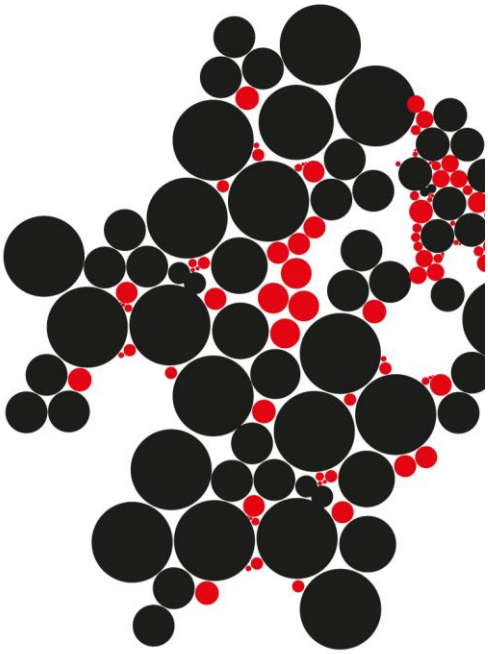

MASTER THESIS
Business Administration - Financial Management

Impact of corporate social responsibility disclosure on the financial performance of firms in UK

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For you Mamma…

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Abstract

This piece of work for master thesis investigates the impact of corporate social responsibility (CSR) disclosure on the financial performance of firms in UK. The work is extended to three industries of UK, viz., industry of extraction of crude petroleum and natural gas, industry of mining of metal ores and preparations and industry of manufacture of basic pharmaceutical products and pharmaceutical preparations. For this purpose, we measured corporate social responsibility disclosure in terms of published CSR keywords on the annual reports of the firms over five years ranging from 2008 till 2012. The financial performance of the firms is measured as return on assets (ROA), Tobin's Q, and total shareholder returns (TSR). A linear regression is then performed on the data to validate the impact of corporate social responsibility disclosure on the financial performance of firms. The results have shown no significant impact of CSR disclosure on the financial performance, both in short-term scenario and long-term scenario for the chosen industries in UK.

Contents

1. Introduction – Corporate Social Responsibility (CSR)

1.1 Definition and History

Definition

Corporate Social Responsibility (CSR) programs have grown tremendously in importance and are now being considered as a prescription for 'ethical business'. A quick search on Google publishes more than 79 million[1] results from sites all over the world. On one hand consultancies like Price Waterhouse Coopers (PwC, 2014) dedicated to CSR are flourishing under the regime, while on the other hand large firms like IBM (IBM, 2014) have dedicated units for CSR and 'reputation management' (Doane, 2005). The reason for the vastness of the subject is that reporting of the firm's actions has become all the more dominant because investors, customers, and other stakeholders demand a greater transparency about the business. Grant Thornton (2008) even claimed that CSR is now a necessity for all kinds of businesses and is no longer a domain of only large corporations (Kim, Park, & Wier, 2012). Since this research revolves around CSR, getting the central idea behind it is essential. Broadly, CSR represents responsibilities of the corporate world towards the social causes and issues of society. The extensive literature on CSR provides numerous definitions; a few of them are listed below.

Carroll (1979) presented CSR as a construct that 'encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point of time'. With this definition he proposed that these responsibilities are equally important for the society as a whole and not just only for the firm. Furthermore, Carroll (1979) argued that an organization must always strive to achieve all the four constructs of CSR – economic, legal, ethical, and philanthropic (Pirsch, Gupta, & Grau, 2007). Davis (1993) defined CSR as 'the firm's considerations of, and response to, issues beyond the narrow economic, technical, and legal requirements of the firms to accomplish social and environmental benefits along with the traditional economic gains which the firms seek' (Sprinkle & Maines, 2010). For Angelidis and Ibrahim (1993), CSR are 'corporate actions whose purpose is to satisfy social needs' (Brønn & Vrioni, 2001). Brown and Dacin (1997) adopted the wider societal perspective and defined CSR as the company's 'status and activities' regarding its responsiveness to its perceived societal obligations as they apply to all company stakeholders (Pirsch, Gupta, & Grau, 2007). Enderle and Tavis (1998) believed CSR as 'the policy and practice of a corporation's social involvement over and beyond its legal obligations for the benefit of the society at large' (Brønn & Vrioni, 2001). According to the World Bank, CSR is a 'term describing a company's obligations to be accountable to all of its stakeholders in all its operations and activities'. They argue that socially responsible companies must consider the scope of their impact on communities and environment at the time of making decisions, while balancing the needs of stakeholders along with their need to make economic profits (Doane, 2005). The World Business Council for Sustainable Development proposes two definitions for CSR. First, CSR is 'the ethical behavior of a company towards society…management acting responsibly in its relationships with other stakeholders who have a legitimate interest in the business.' And second, 'CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the

[1] Retrieved on 3 April 2014

quality of life of the workforce and their families as well as of the local community and society at large' (Moir, 2001).

The concept of CSR is very broad and complex, with more than 40 definitions existing in the literature. However, as Doane (2005) argued, the most important thing beyond the definition stance of CSR is the implicit expectation of business to deliver better social and environmental results without regulation of governments. On similar grounds, the European Union (EU) also defines CSR as a behavior of business which is over and above the legal requirements (Doane, 2005). Convinced on the aspect of CSR beyond legal necessities, this study adheres to the definition proposed by the European Commission which defines Corporate Social Responsibility (CSR) as "*a management concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntarily basis*."[2] In a more general sense, it is the initiative of a firm to assess and take responsibility for their impacts on the society. Campbell (2007) also suggested that companies must refrain themselves from harming their stakeholders and rectify it immediately if the harm has been discovered and brought to notice. These definitions stand appropriate for this research because of the strong focus on stakeholders and also because they cover a broad understanding of CSR (Öberseder, Schlegelmilch, & Murphy, 2013).

History

Corporate Social Responsibility (CSR) has witnessed growth in importance and significance over the decades. The consciousness and the idea that business enterprise has some responsibilities towards society besides generating revenue have existed for centuries. The roots of CSR have been found to be evident even before World War II; however CSR gained importance majorly after World War II (Carroll & Shabana, 2010). Dodd (1932) argued that managers have a wide range of responsibilities that includes public as a whole, and not just the shareholders (Cochran, 2007). Many scholars consider Howard Bowen as the father of the CSR movement. In 1953, he published a highly influential article with the central idea of '*Social Responsibilities of the Businessman*'. Bowen (1953) defined social responsibilities of business as "the obligations of businessmen to pursue those policies, to make those decisions or follow those lines of action which are desirable in terms of the objectives and values of the society." The ideas of Bowen (1953) were focused evenly on the decision-making of the managers and the obligations to the larger society and were not only internal to the business. However, this is in contrast with the CSR approach today, which focuses on larger corporate and institutional practices rather than on the decision-making of individual managers (Murphy & Schlegelmilch, 2013).

In the initial years the studies of 1950s explored the links between CSR and benefits for the businesses. The primary focus then was the businesses' responsibilities towards the betterment of the society. Further, the era of 1960s completely belonged to civil rights, women rights, consumer rights and the environmental movements. During this period of time the communicated business expectations were obligatorily addressed, which eventually laid down the foundation of CSR into practice. This era witnessed a significant expansion in the CSR literature. Scholars believed that the 1960s and the early 1970s were the '*Awareness*' and '*Issue*' eras of CSR, wherein the social consciousness changed and an overall

[2]COM(2001) 366

responsibility was recognized. Further in the 1970s, formal definitions of CSR were proposed by researchers that emphasized on corporate social *responsibility*, *responsiveness*, and *performance*. Corporate social responsibility (CSR_1) emphasized on the firm's assumption of socially responsible behavior. Corporate social responsiveness (CSR_2) focused on the actual act of responding or achieving a responsive posture towards society. Reconciling the importance of corporate social responsibility (R_1) and responsiveness (R_2) led to an attempt towards corporate social performance (CSP) that emphasized the outcomes of socially responsible initiatives. Progressing ahead, 1980s observed an increase in empirical research for alternative themes. This era saw an explosion in the research that tried to establish a link between the CSR and corporate financial performance. The expedition for CSR then accelerated in terms of its global outreach in the 1990s, thereby making the 1990s and 2000s the era of global corporate citizenship (Carroll & Shabana, 2010).

1.2 Theories explaining CSR

Irrespective of the definition, being socially responsible in every sense means that the organization has entered into a social contract, which obliges it to think about the society at the time of taking decisions. As Moir (2001) argued, there are three theories that explain active CSR. The stakeholder theory explains 'how', whereas the social contracts theory in close association with legitimacy theory explains 'why' (Moir, 2001).

1.2.1 Stakeholder Theory

Pirsch *et al.* (2007) attributed the emergence of CSR to Stakeholder Theory, which suggests that an organization's survival and success is recognized by the achievement of its economic (e.g. profit maximization) and non-economic (e.g. corporate social performance) objectives in the interest of their stakeholders. Freeman (1984) defined stakeholder in an organization as "*any group or individual who can affect or is affected by the achievement of the organization's objectives.*" Primarily, a stakeholder group comprises of shareholders and investors, employees, customers, suppliers, public entities (e.g. government), and trade associations and environmental groups (Pirsch, Gupta, & Grau, 2007). Donaldson and Preston (1995) suggested that stakeholder theory inclines the companies to undertake CSR activities and then consider the impact on all of its constituents, viz. various stakeholder groups (Bird, Hall, Momentè, & Reggiani, 2007). The theory argues that a firm's financial success is dependent on its ability to formulate and execute a corporate strategy which manages its relationships with stakeholders effectively (Brammer, Pavelin, & Porter, 2006). Management of any firm considers each stakeholder group in any of the three different ways, namely; normative, instrumental, and descriptive. The normative viewpoint proposes that the firm considers the interests of the entire stakeholder group equally and not only of the customers or stockholders. As per this viewpoint, a firm must lay the framework of a comprehensive CSR initiative in a way that appeals uniformly to the entire stakeholder group. The instrumental viewpoint favors a firm's focus on improving economic performance arguing that the economic success is the key objective for companies. To achieve this it is suggested that firm must lay emphasis on only those CSR attributes that directly improve the economic performance. The descriptive viewpoint suggests that an organization's behavior can be predicted by the organization's shareholders, their values and relative influence, and

the nature of situation. This viewpoint strongly suggests firms to donate for the causes that are of most importance to their stakeholders (Pirsch, Gupta, & Grau, 2007).

