ‘Leadership in Energy and Environmental Design’ (LEED). It has included green building design principles into its buildings by continuously innovating on improvement in the energy performance of its buildings including corporate offices and manufacturing units. The company’s office building in Gurgaon (Haryana) along with the manufacturing units in Baddi (Himachal Pradesh) and Rudrapur (Uttaranchal) have been awarded the LEED India rating. The Baddi and Rudrapur buildings are among the first industrial buildings in India to get this prestigious rating.

Biodiversity promotion: Dabur, with an aim to conserve natural resources and preserve many rare herbs from near extinction, has collaborated with local NGOs and universities all around India to organize special training programmes for marginal farmers, villagers and tribal communities across the country thus training them on sustainable and environment-friendly cultivation processes. As a result of such efforts the total area under cultivation of rare medicinal herbs has grown by 108 per cent and the number of farmers taking up cultivation has grown by 106 per cent in 2016-17. This programme being run in 12 states throughout India including Odisha, Tamil Nadu, Andhra Pradesh, Arunachal Pradesh, Himachal Pradesh, Gujarat, Rajasthan, West Bengal, Uttar Pradesh, Uttarakhand Karnataka and Maharashtra. Since 2003, the company has been running a fully automated state-of-the-art greenhouse in Pantnagar (Uttarakhand) which is devoted absolutely to growth and nurturing of medicinal plants and herbs. It also supplies high quality seeds and plants free of cost to the farmers throughout India along with offering them training on sustainable cultivation practices. In 2016-17, Dabur grew and distributed 9.3 lakh saplings of rare medicinal herbs to various farmers, and benefitted 6500 farmers from its agronomical initiatives. The company has more than 10 satellite nurseries and demo cultivation sites in India.

Healthcare promotion: Dabur through its ‘*Dil Se Dua*’ programme tried fulfilling the nutritional needs of over 6,000 street children living in shelter homes run by Prayas Juvenile Aid Centre Society in various areas of Delhi namely Yamuna Bazar, Jahangirpuri, Tughlakabad, Delhi Gate, Shadipur Depot, Pandav Nagar, Kirti Nagar, Vivek Vihar, Vasant Vihar, Motia Khan, Lahori Gate, Peeragarhi, Bangla Sahib, Nabi Karim, Azadpur, Kucha Pandit etc. The company distributed 30,136 packets of juice to these children. Through this initiative along with creating awareness regarding nutritional requirements of homeless children the company encouraged public to pledge their support for the programme by way of a signature thus collecting more than 15,000 pledges and signatures in 2016-17.

The company also runs ‘*Immune India*’ programme across various schools in the country thus educating students, teachers and parents on health maintenance by strengthening body’s internal immunity system. In 2016-17, special programmes were organized in schools

of Ghaziabad, Pune, Patna, Indore, Lucknow and Jaipur to create awareness about methods of boosting immunity by consuming healthy and balanced diet. Also information on proper hygiene, inclusion on variety of fruit and vegetables in daily diet, exercising and proper sleep was provided. Then ranking of schools and students on the basis of maintaining health and immunity was done while felicitating the winners. Till date this programme has engaged more than 300000 children in approximately 3000 schools across five states of our country.

Also a program named *Dengue Fighter* was rolled out by the company with an aim to educate school children and people living in slums about mosquitoes and diseases caused by them. The company organized Dengue awareness drive in New Delhi in partnership with Health & Environment Safety Workforce (HESW) and South Delhi Municipal Corporation. To raise awareness among school-going kid's, rallies were organized at schools in collaboration with New Delhi Municipal Council (NDMC). This awareness initiative has engaged nearly 700,000 children in 538 schools across 13 cities in Delhi-NCR, Uttar Pradesh, Punjab, West Bengal, Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh with an aim to create a healthy and mosquito-free environment in various government schools and offices.

Dabur in collaboration with Society for Oral and Dental Care (SODC) conducted *Oral Hygiene Camps* to raise understanding about oral health across various schools in the country. At these camps free oral health check-ups were carried out by dentists while distributing samples of toothpaste amongst the students along with teaching best oral care practices to kids. During 2016-17, such camps were organized in 1,317 schools reaching out to almost 0.525 million students in 12 states of the country namely Uttar Pradesh, Madhya Pradesh, Maharashtra, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Jammu & Kashmir, Himachal Pradesh, Haryana, Uttarakhand and West Bengal.

The company also organizes regular interaction sessions with families and malnutrition screening camps in various villages to create awareness regarding consuming variety of fruits and vegetables in daily meals to prevent occurrence of diseases among kids. These camps also encourage people to grow vegetables at home through free of cost distribution of seeds of essential fruits and vegetables under its *Kitchen Gardens, or Ghar ki Bagiya* programme. Under this initiative training on sustainable farming is also provided to masses. In the year 2016-17, almost 390 families were engaged under this programme. Also seeds of various plants and trees were distributed free of cost among families across 24 villages of Ghaziabad and Rudrapur. The company also distributed saplings of approximately 5,758 fruit trees like Jamun, Mango, Pomegranate and Lime among 759 famers living across 21 villages of Uttar Pradesh, Uttarakhand and Himachal Pradesh.

The company also organizes various multi-disciplinary *Health Camps* in remote areas of the country thus offering marginalized populations with free diagnosis, along with provision of required ayurvedic medicines and care. These camps with special emphasis on

baby care and women's healthcare promote preventive healthcare among communities. In 2016-17, approximately 907 health camps were organized examining more than 100,000 patients free of cost across 16 states. Dabur also runs a *Wellness Centre* in Delhi which offers free medical checkups and subsidized medicines to its walk-in patients. The doctors at the centre also answer health queries online and over the phone. In collaboration with local NGOs throughout country, it carries out various activities to fulfill healthcare needs of marginalized sections of society. Dabur in collaboration with National Ayurveda Students and Youth Association hosted the AyurMarathon, to create awareness about Ayurveda in Bhopal, along with organizing a special Ayurveda Health Camp. The company also launched *Brave and Beautiful* campaign to create awareness about cancer and help the cancer survivors all around India lead a normal life.

Sanitation promotion: Dabur rolled out its *700 Se 7 Kadam programme* with the aim to make India Open Defecation Free (ODF) country. This programme was launched before the announcement of Swachh Bharat Mission by government. This project intends to improve social status of rural women along with maintaining their dignity; it improves health and sanitation standards in rural areas and reduces diseases from unhygienic conditions. Under this project, company builds toilets at government schools and assists needful village residents in construction of toilets. This programme was initiated in 2014-15 involving 18 villages, later on expanding to total 39 villages in 2016-17 and further covering 42 villages in 2017-18. The beneficiaries are Hapur, Gautam Budh Nagar and Ghaziabad districts in Uttar Pradesh, Rudrapur in Uttarakhand and Baddi in Himachal Pradesh. Till July 2017 eight villages in Uttar Pradesh and four villages in Himachal Pradesh achieved the ODF status and 1253 households have been benefitted through toilet construction. Along with the assistance in construction of toilets, a cleaning kit consisting of cleaning brush, toilet cleanser and air freshener was provided to households where toilets were constructed with an aim to create awareness about good hygiene practices.

The company organizes regular cleanliness awareness sessions in various rural areas of Uttar Pradesh, Uttarakhand and Himachal Pradesh urging residents to adopt proper sanitation and cleanliness practices. Goshthi and Rallies are also organized by the company to educate various village residents about proper disposal of household waste. Separate toilet blocks have been constructed for boys and girls in two schools of Rudrapur in Uttarakhand. Also drawing competitions and several awareness sessions are organized at village schools in various areas to educate about better hygiene practices along with the distribution of soap-bars among them.

Education promotion: Dabur runs eight non-formal education centers called *Gyan Deep Kendras* in Uttar Pradesh and Uttarakhand to provide basic education to out-of-school underprivileged kids which are later linked to formal schools. In the year 2016-17, almost 253

kids were enrolled at these centers to pursue basic education with later putting 144 of them into formal schools. The company also organizes various seminars to create awareness among people living in urban and semi-urban slums on the need for enrolling their children to formal schools. During community interactions and its regular reviews, Dabur identified that due to low literacy level of parents and lower self-confidence some children were not able to perform well in schools. To resolve this issue company started remedial education centres named Gyan Arjan Kendras in Uttar Pradesh and Uttarakhand thus offering special tuition classes to such weak students, with 115 children attending classes at these remedial centers in 2016-17. Under UDAAN project students with economically weak background from Hapur, Ghaziabad and Gautam Budh Nagar in Uttar Pradesh are given financial support for completing their education.