Stakeholder theory specifies the extent to which a corporation treats its stakeholders appropriately, and thus is linked to corporate social responsibility (Öberseder, Schlegelmilch, & Murphy, 2013). Ullmann (1985) in his study also indicated a link between stakeholder theory and CSR activities. He demonstrated that the connection between the firm's social and economic performances has three attributes: stakeholder power, the firm's strategic posture, and the firm's past and present economic performance. This clearly indicated the general literature of stakeholder theory arguing that the firm's decisions are a mere reflection of their stakeholder groups. Each of these attributes help to predict the level of CSR implementation in a firm. The first attribute, stakeholder power indicates that the more critical are the stakeholders, the higher is the likelihood of their demands being considered. The second attribute, strategic posture, indicates the nature of the firm's response (active or passive) towards the social issues. The third attribute has a direct impact on the firm's ability to implement CSR. Thus, stakeholder theory clearly motivates firms to broaden their objectives to include other goals besides profit maximization (Pirsch, Gupta, & Grau, 2007). Further, Öberseder *et al.* (2013) suggested that the link between stakeholder theory and CSR specifies the extent to which it deals with its stakeholders in an appropriate manner. Thus, stakeholder theory indicates as to *for whom* is the corporation responsible. Accordingly, it pressurizes the managers to ensure that a firm balances interests of all its stakeholders within its social system (Öberseder, Schlegelmilch, & Murphy, 2013). Cochran and Wood (1984) and Mc.Guire *et al*. (1988) established a link between socially responsible actions to economic performance based on the logic that a firm's value creation is a function of its customers and greater society, along with its shareholders (Thornton, Autry, Gligor, & Brik, 2013). However in contrast, Lee (2008) argued that within the stakeholder theory there is no difference between the social and the economic goals of a firm (Lee M.-D. P., 2008).

In reference to studies of Hillman and Keim (2001) and Mitchell *et al*. (1997), it is quite clear that the stakeholder perspective is the core conceptual approach within business and society (Brammer, Pavelin, & Porter, 2006). The reason is that the theory advocates that all stakeholders have a right to be provided with information on how the organizational activities affect them. This applies even when the stakeholders do not use the information, or even when they do not play a constructive role in the survival of the organization (Guthrie, Petty, Yongvanich, & Ricceri, 2004). In other words, the theory hugely emphasizes on the linkages between business organizations and wider constituencies within society (Brammer, Pavelin, & Porter, 2006). Deegan (2000) proposes that stakeholder theory has an ethical (moral) aspect and a positive (managerial) aspect. The *ethical* aspect maintains that all stakeholders enjoy a right to be treated fairly by an organization and that the managers must manage the organization for the benefits of all stakeholders. The *positive* aspect claims that a stakeholder's power to influence corporate management is a function of the stakeholder's degree of control over resources required by the organization (Guthrie, Petty, Yongvanich, & Ricceri, 2004).

1.2.2 Social Contracts Theory

For Gray *et al*. (1996), society is a 'series of social contracts between members of society and the society itself'. Looking from the perspective of CSR, another possibility of businesses acting in a responsible manner besides their commercial interest is that society implicitly

expects them to operate responsibly. Integrated Social Contracts Theory was developed by Donaldson and Dunfee (1999) in order to assist managers while taking decisions in the ethical context. They sub-divided among macrosocial contracts, which was in the context of communities and microsocial contracts that provided support to the local community.

The firms that adopt the view of social contracts describe their involvement as 'societal expectation'. Hence, this is believed to be only an initial motivation, but the totality of their involvement remains doubtful. According to an Australian study, this commercial benefit is described as 'licence to operate', which applies more closely to natural resource firms. Suchman (1995) however argues that even though an enhanced reputation is a part of commercial benefit, a link exists with gaining and maintaining legitimacy (Moir, 2001).

1.2.3 Legitimacy Theory

According to Suchman (1995), legitimacy is 'a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions' (Moir, 2001). Legitimacy theory closely relates to stakeholder theory. The theory suggests that organizations always try to ensure that they operate within the defined norms and boundaries of their respective societies. In simpler terms, the notion behind legitimacy theory is that there is a 'social contract' existing between the organization and the society within which it operates (Guthrie, Petty, Yongvanich, & Ricceri, 2004). Reviewing the prior literature on legitimacy management and including strategic tradition of resource dependency theory (1978), and institutional traditions (1983), Suchman (1995) identified three types of organizational legitimacy: pragmatic, moral, and cognitive. Further, gaining, maintaining, and repairing legitimacy were identified as the three major challenges of legitimacy management.

Suchman (1995) put-forward that legitimacy management is heavily dependent on communication, and thus, to understand legitimacy theory some forms of corporate communications must be examined (Moir, 2001). Lindblom (1994) however believes that legitimacy is not necessarily only a gentle process for organizations to gain legitimacy from the society. She suggested four broad legitimation strategies that an organization can employ on encountering different legitimation threats. First, an organization can seek to educate stakeholders about its intentions to improve their performance. Second, the organization might attempt to change the perceptions of the 'relevant public', without changing the organization's actual performance. Third, the organization can try to divert the attention away from the issue of concern. Fourth, the organization can attempt to manipulate external expectations on its performance (Guthrie, Petty, Yongvanich, & Ricceri, 2004). Lindbolm (1994) then concluded that legitimacy can be considered as the key reason to undertake corporate social behavior and also as an action taken for publicity or influences.

Davis (1973) presented a converse of the view proposed by Lindblom (1994). He suggested that the business does not use its power to legitimate its activity, on the contrary, in an expectation to be used responsibly, the society grants power to the business. Thus, if the business does not behave responsively, they tend to lose these powers. This re-signified the concept of social contract, between the firm and society. Moir (2001) thus concludes that the CSR practice within the organization is potentially motivated in alliance with social contracts theory, and then analyzed using the stakeholder theory, to provide enhanced reputation or legitimacy to the firm (Moir, 2001).

1.3 Motivations for CSR

The urge and necessity that the business enterprise has some responsibilities towards society besides generating revenues has been in existence for many centuries. CSR being widely accepted by various industries over the years has been repeatedly studied under different names that include corporate citizenship, social responsibility, and strategic philanthropy among many others. Irrespective of the caption, the concept of CSR revolves around the core idea of creating "*shared value*". The purpose of CSR is to create value for the firm, its consumers and the society as a whole, besides generating higher revenues (Sprinkle & Maines, 2010).

Studies suggest that organizations do fairly well when they practice CSR, because it symbolizes them as being good global citizens. Further, researchers also highlighted that organization's involvement into CSR practices protects them from negative publicity and stringent actions from non-governmental organizations (NGOs) (Sprinkle & Maines, 2010). An added driving factor identified by Rangan *et al.* (2012) is the persuasive push from the civil society organizations (CSOs) to incline their businesses to consider social responsibility, weighing the social and environmental impacts of their operations on the society (Rangan, Chase, & Karim, 2012). Carroll & Shabana also highlighted the fact that a firm's CSR activities help to ward-off government regulations (Carroll & Shabana, 2010). Also, there are many individuals who would easily align their investments with their moral values. Thus a CSR practicing firm would attract capital from investors with ease (Sprinkle & Maines, 2010).

Researchers term this as "*window dressing*" and hints at pacifying the various stakeholder groups. Their study revealed that a firm's involvement in CSR activities also earns them contracting benefits. They believed it helps them to recruit, motivate and retain their employees. This is indeed an important motive for investing into CSR activities (Sprinkle & Maines, 2010). Rangan *et al.* (2012) also studied CSR drivers and gave utmost credit to the philanthropic motivations of employees. They argued that individuals govern corporations, thus making corporate leaders a major driving force of CSR. (Rangan, Chase, & Karim, 2012). Scholars advocate differentiation as another main motive for incorporating CSR. They believed that every interaction of CSR activities and business strategies has a business value (Wang & Bansal, 2012). Studies also suggested that social motives build a positive reputation of the firm, which develops a good image of their brand (Bauman & Skitka, 2012). A positive CSR reputation in turn helps a firm to charge higher for their products/services, attract capital investors, and also recruit, motivate and retain employees (Wang & Bansal, 2012).

Additionally, CSR activities help the firms to build strategic resources, which include stakeholder relationships and positive CSR reputations. Studies have revealed that firms with an intention to continuously pursue CSR activities are striking to stakeholders with a conscience of social responsibility. This certainly leads to closer stakeholder relationships (Wang & Bansal, 2012). Further it is proposed that economic factors create value, increase profits, satisfy the different stakeholders, and thus contribute to long-term sustainable development (Bauman & Skitka, 2012). Counting further, scholars considered customer-related motivations as an important reason for the firms to engage into CSR activities. According to the theory of consumer behavior on CSR, an organization's CSR involvement tends to incline the customers to buy their products, thereby expanding the firm's customer base (Sprinkle & Maines, 2010). Considering consumer's perception, various studies have revealed that consumers favor the firms and their products which have incorporated CSR

activities into their business actions. For consumers, the social responsiveness outweighs the financial benefits (Carroll & Shabana, 2010).

Another major reason highlighted is the reduction in production costs by being focused on environmental concerns. A stringent focus on reducing the wastes increases the efficiency of the firm thereby decreasing the cost of operations (Sprinkle & Maines, 2010). Developing new energy-saving products, decreasing the production costs, and attracting customers and employees are attributed to the environmental drivers for CSR implementation (Bauman & Skitka, 2012). Studies also suggested that incorporating CSR activities works completely in favor of firms in the long-term. In order to remain healthy in future operation, firms must invest into socially responsible activities early (Carroll & Shabana, 2010).

Different motivations behind a firm's decision to incorporate CSR necessitate the need of quantitative analysis of the relationship between a firm's CSR initiatives and its financial performance.

1.4 Research Proposition

CSR can be referred to as a firm's noble intentions, but clearly, a profit-seeking aspiration is inevitable. A tremendous amount of research has been done on establishing a relationship between CSR and the financial performance of the firm. However, empirical evidence is still limited. There have been a few exploratory researches performed exploring the relationship between CSR and the financial performance in the field of banking (Wu & Shen, 2013), hospitality (Kang, Lee, & Huh, 2010), and tourism (Inoue & Lee, 2011). Majorly the empirical studies focus on a specific industry to find conclusions. A comparative study on a few industries is rare. Further, the existing empirical studies have focused either on the US, or on Asia. Most of studies are targeted on the firms in the US because of the availability of the performance index on CSR. Prior researches have suggested both a positive and a negative impact of CSR on the firm's financial performance (Wang & Bansal, 2012). There has not been a consensus on the same. Also, the European market has been largely disregarded for quite some time. With our research, we try to explore the relationship between CSR and financial performance on a few industries comparatively, in Europe, thereby closing the major gaps.

Through our research we intend to unleash the relationship between CSR and the financial performance of the firms in Europe. Focusing the study in Europe thus helps enriching the existing literature and bridging the research gap in a geographic sense. Emerson (2003) argued that the level of commitment and interpretation of CSR varies within companies and across sectors (Acutt, Medina-Ross, & O'Riordan, 2004). Further, Beurden and Gossling (2008) felt the need of an industry-specific study, which helps advancing the CSR research. They stated that to continue generating value for management practice and for improving the business world, future studies should target on segments of a group of firms practicing CSR (Sun & Stuebs, 2013). Abiding by the suggestion, our research therefore focuses on three industries viz., crude petroleum and natural gas, mining of metal ores and pharmaceutical. In our research, we explore the relationship between CSR and financial performance of these industries in Europe, particularly the UK, both on short-term profitability and long-term profitability (i.e. future profitability), for a period of five years. This research will add to the existing literature significantly in two aspects. First, our research bridges the gap by studying

the relationship in the secluded geographic area, UK, in Europe. Second, we perform a cross-sectional analysis on the relationship between CSR and the financial performance of their firms for their industries. Moreover, our research also analyzes the extent to which CSR affects each industry.

1.5 Thesis Structure

This thesis is structured into 6 chapters, which are further divided into sections. Chapter 2 reviews the prior literature explaining the various aspects of CSR studied and explored over due course of time. Chapter 3 discusses the proposed methodology to validate the impact of CSR on the financial performance of firms. This chapter also deals with the explanation of the variables used in the model. Chapter 4 briefly discusses the ways and methods selected for collection of relevant data. In chapter 5 we present the results of our study and provide an explanation. The last chapter of this thesis, chapter 6 discusses the conclusions and limitations of this research.

2. Literature Review

Windsor (2013) has highlighted four continuous themes dominating the CSR literature. The first theme is the contest between pro-CSR and anti-CSR positions. Aligned with the proposition the next theme is the minimum requirements and maximum limit to CSR. These two themes are concerned with CSR desirability. The other themes are concerned with the viewpoint whether CSR should be treated as strategic or ethical, and if there is a superior alternative to CSR terminology. Further, a section of literature proposed corporate citizenship (CC) as a replacement to CSR. Although the two terms, viz., CC and CSR are regarded as logically equivalent in theoretically ideal forms, there are a couple of significant differences between the two. They are in terms of voluntarily undertaking of corporate altruism and suggestion of rights and duties for businesses. Another group of scholars have studied CSR in conjunction with corporate social irresponsibility (CSI). Their findings suggest that CSR is superior to CSI because CSR wealth generation relationship is stronger than CSI wealth generation relationship (Windsor, 2013).

Lee (2008) argued that the conceptualizations and research on CSR has evolved along two avenues. With respect to the theoretical orientation, researchers have drifted from ethics-oriented arguments to implicit performance-oriented managerial studies. And with respect to the level of analysis, researchers have moved ahead from discussing the macro social effects of CSR to an organizational-level analysis of CSR and its impact on the processes and performance of the organization (Lindgreen & Swaen, 2010). With time, researchers have tried to establish a link between CSR and the financial performance of the firm. The prior literature has shown inconsistent results (Wu & Shen, 2013).

This chapter is a reflection of prior literature on the various aspects of CSR. The aspects are very broadly categorized as: strategic, and instrumental. The strategic aspect of CSR deals with the influence of CSR on the firm's employees, their customers or consumers of their products, and the marketing strategy. The instrumental aspect of CSR is referred to its impact on cost of equity and bank debts, taxes and on the financial performance of the firms.

2.1 Strategic Aspect of CSR

Ansoff (1965) and Thorelli (1977) defined strategy as the goals, mission, and objectives of the firm. Other theorists like Quinn (1980), Andrews (1980), Mintzberg (1988) and Lyles (1985) laid emphasis on strategy as the plan, pattern, process and positioning for competitive advantage. These definitions of strategy placed the foundation for exploring strategic benefits of CSR. A few researchers thus made an attempt to study the impact of CSR that generated strategic benefits to the firms. These strategic benefits were not readily measurable as distinct contributions to the base line. Andrews (1980) identified the relationship between corporate strategy and the economic and non-economic benefits that a firm intends to generate for its stakeholder group, including, shareholders, employees, consumers, and communities. Ansoff (1983) expressed the importance of societal strategies to be developed by firms. This led to the increased use of environmental scanning and monitoring systems, as they were considered to be effective information gathering systems that helped formulate strategies. This sparked the row for integrating the concept of CSR with corporate strategy, including the stakeholder model. Researchers then proposed the definition of strategic CSR, which reflected the ways in which CSR activities were linked to the strategy of the firms.

Accordingly, CSR is considered strategic when it generates substantial business-related benefits to the firm by supporting the core business activities and also by contributing to the firm's effectiveness in achieving its defined tasks (Burke & Logsdon, 1996).

Further, competitive strategy is central to global brands because it helps them to earn profits by differentiating the products and services. Ideally, a brand's appeal to its customers depends entirely on its value proposition, which engages customers in a subjective calculation of costs and benefits of the brand in comparison to other substitutes. Customers, activist groups and NGOs tend to benchmark the branding process while evaluating a brand. According to Licha (2003), a major problem in the branding process is the mismatch between what the brand tries to communicate, and what is perceived by the customers. Any behavior or act that hampers the values and attributes of a brand has a severe effect on the brand image and also on the brand loyalty. Therefore, the leaders who create an organization-wide CSR commitment eventually bear the premium for the CSR brand insurance. Scholars argued that CSR helps create strategies which make their firms and their brands more successful at the time of crisis. In this regard, strategic CSR also functions as a global brand ambassador (Jr. & Chandler, 2005).

Smith (2009) contemplated as to how much CSR is sufficient enough to fulfill the organization's primary function of generating profits. Kemper *et al*. (2013) argued that managers under the influence of both intense competition and economic channels often suspect the worthiness of their CSR initiatives which are usually of the form of monetary donations, reducing carbon footprint, etc. They are concerned as to how and under what conditions CSR would lead to an increased firm performance. Thus, marketing researchers have approached CSR from various perspectives. Singhapakdi *et al*. (1999) studied the relevance of CSR to marketing managers. On the other hand, Lichtenstein *et al*. (2004) laid emphasis on the charitable causes of CSR, and Menon and Menon (1997) studied environmental protection (Kemper, Schilke, Reimann, Wang, & Brettel, 2013). The practice of advocating CSR in marketing communications is known as Cause-Related Marketing (CRM). According to Mullen (1997), CRM is a 'dramatic way to build brand equity… as it creates the most added values and most directly enhances financial performance'. It is believed that when properly executed CRM sells products, enhances image, and motivates employees. Ptacek and Salazar (1997) suggested that CSR is a 'good way to solve social problems' and when firms try to do something in order to make the world a better place, consumer perceives the image of a firm in a positive way. Majority of research favors CRM in that it adds value to the brand and thus brand equity, strengthens relationship between the internal and external stakeholders, and makes the CSR communication believable by reducing the confusion and misleading information (Brønn & Vrioni, 2001). Adding further, Torres *et al*. (2012) claimed that CSR also has a positive effect on global brand equity (Torres, Bijmolt, Tribó, & Verhoef, 2012).

2.1.1 CSR and Consumers

The review of various studies suggests that the payoff from socially responsible activities takes time and that it is not guaranteed. It is because of this reason that many managers look at incorporating CSR as an extra cost to the company rather than considering it as an investment. The managers fear that offerings with increased cost to consumers will lead to lower sales. Genuinely, the consumers are price-sensitive but they surely care about many other aspects of the product than just low price (Mohr & Webb, 2005). Creyer and Ross

(1997) revealed that consumers are inclined to reward an ethical firm by paying a higher price, and on the contrary punish unethical firms by paying less (Schuler & Cording, 2006). On similar lines Crawford and Mathews (2001) in their study affirmed that consumers are concerned with 'fair and honest' prices. Further, study of Auger *et al*. (2003) suggested that consumers do not hesitate to pay more for products which are ethically made. Bhattacharya and Sen (2003) argued that consumers who find their interest aligned with the company are more likely to remain loyal to the firm and also promote them to others. Supporting further, Mohr and Webb (2005) suggest that CSR may add value to a product and that being a leader on a social issue inclines consumers and employees to identify themselves with the firm. The results of Lafferty and Goldsmith (1999) indicated that corporate credibility had a significant impact on the purchase intentions of the consumers. The impact was found more than that caused by spokesperson credibility. In another study by Brown and Dacin (1997), evaluation of a firm on CSR significantly influenced the evaluation of the firm's product (Mohr & Webb, 2005). Schuler and Cording (2006) projected consumers as the 'hidden link' between CSR and financial performance of the firm. Mitchell *et al*. (1997) argued that consumers are the dominating stakeholders, as they affect the financial performance of the firm directly through their purchase power (Schuler & Cording, 2006).