Under its *Adarsh Paathshala* initiative, Dabur started developing basic infrastructure at schools in various villages. The company provided wooden desks and benches for students, constructed clean drinking water facilities and installed dustbins in schools. In 2016-17, almost 632 sets of wooden desks were distributed among 17 schools thus benefiting 2374 students in rural areas of India. It also constructed separate toilet blocks for girls and boys in selected schools thus covering almost nine schools in Uttar Pradesh and four each in Uttarakhand and Himachal Pradesh. The company also introduced Building as Learning Aid (BaLA) paintings with an aim to create a range of educational aids in schools. It includes painting classroom walls with pictograms, mathematical tables etc. and utilizing outside walls of classrooms, corridors, outdoor spaces and pillars with paintings of hygiene and general health awareness messages. In 2016-17 BaLA paintings were carried out in seven schools thus benefiting approximately 495 students. Also it extended its school support programmes to two schools in Tezpur, Assam named Dhekidol LP School and Sessa Panbari LP School in the same year. It donated teaching equipment, dustbins, almirah etc.; refurbished classrooms in these schools along with organizing tree plantation activity there.

Women empowerment: Dabur conducts regular seminars for men folk in the villages to change their perspective and thinking about women. It also carries out various educational and financial literacy programmes to develop female entrepreneurs in rural areas. The company runs adult literacy centers called *Bahno Ki Paathshala* in Uttar Pradesh and Uttarakhand to help women establish micro enterprises and become financially independent. In 2016-17, a total of 393 rural women gained education through its 18 Adult Literacy Centers. Dabur through Sundesh organizes training and capacity building programmes for women, thus organizing them into various Self Help Groups (SHGs) and Joint Liability Group (JLGs) which makes savings contribution by pooling money for a few months and then lending it to needy ones for undertaking economic activities. These SHGs and JLGs, which are completely run and managed by women, are giving loans to the men folk in their villages

for setting up new ventures thus boosting their self confidence. A total of 156 SHGs benefiting 1,872 families and 28 JLGs benefiting 140 landless farmers are operational today.

Sports promotion: Dabur launched *Ab Daudega Hindustan* initiative in 2016-17 which identified around 350 athletes across cities in Bihar, Uttar Pradesh, Andhra Pradesh, Odisha and West Bengal and invited them to participate in a national camp held in Delhi. A team of experts judged the shortlisted candidates and selected the top 7 athletes from the group thus sending them to a coaching camp at the Ashwini Nachappa Foundation for professional coaching and training under the guidance of Ashwini Nachappa. The goal behind this initiative was to identify athletic talent, train them and thus help them excel at various national and international sports competitions.

Skill development: Dabur operates a total of twelve skill development centers named *Nari Shakti Kendras* in Uttar Pradesh, Uttarakhand and Himachal Pradesh. These centres offer courses on stitching, beautician, computer education, handicraft and soft toy making, along with training on soft skills to girls from various villages with an aim to make them financially independent and supplement their household income. In 2016-17, almost 510 girls successfully completed training in their respective courses from these Nari Shakti Kendras. The company also runs *Swavalamban* which is a training and employment generation programme focused on rural youth in Uttar Pradesh. Under this programme employment guaranteed training as salesman, merchandisers and promoters is provided to youth in rural areas.

The company also runs awareness drives in selected villages in Uttarakhand thus training and encouraging farmers to take up vermicomposting. This has resulted in several farmers shifting to organic vermicompost from usage of chemical fertilizers in their fields. Many farmers have taken up vermicomposting to generate income by selling their excessive production of vermicompost to companies in the neighboring markets thus reaping rich dividends. As part of its capacity building initiatives, Dabur is also running programmes in Bihar and West Bengal to train small and marginal farmers on beekeeping thus providing them with a sustainable livelihood.

CSR in North India

In north India, Baddi is the major area of operation for Dabur India Limited with total 6 manufacturing units in this location. This town with a total population of 29911 is an industrial hub in Solan district of Himachal Pradesh, with almost 2120 manufacturing units belonging to various companies.

Dabur initiated CSR at Baddi location on 2nd November, 2010 through its CSR arm Sundesh in a participatory manner. Its main areas of focus are health, education, livelihood, women empowerment and environment. The programmes are implemented as projects by first conducting a base line survey for need assessment then focused group discussions are

conducted followed by planning, formulating and implementing these programmes. After implementation the progress made is evaluated and reported back to the core CSR team.

'Healthy Village' movement was initiated by company at Baddi location thus selecting five villages with an aim to initiate and promote healthy environment and awareness among residents. Under this movement projects like 700 se 7 kadam, vermi compost, farmers training on domestic fertilizer making and farmers exposure visit are implemented.

In Baddi area, company conducted a baseline survey and identified 15 villages with non availability of toilet among more than 26.42 per cent of the resident families. So company provided financial support for toilet construction to families in these needy villages for making them Open Defecation Free (ODF) under its *'700 se 7 kadam'* programme. Recently a function to celebrate the achievement of ODF status was organized at Jattimajra village of Baddi on February 22, 2017. It also constructed 3 units of toilet separately for girls, boys and staff with modern facilities at Government Primary School in Manakpur.

Under its school support programme named *'Adarsh pathshala – Ek Nai pahal'* government donated 515 desk and bench sets at various government schools since 2012. In current financial year a total of 235 desks were supplemented to four government schools namely Government Senior Secondary School, Chenal Majra, Government Primary School, Lodimajra, Government Primary School, Theda and Government Primary School, Dasomajra. In order to create better learning environment Building Aid Learning Aid (BALA) paintings were done at Manakpur School.

In various deprived regions of Baddi an adult Literacy centre named *'Bahno ki Pathshala'* is run to improve literacy among women. For skill development of women in rural areas five full time skill development centers dedicated to them are being run in Baddi. Also it provides training related to cutting and tailoring, beautician and handicraft at its livelihood and skill development centers named Nari Shakti Kendra. In 2016-17, 82 candidates divided in 4 batches enrolled, out of which 65 qualified for certificates at both of its cutting and tailoring centers. Currently 2nd batch is being conducted in Nandpur village with 45 students. The certificates distributed are fully valid and Himachal Pradesh government provides free sewing machines to SC/OBC trainees at these centers. These centers after completing six months courses are transferred from one village to another village. Also two beautician training centers and one handicraft training centre are being run by company at its Baddi location. In 2016-17, 54 candidates under four batches enrolled out of which 38 students completed their training with certificates for beautician course and out of 23 candidates enrolled under two batches, 20 got certificates for course in handicrafts.

The company with a vision for *'Healthy Village'* launched vermicompost movement covering each household in Jattimajra, Panga, Raipur, Danoda Ghat and Rugi. A total 100 vermicompost units were installed with one unit in each household of these villages. As part

of company's seed distribution programme under National Food Security Mission scheme, 60 progressive farmers were selected from Nalagarh and supplied with wheat and gram seeds and medicine and zink kit costing approximately Rs 4300 per kit to each farmer. Also awareness regarding various technicalities of farming was created.

A campaign '*Ghar Ki Bagiya*' was conducted to educate residents of Baddi village to grow organic fruits and vegetables and reduce the consumption of fruits and vegetables. Also a workshop to train farmers on making domestic fertilizers named panchgavya, matka khad and amrit ghol was conducted on October 22, 2016 at Nalagarh. Also it organized a farmer visit for 52 farmers from Jattimajra village to agro technology and business fair held at Chandigarh on November 19, 2016. These free of cost visits were organized to introduce farmers to new practices and technology in agriculture. The company along with village farmers planted more than 1100 fruits and shadow trees in Jattimajra, Panga, Raipur, Danoda Ghat, Rugi, Khariana, Harraipur and Thana in Baddi during current year 2016-17.

Stakeholders viewpoints

In order to understand the opinion of several stakeholders regarding CSR initiatives undertaken by company, interviews and a field visit was conducted. The employees interviewed threw light on motive behind CSR initiatives by stressing how CSR was started by Dabur with focus to serve society than for strategic purposes by incorporating Sundesh 23 years back. They also talked about the job satisfaction they achieve because they know that they are working in an organization that selflessly contributes towards the social causes.

On field visit to Government Primary School, Manakpur school authorities appreciated Dabur for constructing toilet facilities, making BALA paintings and donating desk benches and dustbins to their premises. This school with majority of its students from slum areas was the first school in Baddi area where school toilet programme was started by the company. Prior to company intervention the condition of toilets in school was very poor with leakages everywhere and roof on the verge of falling, making it highly unsafe for students to use these facilities. Due to non-availability of furniture facilities children used to sit on floor. Because of such derogatory conditions the students were facing several health issues and school dropout rate was high. After company intervention the academic performance and attendance level of students in this school highly improved. Also hygiene condition of students especially girls has highly improved in the school.