Consumer's reaction towards a firm's CSR involvement has been studied extensively. According to a study by Strahilevitz (2003), CSR activities that are unethical do not enhance the reputation of a firm. Forehand and Grier (2003) in their study on firms with bad reputations showed that a strong association between the firm and its cause leads to the importance of firm-serving benefits. They further commented that firm's self-claim of public-serving tends to have a negative impact on the evaluation of the firm. They supported their argument by giving an example of a tobacco company. A tobacco firm that makes a donation to cancer association rather than to an environmental cause will earn a positive reputation for the firm, because smoking of tobacco leads to cancer (Yoon, Gürhan-Canli, & Schwarz, 2006). The findings of Cornwell and Smith (2001), Lafferty and Goldsmith (2005), and Ross *et al*. (1992) suggested that CSR activities have a positive spillover effect on strategic alliances. Many scholars suggested that national and cultural differences are present, and even though pro-CSR consumers exist, profiling them cannot be done (Beckmann, 2007).

Du *et al*. (2007) in their study on major brands of yoghurt revealed that a brand's competitive positioning on CSR is a major determinant of consumer's reaction to its CSR initiatives. They documented brand-specific differences and inferred that consumers tend to have more favorable beliefs and reward brands to a greater extent on the virtues of relational behaviors like loyalty and advocacy. Further they added that customers are much more sensitive to their CSR beliefs in a way that if the brand works towards the consumer's CSR belief, consumers repay the brands with even more loyalty, against the brand's competitors. CSR brands also experience major benefits from the spillover of the firm's CSR activities (Du, Bhattacharya, & Sen, 2007). Bhattacharya and Sen (2004) proposed that CSR is growing in importance because it directly influences consumers who on the other hand demand more than a quality product at a low price from an organization. Maignan *et al*. (2005) believed that consumers expect a contribution towards community in terms of social values. Marin *et al*. (2009) in their study on the effects of CSR on consumer response introduced 'identity salience' as a moderator. They examined the variables which mediate and moderate the relationship between CSR initiatives and consumer loyalty. The results of their study concluded that a higher identity salience for consumers, who are aware of the firm's CSR activities, will strengthen the background and values of consumer-company identification (Marin, Ruiz, & Rubio, 2009).

Further ahead in time, Lee and Shin (2010) made an attempt to understand the consumer's responses towards CSR activities of a firm. They explored the link between increased awareness on CSR activities and purchase intentions of the consumers. Their study very clearly found out that the consumer's awareness on CSR initiatives and their purchase intentions have a positive relationship. The positive relationship implies that consumers have an inclination towards firms with good and noble CSR activities which in turn promotes consumers to buy their products (Lee & Shin, 2010). Öberseder *et al*. (2013) studied how CSR activities affect corporate practices and consumer's perceptions. Their findings indicate that both corporations and consumers sensibly distinguish among CSR dimensions. They argue that firms that intend to use CSR for differentiation must also consider the other domains, viz. employee, customer, environment and supplier, in their communication campaigns and market segmentation. Further, consumers weigh each CSR domain differently which usually reflects their opinions and values. Thus, firms should emphasize on the domains which are core to their business. The findings also suggested that fairness, respect and honesty are the underlying themes across all domains and for corporate and consumer perspective which must guide a firm's responsible behavior and should also assist managers while taking decisions (Öberseder, Schlegelmilch, & Murphy, 2013).

2.1.2 CSR and Employees

Firms' willingness to undertake CSR activities has increased their chances of future profitability and their 'license to operate'. However, they might fail to convince their stakeholders on their sincerity towards CSR unless they prove the credibility of their policies favoring social, environmental and ethical motives. Scholars believed that employees play a major role in achieving these motives because they are the actual workforce responsible to implement CSR activities in the operation of firms. Thus the achievement of social, environmental and ethical motives in true sense depends on the willingness of employees to contribute towards social cause. In other words, employee responsiveness drives the efficient delivery of CSR initiatives of a firm. The driving factors for employee responsiveness are motivation and commitment. Scholars believed that employees must be motivated enough to implement CSR initiatives of the firm with zeal and efficiency. Moreover, employees must be committed towards the firm's inclination of achieving social, environmental and ethical motives.

Locke (1997) defined motivation as an 'energizing force that includes action', action of employees that is in alignment with their personal needs and values. Latham (2004) propose that goal setting is a crucial element in motivation. He argues that measuring an achievement is not possible in the absence of a pre-defined goal. Also, if measurement of an achievement is missed, a standard of assessing satisfaction will also be absent. In compliance with Locke's model of motivation, the achieved goals can be achieved with actions embedded with effort, persistence and task strategies. Adding further, Meyer and Herscovitch (2001) advocate that persistence of motivation is withheld by commitment. They define commitment as 'a force that binds an individual to a course of action that is of relevance to a particular target'. Meyer *et al*. (2004) propose that both motivation and commitment play a great part in understanding, predicting and influencing employee behavior. Commitment is believed to be more enduring and stimulates motivation. Collier and Esteban (2007) conclude that commitment is extremely important when firms operate globally on multi-cultural aspects and employees have to take decisions (Collier & Esteban, 2007).

According to Balmer and Greyser (2002), an employee's behavior towards the organization and management depends on the employee's perception and attitudes of the firm's ethics and services to the community. Cropanzano *et al*. (2001) reiterates that according to an organizational behavior study, employees react to both how they are treated by the firm, and also to how others are treated. Findings of Rupp *et al*. (2006) suggest that an employee is likely to exhibit a negative work attitude and behavior if they perceive that their organization behaves in a socially irresponsible manner. Conversely, when the organization is perceived to behave in an ethical and responsible manner, an employee has a positive attitude towards the firm and tends to work more productively. The study of Riordan *et al*. (1997) is of the view that the employee's perceptions of corporate image positively affect job satisfaction and negatively affect the attrition rate. Flynn (2005) proposes that employees feel obliged to engage themselves productively, thus rewarding CSR practices that are directly linked to them or their work conditions. Bhattacharya and Sen (2004) put-forth that employees attempt to judge the intentions of their firm behind the CSR initiatives. Ashforth and Mael (1989) showed that CSR activities, besides having an impact on the existing employees tend to influence the choice of the prospective employees as well. Looking at the other perspective, Albinger and Freeman (2000) conferred that job-seekers who have knowledge about CSR are attracted to firms that have CSR activities in their operations. Bashir *et al*. (2012) explored the internal impact of CSR activities on the employees of the firms. Their study concluded that a firm's involvement in CSR activities gave mental comfort to their employees. This increases their productivity and in turn firms reward the employees for their improved performance (Bashir, Hassan, & Cheema, 2012).

Lee *et al*. (2013) put forth that firms make sure that employees feel associated with their firm so that the attrition rate is low. Turban and Greening (1996) suggested that a good CSR reputation generates positive response from both current and prospective employees. The detailed study of Sims and Keon (1997) concluded that in an ethical work environment, an employee develops a strong belief and is even more closely attached to his or her firm. This leads to a good conduct of employees and they exhibit a positive attitude towards work, which further reduces absenteeism and attrition rate, resulting into higher productivity. Many scholars such as Riordan *et al*. (1997) and Viswesvaran and Ones (2002) advocated that people show a keen interest in working for firms that are responsible citizens in their community. The study of Lee *et al*. (2013) is focused on the employee perception of CSR activities which they define as the degree to which employees perceive their company supports the activities related to social cause. The results suggested that CSR capability and perceived cultural fit induces a positive CSR perception amongst the employees, which in turn improves their performance (Lee, Park, & Lee, 2013).

2.2 Instrumental Aspect of CSR

Instrumental or economic aspect of CSR suggests that firms will improve their return on investments only when they engage in pro-social or ethical conduct beyond what is required by law. The term 'instrumental' reflects the idea that the obligation of managers is to promote shareholders and wealth regardless of ethical considerations (Arnold & Valentin, 2013). Bassen *et al*. (2006) reiterated that the dramatic growth in the number of institutes, mutual funds, and online resources along with other publications, which specialize in encouraging corporations to improve their practices according to various responsibility criteria has led to a growth of CSR. Moreover, large institutional investors such as CalPERS also give preference

to investing in those firms which pursue socially responsible activities. Renneboog *et al*. (2008) reviewed many CSR studies and understood that whether CSR is priced by capital markets or not is unexplored. They then join the league of scholars such as Kempf and Osthoff (2007) and Sharfman and Fernando (2008), who in their research directly examined how CSR influences firm's cost of equity capital. The study of scholars such as Derwall and Verwijmeren (2007), and Goss and Roberts (2011) analyzed the implications of CSR on the cost of equity capital. On similar lines, Ghoul *et al*. (2011) also in their study attempted to understand if CSR affects the firm's *ex ante* cost of equity capital. The results reveal that firms with high CSR activities should have lower cost of capital than firms with low CSR activities. Also, firms with low CSR activities have a reduced investor base and higher perceived risk (Ghoul, Guedhami, Kwok, & Mishra, 2011).

A few studies that explored the intended link have used corporate bonds as the proxy for measuring the cost of debt. D'Antonio *et al*. (1997) validated the performance of socially screened bond mutual funds, which did not yield any difference on a risk-adjusted basis. Further, the study of Menz (2010) examined corporate bonds and found a weak positive relationship between CSR and European bond spreads. The study of Sharfman and Fernando (2008) that examined the link between CSR and the cost of capital indicated towards higher bond yields for firms with good environmental performance. However, these firms also have a high leverage. Responsible firms are interpreted to be having an easier access to debt financing. Chen *et al*. (2007) suggested that since mergers diminish the tendency of shareholders to commandeer bondholders, unionized firms face lower costs of debt in comparison to non-unionized firms. In another attempt to study the impact of CSR, Goss and Roberts (2011) directed their research to validate the impact of CSR on the cost of bank loans. The results of their study revealed that banks perceive CSR as a second-order determinant of spreads. Banks register CSR concerns as risks and are responded with less attractive loan contract terms. Concerning CSR strengths, banks tend to respond conditionally as per the quality of the borrower (Goss & Roberts, 2011).