Also a visit was made to Government Senior Secondary School, Chenal Majra where Dabur donated desk benches for students, did BALA paintings to facilitate learning for students and constructed plant guards along with planting trees as a part of its tree plantation drive.

As a part of company's sanitation drive in village Jattimajra which has achieved ODF status the toilets were constructed in houses with no toilet facility on participatory basis. The

individual households were given financial aid for toilet construction. The village residents interviewed applauded Dabur for helping them avail this basic need and making their life better. This initiative which is a major step towards maintaining the dignity of women has improved the lives of a number of women living in rural areas.

The women being trained in Nari Shakti Kendra shared their stories regarding motivation for joining these centers to learn tailoring, beautician and handicrafts. They expressed how women in their village became self dependent and contributed towards household expenses by acquiring these skills. These centers after training local women in one village for 6 months are transferred to another village thus benefiting residents in various villages of Baddi district. Currently 2nd batch on cutting and tailoring is being conducted in Nandpur village with 45 students. The trainee women at this centre expressed how these training courses have helped improving their families' standard of living by making them capable of contributing to total household income. Also due to availability of training centers in their native villages these women got an opportunity to get trained at places close to their residence. Earlier it was very difficult for them to pursue such courses due to lack of proper road connectivity in these semi-hilly areas. Also at Dharampur, a computer literacy center in collaboration with NIIT is being run by Dabur to provide training on MS Office.

On field visit to Jattimajra, it was observed that every house had a vermicompost unit for producing natural fertilizers for their house gardens. These units ensure production of healthy food products for village residents which are free from chemical fertilizers. Dabur supports these farmers by ensuring provision of earthworms costing INR 200 per kg to these farmers at zero cost. Farmers interviewed communicated how they are motivated to take up organic farming at their farms and assisted in developing these vermicompost units by Dabur. These efforts have ensured better health and consumption of organic food products for the village residents.

Conclusion

Dabur India Limited with its current activities is leading as an example for others to follow. The amount spent by it on various CSR activities has always exceeded the stipulated amount as per Government recommendations. Initiatives of the company like using stubble which is an agricultural waste in preparing vermi compost, can sort out our country's major problem of air pollution due to smog at the time of harvesting in Northern areas of India. In addition to preventing this life threatening situation utilization of stubble in vermicomposting will also contribute towards production of organic fertilizer in the country thus ensuring production of healthy and chemical free food for masses. In future, in addition to widening up its current projects the company is also planning to initiate installation of solar street lights in villages, carry of renovation of local ponds, setting up science centers in government schools and initiate programmes on adult literacy for old age women in the area.

CHAPTER V

SUMMARY

The purpose of this dissertation entitled ‘Corporate social responsibility in India: A study of disclosures and relevance’ was to analyze corporate social responsibility disclosures made by selected Indian companies; to study the relationship between corporate social responsibility and financial performance of selected Indian companies; and to develop case studies regarding corporate social responsibility initiatives undertaken by selected companies. This chapter presents the summary and conclusion drawn on the basis of our research findings and throws light on the limitations of the present study while offering suggestions for the future research to overcome these limitations. The objective wise summary of findings and implications has been presented below:

5.1 Corporate social responsibility disclosures by selected companies

An attempt was made to analyze the corporate social responsibility disclosures made by selected Indian companies across eight themes namely ‘community development theme’, ‘human resources theme’, ‘energy theme’, ‘environment theme’, ‘product, services-safety and innovation theme’, ‘customers theme’, ‘emission of carbon and harmful gases theme’ and ‘other CSR activities theme’ over a period of ten years from 2008 to 2017. The content, quality and amount of disclosures made by selected companies were investigated. Further in depth analysis of these disclosures was made on the basis of their industry groups and form of ownership.

5.1.1 Overall CSR disclosures

It was observed that across selected themes, activities from ‘customer theme’ were disclosed by all companies (100%) in most of the years, followed by activities from ‘community development theme’ with disclosures by 117 companies (85.4%) in 2008 which steadily rose to 133 companies (97.1%) in 2017. Overall the number of companies making disclosures on CSR has been quite high throughout the period of study. Bharat Heavy Electricals Limited (74.8%) and Ambuja Cements Limited (73.2%) are the top most CSR disclosing companies, while Aurobindo Pharmaceuticals Limited (22.3%) is the least CSR disclosing company out of selected sample. It was also observed that average number of activities disclosed by the selected sample was 71 activities (39.9%) in 2008 which gradually increased over time to average 124 activities (69.7%) in 2017.

Results on quality of CSR disclosures suggest that over period of study, the proportion of financial disclosures by companies has increased continuously while that of simple qualitative disclosures has decreased. However qualitative disclosures with specific information were observed to be most preferred form of disclosures by the selected companies. Among all the themes maximum financial disclosures were made by ‘energy

theme' (41.9%) and maximum qualitative disclosures with no special information were made by 'emission of carbon and harmful gases theme' (72.5%). In the category of non-financial disclosures with particular information highest proportion was shared by 'customers theme' (53.7%).

In terms of volume/amount of disclosures on CSR by companies in their annual reports, a continuous increase over the entire period of study was observed with maximum amount of disclosures on 'community development theme' followed by 'human resources theme'. The amount of disclosures on 'other CSR activities theme' was found to be lowest. Also the volume of disclosures on 'energy theme' and 'emission of carbon and harmful gases theme' have always been on comparatively lower side across all years of study. The results of trend analysis indicate the existence of a positive and highly significant trend during the period of study across all the themes of CSR. On investigating variations across all selected themes of CSR, it was observed that at 1 per cent level of significance there is a significant variation in amount/volume of disclosures made across all themes of CSR.

5.1.2 Disclosures across different industry groups

Results on investigating automobiles group indicate that each of the selected eleven companies from this sector have made disclosures on CSR in their annual reports during study period. The activities from 'community development theme', 'human resources theme', 'customers theme', 'product, services-safety and innovation theme' and 'environment theme' were mostly reported by the companies in this group. Most of the disclosures within this sector were qualitative disclosures with specific information (52.2%), followed by qualitative disclosures (25%) and financial disclosures (22.7%) being the lowest. Further, in the category of financial disclosures maximum contribution was by 'energy theme' (43.4%) and in the form of non-financial with particular information by 'customers theme' (58.4%). In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (79.1%). Also a consistent increase in average number of sentences from 208.7 sentences in 2008 with a slight dip in 2016 with 434.1 sentences to a rise again in 2017 with 454.5 sentences was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes over the selected study period. In terms of amount of disclosures 'human resources theme' shared maximum volume while 'emission of carbon and harmful gases theme' contributed least towards total amount of disclosures within automobiles sector.

Results on cement industry indicate that each of the selected five companies from this sector have made CSR disclosures in their annual reports. The activities from 'energy theme', 'environment theme', 'human resources theme', 'product, services-safety and innovation theme' and 'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative disclosures with

specific information (50.7%) followed by financial disclosures (24.9%) and finally qualitative disclosures (24.4%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme; (39%) and in the form of non-financial with particular information 'product, services-safety and innovation theme' (62.6%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (71.6%). Also a consistent increase in average number of sentences from 258.6 sentences in 2008 to 549.4 sentences in 2017 was observed within cement industry. The results of trend analysis indicated a highly significant and positive trend among all the themes except the 'energy theme' where the trend coefficient is not significantly different from zero at 1 per cent level of significance value indicating the presence of neither a positive nor a negative trend. The 'human resources theme' shared maximum volume, while 'other CSR activities theme' contributed the lowest in terms of amount of disclosures.

For construction industry it was found that each of the selected three companies from this sector has made CSR disclosures in their annual reports. The activities from 'energy theme', 'environment theme', 'customer theme', 'human resources theme', 'product, services-safety and innovation theme' and 'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (48.1%) followed by financial disclosures (27.8%) and qualitative disclosures (24.1%) as the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (52.6%) and in the form of non-financial with particular information 'customers theme' (58.4%) ranked one. In case of qualitative disclosures with no special information, 'emission of carbon and harmful gases theme' contributed the maximum (83.6%). Also a consistent increase in average number of sentences from 217.3 sentences in 2008 to 454.3 sentences in 2017 was observed in construction sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'emission of carbon and harmful gases theme', 'energy theme' and 'other CSR activities theme' contributed the lowest in terms of amount of disclosures.

Results on consumer goods industry indicate that each of the selected twenty companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative disclosures with specific information (55%) followed by financial disclosures (23.4%) with qualitative disclosures (21.5%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (42.3%) and in the form of non-financial with particular information 'product, services-safety and innovation theme' (54.3%) ranked one. In case of

qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (75%). Also a consistent increase in average number of sentences from 185.6 sentences in 2008 with a slight dip in 2016 with 461.7 sentences to a further fall in 2017 with 442.7 sentences was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' shared maximum volume, while 'other CSR activities theme' contributed the lowest in terms of amount of disclosures.

Results on energy industry indicate that each of the selected twenty companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative nature with specific information (50.4%) followed by financial disclosures (28.2%) with qualitative disclosures (21.4%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (39.3%) and in the form of non-financial with particular information 'customer theme' (56.5%) ranked one. In case of qualitative disclosures with no special information 'other CSR activities theme' contributed the maximum with 70.3 per cent. Also a consistent increase in average number of sentences from 257.6 sentences in 2008 to 478 sentences in 2017 was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes. The 'community development theme' shared maximum volume, while 'other CSR activities theme' contributed the lowest in terms of amount of disclosures.

Results on investigating financial services industry group indicate that each of the selected twenty six companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (50.6%) followed by qualitative disclosures (25%) with financial disclosures (24.4%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (29.1%) and in the form of non-financial with particular information 'customers theme' (50.6%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (85.9%). Also a consistent increase in average number of sentences from 185.7 sentences in 2008 to 400.2 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'community development theme' shared maximum volume, while 'emission of carbon and harmful gases theme' contributed the lowest in terms of amount of disclosures.

For industrial manufacturing industry it was found that each of the selected seven companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme', 'product services-safety and innovation theme' and

'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (49.8%) followed by financial disclosures (25.5%) with qualitative disclosures (24.7%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (44.3%) and in the form of non-financial disclosures with particular information 'product services-safety and innovation theme' (57.5%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (64.2%). Also a consistent increase in average number of sentences from 239.1 sentences in 2008 to 503.1 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities' contributed the lowest in terms of amount of disclosures.

Results on information technology industry indicate that each of the selected nine companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme', 'community development theme' and 'product, services-safety and innovation theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative nature with specific information (55.4%) followed by financial disclosures (24.3%) with qualitative disclosures (20.3%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (40.8%) and in the form of non-financial with particular information 'customer theme' (52.7%) ranked one. In case of qualitative disclosures with no special information 'other CSR activities theme' contributed the maximum (70.9%). Also a consistent increase in average number of sentences from 207.8 sentences in 2008 to 422.9 sentences in 2017 was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes except the 'product, services-safety and innovation theme' where the trend coefficient is not significantly different from zero at 1 per cent level of significance value indicating neither the presence of a positive nor a negative trend. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities' contributed the lowest in terms of amount of disclosures.

Results on investigating metals industry indicate that each of the selected nine companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme', 'human resources theme', 'product, services-safety and innovation theme' and 'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (49.8%) followed by financial disclosures (29.3%) with qualitative disclosures (20.9%) becoming the lowest. In the category of financial disclosures

maximum disclosures were by 'energy theme' (44.4%) and in the form of non-financial with particular information 'customers theme' (54.9%) ranked one. In case of qualitative disclosures with no special information 'other CSR activities theme' contributed the maximum (71.1%). Also a consistent increase in average number of sentences from 236.6 sentences in 2008 to 503.7 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities theme' and 'energy theme' contributed the lowest in terms of amount of disclosures.

For pharmaceuticals industry it was found that each of the selected twelve companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customers theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (54%) followed by financial disclosures (27.5%) with qualitative disclosures (18.5%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (55.5%) and in the category of non-financial with particular information 'customers theme' (56.3%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (80.7%). Also a consistent increase in average number of sentences from 197.2 sentences in 2008 to 433.7 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'community development theme' and 'human resources theme' shared maximum volume, while 'other CSR activities theme' and 'emission of carbon and harmful gases theme' contributed the lowest in terms of amount of disclosures.

Results on services industry indicate that each of the selected four companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'environment theme', 'customers theme', 'human resources theme', 'product, services- safety and innovation theme' and 'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative nature with specific information (54.3%) followed by financial disclosures (26%) with qualitative disclosures (19.7%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (57.7%) and in the form of non-financial with particular information 'product, services- safety and innovation theme' (51.2%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (82.6%). Also a consistent increase in average number of sentences from 218.25 sentences in 2008 to 439.5 sentences in 2017 was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes except the 'energy theme' where the trend coefficient is not

significantly different from zero at 1 per cent level of significance value indicating neither the presence of a positive nor a negative trend. The 'community development theme' and 'human resources theme' shared maximum volume, while 'other CSR activities theme' and 'emission of carbon and harmful gases theme' contributed the lowest in terms of amount of disclosures.

Results on investigating telecom industry indicate that each of the selected four companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme', 'human resources theme', 'product, services-safety and innovation theme' and 'community development theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (53.7%) followed by financial disclosures (27.9%) with qualitative disclosures (18.4%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'community development theme' (34.2%) and in the form of non-financial with particular information 'product, services- safety and innovation theme' (63.7%) ranked one. In case of qualitative disclosures with no special information 'other CSR activities theme' contributed the maximum (65.1%). Also a consistent increase in average number of sentences from 248.7 sentences in 2008 to 468.5 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities' contributed the lowest in terms of amount of disclosures.

For miscellaneous industry group it was found that each of the seven companies from this group has made some sort of CSR disclosures in their annual reports. The activities from 'product, services-safety and innovation theme' and 'customer theme' were mostly reported by the companies in this group. Companies from this group made maximum disclosures as qualitative with specific information (53.7%) followed by financial disclosures (24.7%) with qualitative disclosures (21.6%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (53.3%) and in the form of non-financial with particular information 'environment theme' (58.8%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (90.9%). Also a consistent increase in average number of sentences from 213.1 sentences in 2008 to 410.6 sentences in 2017 was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes except the 'energy theme' where the trend coefficient is not significantly different from zero at 1 per cent level of significance indicating neither the presence of a positive nor a negative trend. The 'human resources theme' and 'community development theme' shared maximum volume, while 'emission of carbon and harmful gases theme' contributed the lowest in terms of amount of disclosures.

On investigating variation across different themes of corporate social responsibility disclosures within each individual industry group it was observed that at 1 per cent level of significance there is a significant variation in amount of disclosures across different themes of CSRD in each selected industry group. On analyzing variation in these disclosures across different industry groups no significant variation was found in terms of CSRD across thirteen selected industry groups.

5.1.2 Disclosures across different ownership sectors

For industries from public sector it was found that each of the selected thirty companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative disclosures with specific information (50.8%) followed by financial disclosures (28%) with qualitative disclosures (21.3%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (37.2%) and in the form of non-financial with particular information 'customers theme' (54.4%) ranked one. In case of qualitative disclosures with no special information 'other CSR activities theme' contributed the maximum (68.3%). Also a consistent increase in average number of sentences from 234.7 sentences in 2008 to 472.7 sentences in 2017 was observed in the sector. The results of trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities' contributed the lowest in terms of amount of disclosures.

Results on investigating private sector industries indicate that each of the selected 107 companies from this sector has made some sort of CSR disclosures in their annual reports. The activities from 'customer theme' were mostly reported by the companies in this group. Companies from this sector made maximum disclosures as qualitative with specific information (52.5%) followed by financial disclosures (24.9%) with qualitative disclosures (22.6%) becoming the lowest. In the category of financial disclosures maximum disclosures were by 'energy theme' (43.6%) and in the form of non-financial (non-quantitative) with particular information 'customers theme' (53.6%) ranked one. In case of qualitative disclosures with no special information 'emission of carbon and harmful gases theme' contributed the maximum (74.9%). Also a consistent increase in average number of sentences from 208.3 sentences in 2008 to 442.2 sentences in 2017 was observed in the sector. The overall trend analysis indicated a highly significant and positive trend among all the themes. The 'human resources theme' and 'community development theme' shared maximum volume, while 'other CSR activities theme' and 'emission of carbon and harmful gases theme' contributed the lowest in terms of amount of disclosures.

On investigating variation across different themes of corporate social responsibility disclosures within each sector on the basis of ownership, it was observed that at 1 per cent level of significance there is a significant variation in amount of disclosures across different themes of CSR in each sector. On analyzing variation in these disclosures across sectors no significant variation was found in the amount of disclosures being made across both the sectors.

5.2 Relationship between corporate social responsibility and financial performance

On investigating the relationship between selected financial performance indicators and total CSR disclosures it was found that return on assets was negative and not significantly related to total CSR. While both return on equity and net profit margin had a significant and negative relationship with total CSR disclosures. On taking values of total disclosures with lags consecutively for three years, it was observed that return on assets again shared a negative and insignificant relationship with CSR disclosures having one year lag, two year lag and three year lag. While return on equity shared a negative and significant relationship with CSR having one year lag, two year lag and three year lag. Net profit margin was observed to have a negative and significant relationship with CSR having two year lag, while it shared an insignificant relationship with both CSR having one year lag and three year lag.