Another aspect studied with respect to CSR is earnings quality management. Petrovits (2006) investigated the use of strategic philanthropy programs in order to attain earnings targets. The study revealed that firms reporting small earnings increases make discretionary funding choices to charitable foundations that result in an increased income. Prior *et al*. (2008) studied if firms used CSR strategically to disguise earnings management. Their study resulted into a positive relationship between earnings management and CSR for regulated firms. However, the result has no statistical significance for unregulated firms. Further, Kim and Venkatachalam (2011) found that 'sin firms' – firms in gaming, tobacco, and alcohol industries – displayed superior financial reporting quality. A couple of studies on the aspect of CSR and earnings quality management presented confusing results. The study made by Tre´bucq and Russ (2005) did not find consistent results across different specifications. Their study did not reveal any significant relationship between CSR and earnings management with the use of a net CSR score. However, they observed a negative relationship for other specifications. Chih *et al*. (2008) also studied CSR and earnings management and provide inconsistent results across different earnings management proxies. Their study suggested that CSR firms are more aggressive in accruals management, but tend to be reluctant in earnings smoothing and earnings loss avoidance. Kim *et al*. (2012) in their study examined whether CSR firms behave differently from other firms in their financial reporting. Their study investigated if CSR firms behave in a responsible manner and deliver more transparent and reliable financial information to investors. The results suggested that CSR strengths are significantly related to real activities manipulations, and on the other hand, accrual-based

earnings management is more attributable to CSR concerns. The evidence indicated that CSR firms with higher levels of abnormal operating cash flows, abnormal expenses, and overall real activities manipulations tend to be more conservative in accounting and operating decisions. This further concluded that CSR firms are involved in earnings management less by manipulating real operating activities, resulting into providing more transparent financial information (Kim, Park, & Wier, 2012).

The previous research on earnings forecasting has mainly focused on the role of two dimensions of CSR, i.e., accounting and corporate governance. In their study, Ajinkya *et al*. (2005) demonstrated that more frequent and accurate earnings forecasts are in association with strong corporate governance. Further, Brown and Zhou (2012) showed that analyst forecasts improve after management forecasts. The study of Barnea and Rubin (2010) presented that there is negative relationship between the decision to invest in CSR and inside ownership. Goss and Roberts (2011) also revealed that banks penalize the riskier borrowers who invest in discretionary CSR strengths. Becchetti *et al*. (2013) investigated the relationship between CSR and earnings per share (EPS) forecast. Their study was also an attempt to evaluate the relationship between CSR and risk. Their study included two more dimensions, viz., stakeholder's risk mitigation, and overinvestment. Their results presented four conclusions. First, CSR includes adoption of more transparent accounting practices, thus reducing information asymmetries, and variability and also the absolute value of earnings forecast error. Second, CSR tends to involve mitigation of the controversies and conflicts with stakeholders, which affects corporate profitability, resulting into an increase in its variability. Third, good corporate governance has a positive association with earnings forecasts predictability. Fourth, CSR might also make earnings more unpredictable if managers exhibit arbitrary behavior and overinvest in strengths to maximize their personal visibility and recognition (Becchetti, Ciciretti, & Giovannelli, 2013).

2.2.1 CSR and Taxes

With the increasing studies in CSR, scholars have also touched the aspect of taxes in association with CSR. A few studies reveal that pressure groups and NGOs have highlighted the differences between what the corporate claims as social responsibility and their practices of avoiding taxes. This in turn has crippled the governments in providing education, healthcare, clean water, pensions and even a peaceful and equitable society. Henderson (2001) argued that it is absolutely appropriate to scrutinize tax avoidance claims on the grounds of CSR, because, for some directors of the firms, promoting the success of their company is the prime legal responsibility. For the benefit of the shareholders and their interests, the directors tend to override the interests of other stakeholders. Organization for Economic Co-operation and Development (OECD) intimates that for the long-term success of the firm, directors "are expected to due regard of, and deal fairly with, other stakeholder interests including those of employees, creditors, customers, suppliers and local communities". Palan (2002) believed that the intensification of globalization has led to corporate discretion on increasing profits through tax avoidance. Thus, in order to take advantage of the diverse menu of taxation choices, many firms have established their residences in microstates. Sikka (2010) drew attention to the gaps between corporate talk, decisions and actions. He highlighted the fact that accounting firms make promises of responsible conduct but eventually indulge into tax avoidance and evasion (Sikka, 2010).

The academic literature has witnessed a lot of studies on CSR and tax aggressiveness as separate issues. However, a few researchers such as Freedman (2003), Desai and Dharmapala (2006b), and Williams (2007) have shown that CSR and tax aggressiveness are associated with each other. Corporate tax aggressiveness is believed to generate significant costs and benefits. Freise *et al*. (2008) suggested from a societal perspective that corporate tax ensures financing of public goods. Freedman (2003), Slemrod (2004) and Landolf (2006) suggested that a corporation's tax aggressive policies might affect the society negatively. Freedman (2003) and Freise *et al*. (2008) further argued that ensuring financing of public goods, overtly tax aggressive corporations generally do not pay their 'fair share' of corporate taxes to the government. Quite recently, Lanis and Richardson (2011) in their study revealed that CSR principles influence tax aggressiveness of a corporation potentially through the board of directors. According to them, the outside directors exhibit more responsiveness towards the needs of society, thereby influencing the board of directors away from an attitude of aggressive tax policy. Lanis and Richardons (2011) investigated empirically if a corporation's approach to CSR is associated with its level of corporate tax aggressiveness. Their results showed a significant negative relationship between CSR and tax aggressiveness. A higher level of CSR disclosure of a corporation implies a lower level of corporate tax aggressiveness (Lanis & Richardson, 2012).

Sikka (2010) revealed that a firm's strategy to reduce or avoid taxes is beneficial to shareholders, but, the society suffers. Many researchers propose that tax avoidance is a tax-saving vehicle, which reduces costs and increases the wealth of shareholders. Studies of Erle (2008) and Schön (2008) indicated that firms which use tax shelters tend to be socially irresponsible. In their study, Desai and Dharmapala (2006) found a negative relationship between incentive compensation and tax sheltering. Minnick and Noga (2010) found an association between executive high pay-performance sensitivity and low taxes; whereas other measures of compensation do not exhibit a relationship. A few more studies suggested that there might be a relationship between CSR and tax avoidance. Watson (2011) and Lanis and Richardson (2012) have found that more socially responsible firms tend to be less tax aggressive. However, studies of some other researchers such as Carroll and Joulfaian (2005), Preuss (2010) and Sikka (2010) argued that even though some firms claim to be socially responsible, they also indulge in tax avoidance. The study of Huseynov and Klamm (2012) found evidences that the interactions between various CSR categories and tax fees have an effect on tax avoidance. The results also indicated that the firms with strong CSR strategies to lower cost not only think about the benefit of the shareholders but also for the benefit of society. The firms that run into profits have a better position and can easily participate in charitable giving. Thus, for such firms it is socially acceptable to reduce the tax expense (Huseynov & Klamm, 2012).

2.2.2 CSR and Financial Performance

CSR practice has witnessed a substantial rise in due course of time, which has led to the aggressive research on the relationship between CSR and financial performance. However, Jiao (2010) argued that to this date, the research on the relationship has produced mixed findings (Ghoul, Guedhami, Kwok, & Mishra, 2011). Many researchers have tried to find a relationship between the firm's CSR initiatives and their financial performance. As Cochran and Wood (1984) argued, if certain actions that are classified as socially responsible are negatively associated with the firm's financial performance, then the managers are advised to be cautious. On the contrary, if the relationship exhibits a positive association, the managers

are encouraged to pursue such activities with enthusiasm (Cochran & Wood, 1984). According to Parket and Eibert (1975) and Ullmann (1985), even if CSR is viewed as a significant cost, the firms with profitable performance might be more willing to absorb these costs in the future. However, less profitable firms are reluctant in undertaking socially responsible activities (McGuire, Sundgren, & Schneeweis, 1988). The existing literature has confirmed three assertions on the subject.

The first group of scholars favors a negative relationship between CSR and the financial performance. This group supports Friedman's viewpoint that the only obligation of business is to utilize its resources in a way which helps to increase the profit and share of the owners of firm (Kang, Lee, & Huh, 2010). It is believed that indulging in CSR is an extra cost to the firm, thus the net financial performance goes low. Results of studies of Vance (1975), Wright and Ferris (1997) indicated a negative relationship (Barnett & Salomon, 2012). In contrast, the second group of scholars confirms a positive impact of a firm's CSR activities on its financial performance. This group's assertions is based on stakeholder theory as proposed by Pirsch *et al*. (2007), suggesting that an organization's survival and success is attributed to the achievement of its economic (profit maximization) and non-economic (corporate social performance) objectives in the interest of their stakeholders (Kang, Lee, & Huh, 2010). Scholars argued that an increase in the expenditure on social activities improves the stakeholder relationships which reduces firm's transaction costs and increases the market opportunities and pricing premiums, which further leads to higher net financial performance. The study of Orlitzky *et al.* (2003) has been in support of this view (Barnett & Salomon, 2012). The third group of scholars partially argues for the existence of too many confusing parameters, advising no precise relationship between CSR activities and the financial performance (Kang, Lee, & Huh, 2010). Patten (1991) and McWilliams and Siegel (2000) concluded with no relationship (Barnett & Salomon, 2012).

The validity of the already existing empirical findings has been regarded as controversial. With inconsistent results of the previous studies indicating unclear direction of the relationship between the CSR and financial performance of the firm, most studies have found a positive association between the two variables. McWilliams and Siegel (2001) argued that CSR impact is influenced by factors such as firm's size, diversification, R&D and market conditions. They proposed that all these factors when considered must neither promote nor obstruct the financial performance of the firm. Hillman and Keim (2001) in their study proposed that CSR can be decomposed into stakeholder management and social issue participation. Their study revealed a positive impact on the financial performance of the firm from the perspective of stakeholder management, while a negative impact for being a participant in the social issue. Hull and Rothenberg (2008) showed that the impact of CSR on the financial performance is relatively stronger in low-innovation firms and in industries with little differentiation. Majority of studies abide by the idea that a high level of social indulgence helps to build good relationships with its stakeholders, thus enhancing the firm's financial performance. Studies of Dutton *et al.* (1994) showed that a high level of social indulgence of the firm is perceived as quality of virtue and moral worth among the employees. This results into a greater satisfaction of the employees, and they tend to identify more strongly with the firm. Strong identification indicates greater loyalty towards the firm, thus contributing more to the firm's success. CSR activities also build good relationships with the firm's external stakeholders such as customers, community, and prospective employees. They weigh the firm's CSR involvement positively, thereby increasing their demand or paying premium prices for the products of CSR active firms. CSR involved firms attract

better quality of workforce as these firms are perceived as attractive by job-seekers (Wang & Choi, 2013).