On analyzing the relationship between selected financial performance indicators and each theme of corporate social responsibility disclosures it was found that return on assets was not significantly related to any theme of CSR while return on equity and net profit margin both were found to be significantly and negatively related to only 'community development theme' of CSR disclosures. On analyzing the relationship of these measures of financial performance with lagged values of each theme of CSR disclosures for consecutively three years, it was found that return on assets shared an insignificant relationship with each theme having one year lag, two year lag and three year lag. While return on equity was observed to have a significant and negative relationship with only 'community development theme' having all one year lag, two year lag and three year lag. It shared an insignificant relationship with all other themes of CSR disclosures having lags upto three years. Net profit margin shared significant and negative relationship with three year lag value of 'community development theme' while with one year lag and two year lag value the relationship was observed to be insignificant. Other themes of CSR disclosures had an insignificant relationship with net profit margin across three year lags.

On taking CSR as dependent variable and financial performance as dependent variable, it was found that it shared an insignificant relationship with both return on assets and net profit margin. The relationship between CSR and return on equity was found to be negative and significant.

5.3 Case studies on corporate social responsibility initiatives by companies

It was observed that Nestle India Limited through its Creating Shared Value approach carries out several CSR initiatives in Punjab. It carries out Nestle Healthy Kids Programme in collaboration with College of Home Sciences, PAU, Ludhiana to create awareness on nutrition among school children. Also it has launched Project Jagriti to educate and encourage women on good nutrition and breastfeeding practices. It organizes water awareness programmes for school going children and is constructing sanitation facilities for girl students and contributing towards provision of clean drinking water by building up water tanks and setting up RO facilities in government schools throughout Punjab. It also trains farmers on sustainable agricultural practices and conducts Village Dairy Development Programme to educate and train rural women towards entrepreneurship. Owing to its years of social involvement and partnership with local farmers, Nestle has established a special bond of trust with the local community in Punjab.

Ambuja cements run its CSR initiatives mainly through Ambuja Cement Foundation and is well respected in the community for its deep involvement and true to heart service to the society. It runs skill and entrepreneurship development institute thus training rural youth across twelve sectors by offering almost 30 training courses. It also promotes women empowerment by serving as a platform for Self Help Groups for rural women and also runs training programmes to promote digital literacy among them. It runs several Gyan Deep Kendras which are non formal education centers run for educating children of migrant laborers. Also it carries out several infrastructure development programmes in rural areas. As a commitment towards Swach Bharat Abhiyan it adopted 259 villages out of which 95 have achieved ODF status. It also runs several farmer clubs in various villages assisting farmers on sustainable agricultural practices and educating on latest developments in the field. Ambuja also runs world renowned Ambuja Manovikas Kendra for children with special needs and organizes drug de-addiction programmes in Punjab from time to time. It follows a process oriented approach and its major aim while implementing various social development projects is to bring behavioral changes in the beneficiaries so as to ensure sustainability of these projects.

Cipla carries out its CSR activities mainly through Cipla Foundation. It has established Cipla Palliative Care and Training Centre for terminally ill cancer patients and supports free education for children of marginalized communities with AIDS and HIV positive. It also runs Mobile Health Plan for providing free health services to residents of slum and rural areas. The company recently established a skill development center at Ambuja Manovikas Kendra for disabled children which provides training on several trades. It also runs Balvatika centers for fulfilling education needs of kids from slum who cannot afford school education and sponsors the higher education of selected children with poor

background. However, it was also found that Cipla is failing to spend stipulated amount on its CSR projects continuously which needs further consideration and redressal by the higher management.

It was observed that Vardhman Textiles Limited mostly carries out its CSR activities in areas around its manufacturing facilities. It sponsors infrastructure development projects in several government schools around its plants and assists selected government hospitals in procuring medical equipments and building wards and sanitation facilities. It also organizes several camps and provides technical assistance to farmers in order to help them increase cotton yield and carries out several projects for developing infrastructure facilities in rural areas. Vardhman has contributed significantly towards development of green area belts and also organizes blood donation camps and events for promotion of rural sports. However, it was also noticed that Vardhman is failing to spend stipulated amount on its CSR projects continuously which needs a serious consideration by the management.

Dabur India Limited carries its CSR activities through its own NGOs namely SUNDESH and Jivanti Trust. It carries out several programmes in areas around Baddi district of Himachal Pradesh like healthy village movement under which it supports the construction of sanitation facilities as a part of its 700 se 7 kadam programme. It also offers supports to local schools by fulfilling their infrastructure need under Adarsh pathshala – Ek Nai pahal programme. Adult Literacy centres named Bahno ki Pathshala are run in deprived areas thus training women on skills like stitching and computer education. It has also launched a vermicompost movement by installing one unit in each household of the selected villages. It organizes Ghar ki Bagiya programme to educate people for growing and consuming organic fruits and vegetables. Also it runs several Gyan Deep Kendras to provide basic education to out-of-school underprivileged kids. The amount spent by Dabur on various CSR activities has always exceeded the stipulated amount as per government recommendations and with its current activities it is leading as an example for others to follow in the region.

5.4 Conclusion and Implications

In the light of several changes observed in the landscape of CSR reporting within India over past few years, this study analyzed the content, quality and amount of corporate social responsibility disclosures made by Indian companies. Most of Indian companies were found to make disclosures on CSR in their annual reports with a continuous increase in volume over selected time period. Though financial disclosures are gaining popularity over years but still qualitative disclosures were observed to be preferred by companies. Considering the ambiguity of relationship between CSR and financial performance (Aras *et al.*, 2010; Orlitzky, 2011, 2013; Aldag, 2013) and with limited number of empirical investigations in developing countries (Tilt, 1994; Hossain *et al.*, 2006; Bird *et al.*, 2007; Jamali, 2008; Saleh *et al.*, 2011) this study contributes to the body of knowledge by analyzing

this relationship in Indian context. Evidently supporting the stockholder theory which contends that only responsibility of business is to maximize profits and returns for its stockholders (Friedman, 1970), this studies proves the existence of a negative relationship between CSR and financial performance in Indian companies. Based on the findings of the study it is recommended that instead of duplicating similar efforts the companies in India should think innovatively and initiate projects to ensure sustainable development to create a bigger impact on the society. The companies should also widen up their area of intervention by taking up social responsibility projects not only for the communities that live around its manufacturing plants but also for other needy communities living in other parts of the country.

5.5 Limitations and future research

Though the present study provided useful implications for both theory and practice; however several limitations exist in terms of the generalizability and interpretation of the results. Firstly the study focused only on annual reports which Unerman (2000) cited in Belal (2001) argues that exclusive focus on annual reports may lead to an incomplete picture of CSR practices. There are other sources of information on CSR like sustainability report, websites, newspapers and magazines which have been ignored in the study. Future studies may include these additional resources for better understanding of disclosure practices being followed within India. Also there may have been some errors in analyzing the content of annual reports although steps were taken to minimize possible errors. Though the activities included in the index were selected on the basis of extensive review of existing literature, but still there is a possibility that some important items might have been left out. The universe for the present study was CNX 500 which includes major companies in terms of market capitalization. As no small companies have been included, this might have affected the generalizability of results regarding the relationship between corporate social responsibility and financial performance. Future studies may consider taking a larger sample size which includes medium sized and small companies to investigate this relationship. Lastly this study was limited to only three indicators of financial performance while controlling the effect of only three control variables. Future studies may consider including other financial parameters and additional control variables for better understanding of relationship between corporate social responsibility and financial performance.