With an intention to establish a relationship between the CSR and financial performance of the firm, Margolis and Walsh (2003) reviewed a total of 127 empirical studies from 1972 to 2002. Among those reviewed, 54 studies indicated a positive relationship, 28 showed no significant relationship and only 7 studies exhibited a negative relationship. A total of 20 studies proposed a mixed relationship. Further, the meta-analysis conducted by Margolis *et al*. (1997) over a period of 35 years displayed an overall positive relationship among the variables, viz. CSR and financial performance of the firm. However, they argue that the magnitude is small (Wu & Shen, 2013). Kim *et al*. (2012) studied the link between quality of earnings and CSR. On similar lines, Petrovits (2006) investigated the strategic use of corporate philanthropy programs to achieve earnings targets and found that firms that report small increase in their earnings tend to incline towards charitable funding choices. Prior *et al*. (2008) in their study found a positive relationship between earnings management and CSR for regulated firms. However, the results do not apply to the unregulated firms. Further, Kim and Venkatachalam (2011) reported a superior financial reporting quality for "sin firms" (gaming, tobacco, alcohol industries) in comparison to the controlled groups (Kim, Park, & Wier, 2012).

All the existing empirical studies on the relationship between CSR and the financial performance of the firm can be easily categorized into two groups based on study methodology. One group of studies have used the event study methodology with a view to assess the short-run financial impact (abnormal returns) when firms engage in CSR. The other set of studies examines the relationship from the perspective of long-term firm performance. However, both the groups of studies have given inconsistent results (McWilliams & Siegel, 2000). Ruf *et al*. (2001) suggested various reasons for the inconsistent results on the link between CSR and the financial performance of the firm. These reasons included a lack of theoretical foundation, a lack of systematic measurement of CSR, a lack of proper methodology, limitations on the sample size and composition, and a mismatch between social and financial variables (Beurden & Gössling, 2008). Wu and Shen (2013) attributed the conflicting conclusions to the varying motives of different corporations. The previous research suggests that the motivations of firms engaging in CSR can be altruism, strategic choices, or greenwashing. Corporation engaging in CSR only for their own sake has an altruistic motive, which negatively affects their financial performance. Strategic choices are supposed to improve the financial performance of the firm when engaged into CSR activities. Firms that do not exhibit a cost difference between responsible and irresponsible behaviors are considered to be as merely greenwashing (Wu & Shen, 2013).

2.2.2.1 Impact on Short-Term Profitability

Several studies have validated the impact of CSR on short-term profitability as measured by ROA. However, the results have been inconsistent with some studies indicating a positive impact, a few others indicating towards a negative impact while others suggested no impact. Inoue and Lee (2011) reviewed the studies of various researchers on the impact of CSR dimensions on the financial performance of the firms. The results of Berman *et al*. (1999) indicated that different CSR dimensions affect the short-term profitability differently. With reference to the short-term profitability they found positive impact for only some of the CSR

dimensions. However, there are a few insignificant impacts for other CSR dimensions. While Russo and Fouts (1997) also proposed that high corporate environmental performance is positively associated with the firm's performance as measured by return on assets (ROA). However in contrast, the findings of Inoue and Lee (2011) suggested inconsistent results. They found that only some of the CSR dimensions affect the short-term profitability positively. For others, the impact turns out either to be negative or insignificant (Inoue & Lee, 2011).

To add further, the empirical results of Lin *et al*. (2009) showed no significant positive relationship between ROA and CSR investments in large manufacturing firms in Taiwan, which indicates that there is no relationship between CSR and financial performance in the short-term. Their study suggested that even the positive CSR activities do not necessarily increase the immediate profitability (Lin, Yang, & Yan, 2009). Moreover, Kang *et al*. (2010) also found no significant relationship between CSR and ROA for three out of four industries under hospitality. Their study revealed that the hotel and restaurant industry had a positive impact of CSR on their profitability; while on the other hand, the airline industry had a negative impact of the CSR on the profitability (Kang, Lee, & Huh, 2010). A recent work of Peloza and Papania (2008) proposed that the financial effects of the various CSR dimensions might be different for firms in different industries. They attributed this difference in impact to the level of importance assigned to each primary stakeholder for the industry (Inoue & Lee, 2011). Another study that focused on the Italian banks being rated by various agencies has also shown inconsistent results. A sample of banks rated by one agency has shown positive impact on ROA, while another sample of banks rated by another agency suggested a negative impact. The study concluded that there exists no significant relationship between the social and financial performance for Italian banks (Soana, 2011).

The studies of Murray and Vogel (1997) concluded that CSR activities are incapable of producing short-term financial payoffs. The direct short-term impact of CSR on financial gains is largely absent (Murray & Vogel, 1997). Keeping in view the previous studies, and the fact that any investment into CSR will take some time to reap benefits, we propose the below hypothesis.

Hypothesis 1: *CSR activities do not have a significant positive impact on the firm's financial performance in short-term.*

2.2.2.2 Impact on Long-Term Profitability

The prior research on the impact on future profitability has been reviewed by Inoue and Lee (2011). Accordingly, scholars have shown that each dimension affects the future profitability of a firm differently. Kacperczyk (2009) observed that three out of the five dimensions (environmental issues, diversity issues and community relations) have a positive impact on the future profitability. On the other hand, Hillman and Keim (2001) observed that only community relations have a positive impact on the future profitability of the firm. On the basis of the resource-based view, many researchers have proposed a positive impact of each CSR dimension on the financial performance of the firm. Studies aiming at the CSR dimensions also found that the creation of these intangible resources lead to high expectations for a firm's future profitability that leads to higher market value. Many researchers have their

results in accordance to this proposition. Berman *et al.* (1999) proposed that the positive evaluation of product quality influences investor's reaction to the firm value. Brammer and Millington (2008) also suggested that higher community involvement leads to a greater market value. It is thus implied that each of the five CSR dimensions contributes to the future profitability of a firm (measured by Tobin's Q) individually (Inoue & Lee, 2011). The research from Lin *et al.* (2009) conducted on firms in Taiwan also suggested a positive relationship between CSR investment and financial performance on a long-term basis (Lin, Yang, & Yan, 2009).

Researchers have argued that long-run economic benefits to the firm via indirect effects are considerable (Murray & Vogel, 1997). Time and again firms have dwelled into adopting CSR activities with a hidden motive of reaping economic benefits. Many scholars have proved this intention of a higher financial performance with their studies. We thus propose in agreement to previous literature that CSR activities will have a positive impact on the future profitability of a firm.

Hypothesis 2: *CSR activities have a significant positive impact on the firm's financial performance in long-term.*

2.3 CSR across Industries

Kang *et al*. (2010) in their study of analyzing the impacts of positive and negative CSR activities on firm performance of hospitality industry dealt with various sub-industries. The hospitality industry included hotel, casino, restaurant and airline firms. The results from their study showed different results for the different sub-industries. The analysis of hotel and restaurant industry showed a positive impact of positive CSR activities on firm value and no significant impact of the negative CSR activities. These industries did not show any significant impact of either positive or negative CSR activities on the profitability. On the contrary, the airline industry exhibited a negative impact of positive CSR activities and no significant impact of negative CSR activities on the profitability. Also for the airline industry, there was a negative impact due to negative CSR activities but no significant impact of positive CSR activities on the firm value (Kang, Lee, & Huh, 2010).

Inoue and Lee (2011) studied the impact of the different CSR dimensions on the tourism industry, comprising of casino, hotel, restaurant, and airline. Their results showed that different CSR dimension affects different industries distinctly. According to the results, a firm's corporate voluntary activity for community significantly decreases the short-term profitability of the airline industry. However, there is a significant increase both in the short-term and future profitability for hotel and restaurant industry. The results involving corporate involvement in diversity issues positively affect the future profitability of the hotel industry, but the other industries did not exhibit any effect. The product dimension of CSR affects the future profitability of airline industry, short-term profitability of restaurant industry, and both short-term and future profitability of the hotel industry. Overall, the results of the study concluded that each CSR dimension affects the financial performance differently, and the financial impacts vary across tourism-related industries (Inoue & Lee, 2011).

The prior literature and research clearly confirms that the relationship between CSR activities and the financial performance of the firm varies with industry, and also with the way of measuring it. Keeping in mind that our study is a cross-sectional analysis of the intended relationship amongst industries, we expect our results to be different for different industries. Thus in consent with the previous studies, we propose that the impact of CSR activities on the firm's financial performance will be different for different industries.

Hypothesis 3: *The impact of CSR activities on the firm's financial performance varies for different industries.*

Irrespective of the perspective of study, most part of the existing literature indicated towards a clear and distinct relationship between CSR and the financial performance of the firms. However, there are not many studies evaluating the impact of CSR on the short-term profitability and on the future profitability of the firms, distinctly. Our research will thus add to the existing literature of CSR-financial performance link in two ways. First, we study the impact of CSR individually on the short-term profitability of the firm, as measured by Return on Assets (ROA) and validate its significance in short-term. Later, the impact of CSR is measured on the long-term profitability, as measured by Tobin's Q (market-to-book value), thus validating the extent of it on the firm's future profitability. We also measure the impact using stock-based measures. Secondly, our research focusses on the industries from UK, Europe which is in contrast to the major studies targeting either US or Asia.