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Annexure I

List of selected companies in the sample

S. No.	Company Name	Ownership Type	Market Capitalization (Rs Crore) as on March, 31 2016
1.	Tata Consultancy Services Ltd.	Private	4966069.54
2.	Reliance Industries Ltd.	Private	3386841.33
3.	Infosys Ltd.	Private	2798367.68
4.	H D F C Bank Ltd.	Private	2708066.99
5.	I T C Ltd.	Private	2641495.69
6.	Sun Pharmaceutical Inds. Ltd.	Private	1973517.37
7.	Hindustan Unilever Ltd.	Private	1881543.2
8.	Coal India Ltd.	Public	1844062.59
9.	Oil & Natural Gas Corpn. Ltd.	Public	1831730.43
10.	Housing Development Finance Corpn. Ltd.	Private	1746678.11
11.	State Bank Of India	Public	1548853.24
12.	Bharti Airtel Ltd.	Private	1402287.96
13.	Wipro Ltd.	Private	1394099.97
14.	I C I C I Bank Ltd.	Private	1376064.95
15.	Kotak Mahindra Bank Ltd.	Private	1248572.22
16.	H C L Technologies Ltd.	Private	1148191.43
17.	Larsen & Toubro Ltd.	Private	1133330.31
18.	Maruti Suzuki India Ltd.	Private	1122620.13
19.	Tata Motors Ltd.	Private	1116192.91
20.	N T P C Ltd.	Public	1062428.09
21.	Axis Bank Ltd.	Private	1058334.76
22.	Indian Oil Corpn. Ltd.	Public	955642.1
23.	Ultratech Cement Ltd.	Private	886070.31
24.	Asian Paints Ltd.	Private	832967.36
25.	Hindustan Zinc Ltd.	Private	775768.57
26.	Mahindra & Mahindra Ltd.	Private	751956.55
27.	Power Grid Corpn. Of India Ltd.	Public	727714.12
28.	Bajaj Auto Ltd.	Private	696202.58
29.	Lupin Ltd.	Private	666524.86
30.	Bharat Petroleum Corpn. Ltd.	Public	653885.09
31.	Hero Motocorp Ltd.	Private	588227.09
32.	Indusind Bank Ltd.	Private	575708.78
33.	Dr. Reddy'S Laboratories Ltd.	Private	517828.35
34.	Adani Ports & Special Economic Zone Ltd.	Private	512974.75
35.	Godrej Consumer Products Ltd.	Private	470209.1
36.	Tech Mahindra Ltd.	Private	459661.39
37.	G A I L (India) Ltd.	Public	452085.35
38.	Dabur India Ltd.	Private	439609.38
39.	Aurobindo Pharma Ltd.	Private	435892.82
40.	Shree Cement Ltd.	Private	432695.75
41.	Cipla Ltd.	Private	411292.58
42.	Idea Cellular Ltd.	Private	396776.13

43.	Siemens Ltd.	Private	391625.44
44.	N M D C Ltd.	Public	388542.17
45.	Bajaj Finance Ltd.	Private	373019.12
46.	Zee Entertainment Enterprises]	Private	371645.63
47.	Yes Bank Ltd.	Private	363780.9
48.	United Spirits Ltd.	Private	363232.16
49.	Ambuja Cements Ltd.	Private	360893.75
50.	Grasim Industries Ltd.	Private	358836.43
51.	Motherson Sumi Systems Ltd.	Private	352481.12
52.	Bank Of Baroda	Public	338711.46
53.	Cadila Healthcare Ltd.	Private	324424.03
54.	Glaxosmithkline Pharmaceuticals Ltd.	Private	323120.83
55.	Britannia Industries Ltd.	Private	322315.03
56.	Marico Ltd.	Private	315188.82
57.	Tata Steel Ltd.	Private	310497.58
58.	J S W Steel Ltd.	Private	310189.81
59.	Ashok Leyland Ltd.	Private	309062.2
60.	Pidilite Industries Ltd.	Private	302119.57
61.	Titan Company Ltd.	Private	301048.29
62.	Oracle Financial Services Software Ltd.	Private	299491.39
63.	Bharat Electronics Ltd.	Public	293832
64.	Bharat Heavy Electricals Ltd.	Public	278659.26
65.	Indiabulls Housing Finance Ltd.	Private	273797.65
66.	Bajaj Finserv Ltd.	Private	272289.83
67.	A B B India Ltd.	Private	271698.32
68.	N H P C Ltd.	Public	267356.64
69.	Hindustan Petroleum Corpn. Ltd.	Public	266753.62
70.	Vedanta Ltd.	Private	266377.78
71.	Divi'S Laboratories Ltd.	Private	262083.86
72.	A C C Ltd.	Private	259445.31
73.	Glaxosmithkline Consumer Healthcare Ltd.	Private	253878.77
74.	L I C Housing Finance Ltd.	Public	248874.56
75.	Container Corpn. Of India Ltd.	Public	242421.16
76.	Cummins India Ltd.	Private	233346.96
77.	Torrent Pharmaceuticals Ltd.	Private	226800.75
78.	Power Finance Corpn. Ltd.	Public	226188.97
79.	Colgate-Palmolive (India) Ltd.	Private	225979.26
80.	Glenmark Pharmaceuticals Ltd.	Private	224329.84
81.	United Breweries Ltd.	Private	218755.6
82.	Shriram Transport Finance Co. Ltd.	Private	216253.28
83.	Emami Ltd.	Private	211601.91
84.	U P L Ltd.	Private	204744.26
85.	D L F Ltd.	Private	204681.42
86.	Procter & Gamble Hygiene & Health Care Ltd.	Private	203991.38
87.	Bharat Forge Ltd.	Private	203252.72
88.	Havells India Ltd.	Private	200711.28
89.	Oil India Ltd.	Public	188155.55
90.	Petronet L N G Ltd.	Public	188062.51
91.	Castrol India Ltd.	Private	185040.07
92.	Apollo Hospitals Enterprise Ltd.	Private	184939.07
93.	Rajesh Exports Ltd.	Private	183385.96
94.	Hindalco Industries Ltd.	Private	181615.5

95.	Piramal Enterprises Ltd.	Private	178853.02
96.	Steel Authority Of India Ltd.	Public	178025.64
97.	Tata Power Co. Ltd.	Private	174854.29
98.	Berger Paints India Ltd.	Private	169763.39
99.	Punjab National Bank	Public	166316.71
100.	Rural Electrification Corpn. Ltd	Public	164115.69
101.	Bajaj Holdings & Invst. Ltd.	Private	163434.52
102.	T V S Motor Co. Ltd.	Private	153358.12
103.	Kansai Nerolac Paints Ltd.	Private	151220.87
104.	Amara Raja Batteries Ltd.	Private	149905.05
105.	Sun T V Network Ltd.	Private	148747.24
106.	Sundaram Finance Ltd.	Private	144501.68
107.	Gillette India Ltd.	Private	143765.98
108.	I D B I Bank Ltd.	Public	142881.77
109.	Reliance Infrastructure Ltd.	Private	140331.46
110.	Mahindra & Mahindra Financial Services Ltd.	Private	138807.09
111.	Reliance Power Ltd.	Private	138573.25
112.	Page Industries Ltd.	Private	135150.38
113.	Crisil Ltd.	Private	128098.06
114.	Central Bank Of India	Public	125461.28
115.	Reliance Communications Ltd.	Private	124448.99
116.	Ajanta Pharma Ltd.	Private	124006.96
117.	3M India Ltd.	Private	120817.31
118.	N L C India Ltd.	Public	119369.04
119.	Godrej Industries Ltd.	Private	119276.03
120.	S J V N Ltd.	Public	118514.35
121.	Wabco India Ltd.	Private	118507.57
122.	Exide Industries Ltd.	Private	118447.5
123.	Mangalore Refinery & Petrochemicals Ltd.	Public	118125.16
124.	Adani Power Ltd.	Private	114854.2
125.	N B C C (India) Ltd.	Public	113154
126.	Cholamandalam Investment & Finance Co. Ltd.	Private	112620.05
127.	G E T & D India Ltd.	Private	112289.21
128.	Torrent Power Ltd.	Private	111455.03
129.	Mindtree Ltd.	Private	109606.32
130.	Tata Communications Ltd.	Private	107616
131.	Vakrangee Ltd.	Private	104860.22
132.	Mphasis Ltd.	Private	103370.02
133.	Canara Bank	Public	103195.45
134.	National Aluminium Co. Ltd.	Public	101800.92
135.	Welspun India Ltd.	Private	99417.55
136.	Shriram City Union Finance Ltd.	Private	99039.06
137.	Indian Hotels Co. Ltd.	Private	97888.66