3. Research Methodology

Since the introduction of CSR, scholars have tried to measure various aspects attached to it. These aspects included measuring the effect of various dimensions of CSR and their impact on the financial performance of the firms. Most of them have been found loyal towards using regression model for the analysis. In the initial years of study, researchers used Ordinary Least Square (OLS) method to study the effects of CSR on the financial performance of the firm. However, OLS method suffered from an endogeneity problem. Since non-random engagement in CSR affects financial performance, this lead to the missing third variable problem. Thus in order to avoid using OLS, the most widely accepted method is a two-stage procedure developed by Heckman (1978). This method helps to obtain consistent regression estimates in model with selectivity. Wu and Shen (2013) then argued that even though the first step of binary choice using Heckman's two-step method can be extended to a multiple choices using extended Heckman method, it is difficult to implement. According to them, the endogeneity problem is seldom corrected and applied in a multiple choice model. Thus, Wu and Shen (2013) used multinomial logit model and regression model to study the effects of CSR on the financial performance in the banking industry (Wu & Shen, 2013).

Galema *et al*. (2008) studied the returns and risk from the perspective of socially responsible investments (SRI). They calculated the monthly excess returns of the portfolios using Fama and French (1993) three-factor model, expanded with the Carhart (1997) momentum factor. Their study integrated the momentum factor so as to capture the risk due to momentum found in the stock returns. Their study also tested the return on a differenced portfolio. The KLD database was used to obtain data on social performance, while the data on financial performance was obtained from Datastream. Galema *et al*. (2008) further used cross-sectional regressions with a view to assess the direct impact of KLD scores on excess returns. Moreover, to investigate the impact of KLD scores on the value of the firm, the researchers used pooled book-to-market regressions (Galema, Plantinga, & Scholtens, 2008).

Kim *et al*. (2012) in their study made an attempt to understand whether earnings quality is associated with CSR and chose multiple regressions and a logistic regression method. They believed that firms are likely to use a mix of discretionary accruals and real activities manipulations as tools for managing their earnings. Thus, the firms can opt between the two mechanisms using a technique which is affordable to them. Kim *et al*. (2012) constructed their CSR score from KLD database, excluding corporate governance and the exclusionary screen categories. Alternatively, they created another proxy CSR score ensuring that the firm has passed the social screens. In alignment with prior studies on earnings management, Kim *et al*. (2012) also employed discretionary accruals as the proxy for earnings management. They argued that earnings management can involve either income-increasing or income-decreasing accruals, hence absolute value of discretionary accruals were used for the main analysis. In their study, the researchers abided to the previous work on real activities manipulations. They used four measures to detect real activities manipulations, viz., abnormal levels of operating cash flows, abnormal production costs, abnormal discretionary expenses, and a combined measure of real activities manipulations (Kim, Park, & Wier, 2012).

Fama *et al*. (1969) proposed the event study methodology to isolate the impact of a particular event on the market valuations. Aktas *et al*. (2011) in an attempt to study the aspect of mergers and acquisitions (M&A), thus used the market model to estimate the normal returns first, and then calculated the abnormal returns for a day as the difference between the

observed return on that day and that estimated using the market model. These scholars measured the firm's ability to deal with social and environmental risks from the data obtained by Innovest Strategic Value Advisors (Innovest). The Innovest group rates firms on environmental, social and governance performance. The sample for M&A was extracted from Thomson Securities Data Company (SDC) (Aktas, Bodt, & Cousin, 2011). Cho *et al*. (2013) in their study tried to find out whether the CSR performance of a firm affects the information asymmetry. As their research methodology they followed the proposition of Cheng *et al*. (2011b), wherein the bid-ask spread was used as a proxy for information asymmetry. They further measured the spread by annually averaging the ratio of the daily bid-ask spread to the closing price from the CRSP daily stock file. For the second test, Cho *et al*. (2013) used regression analysis that included three different measures of CSR performance, in order to test whether the information asymmetry varies based upon the magnitudes of the CSR performance score. As a measure for CSR performance, they used KLD social performance rating scores, and the firm-specific data was collected from Compustat and CRSP (Cho, Lee, & Jr., 2013).

The motive of our study is to find the impact of CSR on the financial performance of firms for three industries of crude petroleum and natural gas, mining of metal ores and pharmaceutical. Thus, CSR is our independent variables, and the financial performance of firms forms our dependent variables. The sections below discuss our method for the analysis followed by various methods to measure both our dependent variables, independent variables and control variables. Further, we also discuss a few robustness tests undertaken so as to ensure correctness of our results.

3.1 Model

With an intention to validate the impact of CSR on the financial performance of firms, researchers have repeatedly used regression analysis. The study of McWilliams and Siegel (2000) defined an econometric model with financial performance as a function of CSR, size, risk and industry. However they further included investment in R&D and advertising intensity of the industry in their model, and evaluate the results (McWilliams & Siegel, 2000). Mahoney and Roberts (2007) evaluated the relationship between CSR and financial performance of firms in Canada. The regression model in their study used financial performance measured by ROA and ROE as dependent variables, corporate social performance (CSP) as independent variables and a few control variables such as firm size, debt-level and industry (Mahoney & Roberts, 2007). Vong and Wong (2013) laid focus on the relationship between CSR and financial performance for the gaming industry. The authors performed regression analysis for the intended relation over various financial performance measures such as earnings per share, gross margin, net profit margin, operating margin, revenue and profit (Vong & Wong, 2013). The study of Wu and Shen (2013) performed a regression analysis for the banking industry. The researchers used various proxy measures for bank performance such as return on assets (ROA), return on equity (ROE), nonperforming loan ratios (NPL), net interest income ratio (NII) and non-interest income ratios (NonII). Their study categorized the control variables as bank characteristics, institutional factors and macroeconomic variables (Wu & Shen, 2013).

Our study validating the impact of CSR on the financial performance of firms for the three chosen industries build the regression model in accordance to the prior work. In our empirical analyses of industry returns, we employ CSR disclosure as independent variable. The

financial performance of firms in short-term is measured by an accounting-based variable ROA. Also, to measure the financial performance of firms in long-term another accounting-based variable Tobin's Q is employed. We also test the validity of the relationship using a stock-based measure of financial performance of firms called Total Shareholder Returns (TSR). Further, the regression model also includes various control variables viz., size of firm, age of firm, financial leverage and specific year-effects. These control variables isolate the effect of CSR on the financial performance and are referred as firm size (SIZE), firm age (AGE), leverage (LEV) and year-effects (YD).

Thus, the mathematical representations of the regression model for this study are as follows.

Hypothesis 1: To estimate the impact of CSR activities on the financial performance of the firm in the short-term, we use the regression equation 1. Here ROA is the dependent variable and is an accounting-based measure of financial performance in short-term. According to equation 1, the impact of CSR is measured on short-term profitability which is measured by ROA after controlling for other factors of firm-size, firm-age, leverage and year-effects. The subscript *i* denotes firm and *t* denotes year.

$$(ROA)_{i,t} = \alpha_0 + \alpha_1(CSR_{Disc})_{i,t} + \alpha_2(SIZE)_{i,t} + \alpha_3(AGE)_{i,t} + \alpha_4(LEV)_{i,t} + \alpha_{5\text{-}8}((YD)_{1\text{-}4})_{i,t} + \varepsilon \quad (1)$$

Once we have the descriptive statistics for all our variables, we perform a correlation analysis. This will help us analyze whether the independent variable CSR is significantly correlated to mean ROA of the industry or not (Wu & Shen, 2013).

Hypothesis 2: On similar grounds to study the impact of CSR activities on the financial performance of the firm on future profitability, we use the regression equation 2 and equation 3. Here Tobin's Q acts as a dependent variable and is an accounting-based measure of future profitability. Also, we further analyze the relationship considering a stock-based measure of financial performance called Total Shareholder Returns (TSR). The subscripts *i* and *t* signify firm and year respectively.

Using accounting-based measure,

$$(\text{Tobin's Q})_{i,t} = \beta_0 + \beta_1(CSR_{Disc})_{i,t} + \beta_2(SIZE)_{i,t} + \beta_3(AGE)_{i,t} + \beta_4(LEV)_{i,t} + \beta_{5\text{-}8}((YD)_{1\text{-}4})_{i,t} + \varepsilon \quad (2)$$

Using the stock-based measures,

$$(TSR)_{i,t} = \gamma_0 + \gamma_1(CSR_{Disc})_{i,t} + \gamma_2(SIZE)_{i,t} + \gamma_3(AGE)_{i,t} + \gamma_4(LEV)_{i,t} + \gamma_{5\text{-}8}((YD)_{1\text{-}4})_{i,t} + \varepsilon \quad (3)$$

With a view to ensure that our results are not influenced because of any specific-year, we employ regression analysis on each industry for all the five years viz., 2008, 2009, 2010, 2011 and 2012 individually. To achieve this, equations 1, 2 and 3 will be modified such that the year dummies are not considered while performing the regression.

Hypothesis 3: Having evaluated the impact of CSR on the financial performance of the firms both on short-term and long-term profitability, analysis can be done across industries. After the descriptive analysis and correlation is performed on the industry-specific data, we perform a pooled-regression analysis and calculate their respective *t*-values. The magnitude and significance-level would thus be used to measure the industry-specific impact. In other words, it will indicate as to the performance of which industry is most affected by CSR out of the three and to what significant level (Inoue & Lee, 2011).

3.2 Measuring Independent Variable – Corporate Social Responsibility

From the perspective of measuring the impact of CSR on the financial performance of firms, CSR works as an independent variable in our study. CSR of a firm is measured with a view to evaluate whether being socially responsible reaps economic benefits for the firm or not. There are three different ways through which a firm's level of CSR activities is measured. This section throws light on all the options available to measure our independent variable CSR followed by the choice of one method on the basis of advantages and disadvantages of all the methods.