ANNEXURE II

Corporate Social Responsibility Disclosure Index

S. No.	Name of the activity in CSRD Index
1.	COMMUNITY DEVELOPMENT DIMENSION
1.1	Eradicating hunger, poverty and malnutrition
1.1.1	Meals for disabled and children
1.1.2	Provision of food to general public at subsidized price
1.1.3	Other activities
1.2	Promoting preventive health care and sanitation and making available safe drinking water
1.2.1	Sponsorship of public health projects
1.2.2	Providing healthcare services to general public
1.2.3	Organizing Medical or Healthcare Camps
1.2.4	Aiding medical research
1.2.5	Establishment of local dispensaries/health clinics
1.2.6	Contribution to the Swach Bharat Kosh set-up by the Central Government for the promotion of sanitation
1.2.7	Making available safe drinking water to general public
1.2.8	Provision of medicines and health supplements to public at subsidized price
1.3	Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly, and the differently abled and livelihood enhancement projects
1.3.1	Promotion of education through donations/scholarships
1.3.2	Promotion of education and adult literacy
1.3.3	Summer or part-time employment of students
1.3.4	Sponsorship of educational conferences and seminars
1.3.5	Generation of jobs
1.3.6	Establishment/maintenance of educational institutions
1.3.7	Adoption of schools
1.3.8	Sponsoring meals of school children
1.3.9	Setting up public libraries
1.3.10	Contributions or funds provided to technology incubators located within academic institutions which are approved by the Central Government
1.4	Social cause awareness programmes
1.4.1	Promoting gender equality and empowering women
1.4.2	Setting up homes and hostels for women and orphans
1.4.3	Supporting girl child programmes
1.4.4	Organising Social Cause Awareness Programmes (Anti Dowry, Remarriage/HIV, AIDS)
1.4.5	Adult literacy programs
1.4.6	Mother and child programs
1.4.7	Setting up old age homes, day care centres and other such facilities for senior citizens /Adopting old age home
1.5	Heritage promotion
1.5.1	Promotion and development of traditional arts and handicrafts/ Sponsorship of art exhibits

1.5.2	Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art
1.6	Sports promotion
1.6.1	Training to promote rural sports, nationally recognized sports, Paralympics sports and Olympic sports
1.6.2	Sponsorship/ Donation for sports
1.7	Measures for reducing inequalities faced by socially and economically backward groups
1.7.1	Contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government for socio-economic development and relief and welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women
1.7.2	Measures against Incidents of violations involving rights of indigenous peoples
1.7.3	Providing relief to victims of natural disasters/Supporting disaster relief efforts
1.7.4	Helping farmers
1.8	Significant indirect economic impacts of organization
1.8.1	Improving agricultural productivity
1.8.2	Stimulating foreign direct investments
1.8.3	Availability of products and services for those on low income group
1.8.4	Economic development in areas of high poverty
1.9	Anti-Corruption initiatives
1.9.1	Formulating vigilance committee to check corruption in the company
1.9.2	Anti corruption initiatives/policy
1.9.3	Confirmed incidents of corruption and actions taken
1.10	Local community support
1.10.1	Special community related activities, e.g. opening the company's facilities to the public like creche facility, playground, dispensary, mass marriage programs etc.
1.10.2	Donations of cash, products or employee services to support established community activities
1.10.3	Actions against operations with significant actual and potential negative impacts on local communities
1.10.4	Proportion of senior management hired from the local community
1.10.5	Proportion of spending on/procurement from local suppliers
1.10.6	Supporting the development of local industries or community programs and activities/ Operations with local community engagement, impact assessments, and development programs
1.11	Measures for benefit of armed forces veterans, war widows and their dependent
1.12	Area development
1.12.1	Livestock/Wasteland development
1.12.2	Infrastructure investments and services supported e.g. improving road networks, social facilities etc.
1.12.3	Rural development program/ Adoption of villages
1.12.4	Slum area development

2	HUMAN RESOURCE DIMENSION
2.1	Employee health and safety
2.1.1	Statements regarding reduction of pollutants, irritants, hazards, injuries in workplace
2.1.2	Promoting employee safety and physical or mental health
2.1.3	Compliance with health and safety standards and regulations
2.1.4	Receiving a safety award
2.1.5	Establishing a safety department/committee/safety policy
2.1.6	Providing a low cost health care for employees
2.1.7	Disclosure on Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities
2.1.8	Disclosure about Workers with high incidence or high risk of diseases related to their occupation
2.1.9	Improvements to the general working condition-both in the factories and for the office staff
2.1.10	Health and safety topics covered in formal agreements with trade unions
2.1.11	Conducting research to improve work safety
2.2	Employment of minorities or women
2.2.1	Disclosing percentage or number of women employees in the workforce and/or in the various managerial levels/Diversity of governance bodies and employees
2.2.2	Ratio of basic salary and remuneration of women to men
2.2.3	Employment of differently abled people/ex-servicemen
2.2.4	Disclosing percentage or number of minority employees in the workforce and/or in the various managerial levels
2.3	Employee training
2.3.1	Training employees through in-house program/Average hours of training per year per employee/assistance programs
2.3.2	Percentage of employees receiving regular performance and career development reviews
2.3.3	Programs for upgrading employee skills and transition
2.3.4	Giving financial assistance to employees in educational institutes or continuing education courses
2.3.5	Establishment of trainee centres
2.3.6	Information about Security personnel trained in human rights policies or procedures
2.4	Employee assistance/ benefits
2.4.1	Workers representation in formal joint management-worker health and safety committees
2.4.2	Benefits provided to full-time employees that are not provided to temporary or part-time employees
2.4.3	Employee loan facilities
2.4.4	Employee welfare fund
2.4.5	Information about support for day-care, maternity and paternity leave/ Parental leave
2.4.6	Holiday benefits
2.4.7	Retirement benefits/Defined benefit plan obligations and other retirement plans
2.4.8	Minimum notice periods regarding operational changes
2.4.9	Subsidized canteen
2.4.10	Subsidized transport

2.4.11	Staff accommodation
2.4.12	Providing recreational, cultural and activities/facilities
2.4.13	Periodic review of workforce policies and employee benefits
2.4.14	Stock option plans for the employees or Employee share purchase schemes
2.5	Employee morale
2.5.1	Providing information on the company/ management's relationships with the employees in an effort to improve job satisfaction and employee motivation e.g. Strikes/statements regarding cordial relations
2.5.2	Employee Participation in Community Development
2.5.3	Awards given away for motivation of employees
2.5.4	Winning an award for being a good employer
2.5.5	Workers representation in formal joint management–worker health and safety committees
2.6	Human rights
2.6.1	Measures against Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk
2.6.2	Measures against Operations and suppliers at significant risk for incidents of child labor
2.6.3	Measures against Operations and suppliers at significant risk for incidents of forced or compulsory labor
2.6.4	Information about Security personnel trained in human rights policies or procedures
2.6.5	Operations that have been subject to human rights reviews or impact assessments
2.6.6	Employee training on human rights policies or procedures
2.6.7	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening
2.6.8	Communication and training about anti-corruption policies and procedures
2.6.9	Reporting on the company's relationship with trade unions and/or workers, strikes, industrial actions/activities and the resultant losses in terms of time and productivity and providing information on how industrial action was reduced/negotiated
2.6.10	Incidents of discrimination and corrective actions taken
2.7	Supply Chain
2.7.1	Disclosures about New suppliers that were screened using social criteria
2.7.2	Disclosures about Negative social impacts in the supply chain and actions taken
2.8	Employee Statistics
2.8.1	Providing per employee statistics, e.g.assets per employee and sales per employee
2.8.2	Information and Statistics on employee turnover/New employee hires and employee turnover
2.8.3	Employee remuneration
3	ENERGY DIMENSION
3.1	Energy conservation
3.1.1	Discussing the company's efforts to reduce energy consumption/ Reduction of energy consumption
3.1.2	Disclosing energy savings resulting from product recycling
3.1.3	Conservation of energy in the conduct of business operations/using energy more

	efficiently during the manufacturing process/Energy intensity
3.1.4	Use of alternate sources of energy
3.1.5	Utilizing waste materials for energy production
3.1.6	Information about energy consumption within and outside the organization
3.1.7	Energy conservation/ day week / month awareness
3.1.8	Monitoring organization's energy consumption
3.1.9	Disclosing increased energy efficiency of products/ Reductions in energy requirements of products and services
3.1.10	Research aimed at improving energy efficiency of products
3.2	Disclosing the company's energy policies
3.3	Receiving an award or appreciation for an energy conservation program
4	ENVIRONMENT DIMENSION
CA 4.1	Ensuring environmental sustainability
4.1.1	Signatory status to agreements that commit the organization to consider the environment in its operations
4.1.2	Use of environment friendly materials
4.1.3	Discussion of environment management systems /policy /committee
4.1.4	Environment studies/ survey
4.1.5	Receiving an award for environment programs and policies
4.1.6	Disclosure about compliance with environmental laws and regulations
4.1.7	New suppliers that were screened using environmental criteria
4.1.8	Actions against negative environmental impacts in the supply chain and actions taken
4.2	Conservation of natural resources
4.2.1	Reduction in usage of non renewable resources
4.2.2	Disclosures about recycled input materials used
4.3	Maintaining quality of soil, air and water
4.3.1	Prevention or repair of damage to the environment resulting from processing or natural resources, e.g. land reclamation or reforestation rainwater harvesting
4.3.2	Preventing waste/ waste management/ Waste by type and disposal method
4.3.3	Water studies/ surveys/Reporting Water withdrawal by source
4.3.4	Water reuse/ reduction of water usage/ Water recycled and reused
4.3.5	Claims that the company is water positive/targets to become water positive
4.3.6	Contribution to the Clean Ganga Fund setup by the Central Government for rejuvenation of river Ganga
4.3.7	Remedies against water bodies affected by water discharges and/or runoff
4.3.8	Precautions taken for transport of hazardous waste
4.3.9	Preventing waste and supporting anti-litter campaigns
4.4	Maintaining ecological balance, protection of flora and fauna, animal welfare, agro forestry
4.4.1	Biodiversity/Wildlife conservation
4.4.2	Habitats protected or restored
4.5	Pollution consciousness in conduct of Business operations(capital, operating, R&D for pollution abatement)
4.5.1	Statements indicating that the company's operations are non-polluting or that they

	are in compliance with pollution laws and regulations
4.5.2	Statements indicating that pollution from operations have been or will be reduced
4.5.3	Installation of Pollution Control Devices
4.5.4	Sponsoring pollution awareness campaigns
4.6	Aesthetics
4.6.1	Designing facilities harmonious with the environment
4.6.2	Contributions in terms of cash or art/sculptures to beautify the environment
5	PRODUCT, SERVICES-SAFETY AND INNOVATION DIMENSION
5.1	Product development
5.1.1	Information on developments related to the company's products, including its packaging e.g. making containers reusable
5.1.2	The amount/ percentage figures of research and development expenditure for specific products and/or its benefits
5.1.3	Disclosing improved or more sanitary procedures in the processing and preparation of products
5.1.4	Information on any research projects set up by the company to improve its product in any way.
5.2	Product safety
5.2.1	Information on the safety of the firm's product/ Requirements for product and service information and labeling
5.2.2	Assessment of the health and safety impacts of product and service categories
5.2.3	Disclosing that products meet applicable safety standards
5.3	Product quality
5.3.1	Information on the quality of the firm's products as reflected in prizes/ awards received
5.3.2	Verifiable information that the quality of the firm's product has increased
5.4	Product marketing
5.4.1	Developing Product Catalogues
5.4.2	Eco friendly products
6	CUSTOMERS DIMENSION
6.1	Customer information
6.2	Provision of adequate grievance handling mechanisms to address customer concern
6.3	Consumer awards
6.4	Customer relationship management
7	EMISSION OF CARBON AND HARMFUL GASES DIMENSION
7.1	Emission reduction
7.1.1	Carbon emission management system
7.1.2	Disclosing mode used for reducing carbon emission
7.1.3	Statements showing that emissions within the limits

7.1.4	Efforts to reduce carbon emissions
7.1.5	Signatory to MOU with other corporate with regard to reduction of emissions
7.2	Clean development management project (use of clean technology)
7.3	Green building movement
7.4	Statements that company is carbon positive
7.5	Planting Trees
8	OTHER CSR ACTIVITIES DIMENSION
8.1	Membership of United Nation Global Compact(UNGC) Program
8.2	Corporate objectives/ policies: general disclosure of corporate objectives/policies relating to the social responsibility of the company to the various segments of society
8.3	Receiving CSR Awards
8.4	Sustainability Report

ANNEXURE III

Grouping of companies on the basis of Industry type

Automobiles Industry	Pharmaceuticals Industry
Amara Raja Batteries Ltd. Ashok Leyland Ltd. Bajaj Auto Ltd. Exide Industries Ltd. Hero Motocorp Ltd. Mahindra & Mahindra Ltd. Maruti Suzuki India Ltd. Motherson Sumi Systems Ltd. T V S Motor Co. Ltd. Tata Motors Ltd. Wabco India Ltd.	Ajanta Pharma Ltd. Aurobindo Pharma Ltd. Cadila Healthcare Ltd. Cipla Ltd. Divi'S Laboratories Ltd. Dr. Reddy'S Laboratories Ltd. Glaxosmithkline Pharmaceuticals Ltd. Glenmark Pharmaceuticals Ltd. Lupin Ltd. Piramal Enterprises Ltd. Sun Pharmaceutical Inds. Ltd. Torrent Pharmaceuticals Ltd.
Consumer Goods Industry	Financial services Industry
Asian Paints Ltd. Berger Paints India Ltd. Britannia Industries Ltd. Colgate-Palmolive (India) Ltd. Dabur India Ltd. Emami Ltd. Gillette India Ltd. Glaxosmithkline Consumer Healthcare Ltd. Godrej Consumer Products Ltd. Godrej Industries Ltd. Havells India Ltd. Hindustan Unilever Ltd. I T C Ltd. Kansai Nerolac Paints Ltd. Marico Ltd. Procter & Gamble Hygiene & Health Care Ltd. Rajesh Exports Ltd. Titan Company Ltd. United Breweries Ltd. United Spirits Ltd.	Axis Bank Ltd. Bajaj Finance Ltd. Bajaj Finserv Ltd. Bajaj Holdings & Invst. Ltd. Bank Of Baroda Canara Bank Central Bank Of India Cholamandalam Investment & Finance Co. Ltd. Crisil Ltd. H D F C Bank Ltd. Housing Development Finance Corpn. Ltd. I C I C I Bank Ltd. I D B I Bank Ltd. Indiabulls Housing Finance Ltd. Indusind Bank Ltd. Kotak Mahindra Bank Ltd. L I C Housing Finance Ltd. Mahindra & Mahindra Financial Services Ltd. Power Finance Corpn. Ltd. Punjab National Bank Rural Electrification Corpn. Ltd. Shriram City Union Finance Ltd. Shriram Transport Finance Co. Ltd. State Bank Of India Sundaram Finance Ltd. Yes Bank Ltd.

Energy Industry	Information technology Industry
Adani Power Ltd. Bharat Petroleum Corpn. Ltd. Castrol India Ltd. G A I L (India) Ltd. Hindustan Petroleum Corpn. Ltd. Indian Oil Corpn. Ltd. Mangalore Refinery & Petrochemicals Ltd. N H P C Ltd. N L C India Ltd. N T P C Ltd. Oil & Natural Gas Corpn. Ltd. Oil India Ltd. Petronet L N G Ltd. Power Grid Corpn. Of India Ltd. Reliance Industries Ltd. Reliance Infrastructure Ltd. Reliance Power Ltd. S J V N Ltd. Tata Power Co. Ltd. Torrent Power Ltd.	H C L Technologies Ltd. Infosys Ltd. Mindtree Ltd. Mphasis Ltd. Oracle Financial Services Software Ltd. Tata Consultancy Services Ltd. Tech Mahindra Ltd. Vakrangee Ltd. Wipro Ltd.
	Construction Industry
	D L F Ltd. Larsen & Toubro Ltd. N B C C (India) Ltd.
Industrial manufacturing Industry	Cement Industry
A B B India Ltd. Bharat Electronics Ltd. Bharat Forge Ltd. Bharat Heavy Electricals Ltd. Cummins India Ltd. G E T & D India Ltd. Siemens Ltd.	A C C Ltd. Ambuja Cements Ltd. Grasim Industries Ltd. Shree Cement Ltd. Ultratech Cement Ltd.
Services Industry	Telecom Industry
3M India Ltd. Adani Ports & Special Economic Zone Ltd. Container Corpn. Of India Ltd. Indian Hotels Co. Ltd.	Bharti Airtel Ltd. Idea Cellular Ltd. Reliance Communications Ltd. Tata Communications Ltd.
Metals Industry	Other sectors
Coal India Ltd. Hindalco Industries Ltd. Hindustan Zinc Ltd. J S W Steel Ltd. N M D C Ltd. National Aluminium Co. Ltd. Steel Authority Of India Ltd. Tata Steel Ltd. Vedanta Ltd.	Sun T V Network Ltd. Zee Entertainment Enterprises Ltd. Pidilite Industries Ltd. Apollo Hospitals Enterprise Ltd Page Industries Ltd. U P L Ltd. Welspun India Ltd.

LIST OF SUBMITTED / PUBLISHED/ACCEPTED RESEARCH PAPERS

S. No	Title	Journal	Impact factor	Status
1.	Analyzing the impact of Corporate Social Responsibility on Corporate Financial Performance: Evidence from top Indian firms	Review of Managerial Science	1.483	Submitted
2	Corporate Social Responsibility: A case of Cipla Limited	Asian Business and Management	1.179	Submitted

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University and year of award : Guru Nanak Dev University, Amritsar,
2011
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Manufacturing Industries
Ph.D. Degree : Business Administration
OCPA : 7.49/10.00
Title of Dissertation : Corporate Social Responsibility in India: A
Study of Disclosures and Relevance