One of the ways is the expert evaluation of the corporate policies into a reputation index. Various independent agencies rate the firms on one or more dimensions of social performance and allot them a rating (Cochran & Wood, 1984). Kinder, Lydenberg, Domini (KLD) database is one such example that ranks companies on thirteen aspects of CSR, using surveys, financial statement information, and reports from mainstream media, government documents and peer-reviewed legal journals. These thirteen dimensions are: community, corporate governance, diversity, employee relations, environment, human rights, product, alcohol, gambling, firearms, military, tobacco and nuclear power. The first seven dimensions measures both strengths and concerns. However, the last six dimensions are purely exclusionary screens and used only to register concerns (Goss & Roberts, 2011). Hillman and Keim (2001) proposed that KLD is the best and the most genuine information available to researchers studying social performance of the firms in U.S. (Mahoney & Roberts, 2007). The method is advantageous in the following aspects. Firstly, this stands to be consistent because only one evaluator applies the same criteria to all the firms. Secondly, there is no fabrication of complex objective measure to a dimension which might be essentially subjective. Third, the allotted rating summarizes the perception of a major constituency of the firms. The methodology however suffers from a few disadvantages as well. The rankings awarded are highly subjective, and hence might vary from one observer to another, leading to unreliability. Secondly, most reputation indexes are formed over a relatively small sample size. Thus, generalizing the results of those studies should be done in an absolutely cautious manner (Cochran & Wood, 1984). Further, the validity of these indexes is also subjected to criticism since it depends on the skill and qualifications of the assessors (McGuire, Sundgren, & Schneeweis, 1988).

As a second method, researchers also assessed social responsibility from specific actions such as expenditures on pollution control, trade violations, corporate philanthropy and social responsibility initiatives of the firms (Herremans, Akathaporn, & McInnes, 1993). In this method, the performance in controlling pollution is measured, which works as a proxy for measuring CSR. An example of such an index is The Council of Concerned Businessmen Pollution Performance Index. The method finds an advantage as it is derived from the real actions of the firms (McGuire, Sundgren, & Schneeweis, 1988). However, pollution control is only one aspect of CSR and thus is valid for only a certain set of industries (Herremans, Akathaporn, & McInnes, 1993).

Another method used for measuring CSR is content analysis. Content analysis is a flexible research method to analyze text data objectively. It refers to an analytical approach which is intuitive, systematic and strictly textual (Hsieh & Shannon, 2005). Content analysis is about measuring the appearance of a specific item in the corporate annual report or other corporate document, qualitatively, quantitatively or by counting a number of items (Cochran & Wood, 1984). As per Guthrie and Abeyeskera (2006), content analysis 'involves codifying qualitative and quantitative information into predefined categories in order to derive patterns in the presentation and reporting of information'. Krippendorff (2004) proposed that content analysis is a research technique that makes replicable and valid inferences from texts which reduces raw data into manageable amounts for analysis. Accounting researchers have used various units of analysis which include word counts, sentence counts, page proportions, frequency of disclosure and high/low disclosure ratings (Kamal & Deegan, 2013). The variables measured in content analysis can be divided as: quantitative items, or qualitative items. The first group is the quantitative items, such as number of pages, sentences and words that quantify the level of environment disclosure in the annual report. However, each of these measures suffers from a limitation. On one hand, pages might include pictures of graphs with no relevant information on environment or social activities, while on the other hand, sentences and word can miss important graphs and tables. In the second group, which is the qualitative items, researchers identify the environmental issues first and then analyze the environmental disclosure of each issue using a scoring methodology. Once the individual scores are quantified, the researchers then calculate the aggregate score for each firm.

Content analysis has been found to be advantageous in the following aspects. Firstly, the procedure is reasonably objective once the desired variable is chosen. Thus, the results are independent of the methodology. Secondly, a larger sample size is possible because the method is mechanical. Nevertheless, the methodology has its own drawbacks also. Content analysis is only a snapshot of what the firm claims to be doing. This might be different from their actual practice. Further, there will always be a sense of being skeptical, because the firms might be projecting themselves as good, when they are actually not competent enough on this front (Cochran & Wood, 1984).

Weighing on the pros and cons of content analysis, many researchers tend to implement quantitative content analysis in order to measure the CSR disclosure of firms. However the unit of analysis has varied with studies. Milne and Adler (1999) suggested that sentences and logical parts of sentences provide context and therefore can be considered as sound bases for coding. Thus many researchers such as Bouten *et al*. (2011) and Guthrie *et al*. (2008) used sentences as the unit of analysis for social and environmental content analysis. The published reports were read through using a qualitative analysis software program Atlas-ti which identified relevant sentences containing CSR information and were then linked to appropriate codes. However for complex sentences, a group of words containing single piece of

meaningful information were coded (Bouten, Everaert, Liedekerke, Moor, & Christiaens, 2011). The studies of Clarkson *et al*. (2008) and Morhardt (2010) involving content analysis focused on the type of themes covered and the quality/evidence of the claims being made. Font *et al*. (2012) in their study followed the principles of Wiseman in scoring the sustainability performance. Each indicator of their study was tailored with a score definition and the content analysis results were benchmarked from 0 to 5. They involved four staff members in conduction the content analysis with one of them analyzing all the documents and the other three employed as subject-experts for inter-coder reliability (Font, Walmsley, Cogotti, McCombes, & Häusler, 2012).

Most researchers use word count as the unit of analysis in quantitative content analysis. Krippendorf (1980) suggested that in order to measure the amount of space dedicated to a topic and to ascertain its importance, words should be a preferred measure of analysis. On similar lines according to Zeghal and Ahmed (1990), word count guards against inconsistencies in calculating the quantity of disclosure. They argued that words being the smallest unit of measurement for analysis provide maximum robustness in assessing the quantity of disclosure (Wilmshurst & Frost, 2000). Thus, many studies used word count as the basic unit of measurement for quantitative content analysis. Asif *et al*. (2013) in an attempt to review the Dutch corporate sustainable development reports identified key research question and split into key areas of investigation. Using this as a basis for content analysis, they reviewed the corporate's sustainability report and website and collected data by electronically searching for keywords (Asif, Searcy, Santos, & Kensah, 2013). Ntim and Soobaroyen (2013) in their study also used CSR word count and measured the quantity of CSR disclosure in six broad areas viz. BEE, HIV/Aids, environment, ethics, health and safety and social investment. Content analysis method was used to codify written texts into these categories to collect CSR data (Ntim & Soobaroyen, 2013). Esrock and Leichty (1998) suggested that companies use their websites to report CSR considerations and activities in an attempt to connect with general audience and key stakeholders. According to Bansal (2005) and Maignan and Ralston (2002) companies' websites generally contain information consistent with other archival documents such as annual reports. Hence, Wang and Bansal (2012) undertook a content analysis on the text published on all the introductory webpages of the firms. The authors focused on discrete CSR items and identified CSR keywords and their frequency (Wang & Bansal, 2012).

The European Commission defined CSR as a concept which companies voluntarily integrates social and environmental concerns in their business operations and also in their interactions with their stakeholders, we aim to measure this voluntary disclosure on CSR. Thus, the CSR sample for our study is collected from the annual reports published on companies' websites. We chose to perform content analysis on annual report for the following reasons. Firstly, annual reports are the most important tool used by firms to communicate with their stakeholders and thus reflect the accountability-discharge activity of companies as they are widely distributed and often directly available on the companies' website. Second, many stakeholder studies such as O'Dwyer *et al*. (2005), Tilt (2004) and Deegan and Rankin (1997) indicate that the annual reports are widely favored source of information (Bouten, Everaert, Liedekerke, Moor, & Christiaens, 2011). Thirdly, annual reports are least costly, yet most effective means of communication. Lastly, corporations are found to be increasingly using their annual reports for disclosing information on their social actions (Holland & Foo, 2003). Thus, for our study we collect CSR information from the online published annual reports of the firms.

In an attempt to calculate the magnitude of CSR practices on the industries, we measure CSR disclosure using content analysis on annual reports by adopting the methodology used by Wang and Bansal (2012). We measure CSR keyword count using a free version of software for qualitative data analysis called Atlas-ti 7, which helps is to evaluate the extent to which firms employ CSR in their business operations. As a process of content analysis we first calculate the number of times a pre-identified specific CSR keyword (Appendix 2) is being published in the annual report for a particular financial year. While counting the appearance of CSR keywords, we do not distinguish between the different forms of the same word, example: responsible, responsibility, responsibly. Also, we do not count the different tenses of the same word separately, example: recycle and recycled (Wang & Bansal, 2012). With a view to ensure that the identified keywords are in context related to CSR, we also do a manual check for the count of keywords on the annual reports for each firm of all the industries. After the screening process when we have identified the frequency of each of the distinct CSR keywords, we then calculate the CSR disclosure using the formula:

$$CSR_{Disc} = \left(\sum_{i=1}^{N} T_i\right)/K \qquad \text{- - - (i)}$$

where, N is the number of different CSR keywords appeared in the annual report of the firm, T_i is the frequency of the appearance of the keyword i and K is the number of total words in the annual report of the firm

It has been observed that larger firms tend to include more CSR keywords as compared to the smaller firms. Hence, in our calculation for CSR disclosure, we divide the summation of total number of keywords by the total number of words in the annual report (K) (Wang & Bansal, 2012).

3.3 Measuring Dependent Variable – Corporate Financial Performance

In our study of analyzing the impact of CSR on the financial performance of firms, undoubtedly financial performance works as a dependent variable for which a large number of measures are available. These measures are broadly categorized as: accounting-based measures and stock-based measures. Further, financial performance is measured both in terms of short-term perspective and long-term perspective. In accordance with Waddock and Graves (1997), our study uses three dependent variables, viz. accounting-based measure return on assets (ROA) reflecting short-term profitability, accounting-based measure Tobin's Q and stock-based measure Total Shareholder Returns (TSR) reflecting future profitability (Barnett & Salomon, 2012).

Accounting-based Measures

Accounting-based measures are the primary methods of predicting future financial performance of the firms (Inoue & Lee, 2011). This largely focuses on how earnings of the firm respond to different policies of the managers. As argued by Cochran and Wood (1984),

the most common measures of accounting returns are earnings per share (EPS) or price to earnings (P/E) ratios (Cochran & Wood, 1984). These measures lay emphasis on the firm's historical assessment of accounting profitability. A wide range of performance indicators, such as Return on Assets (ROA), assets growth, operating revenue are captured by these measures. Nevertheless, accounting-based measures tend to be biased because of the differences in accounting procedures and managerial manipulations (Scholtens, 2008). However it is argued that accounting-based measures are the best proxy for financial performance when considered with financial leverage influences and risk differences (Cochran & Wood, 1984).

In agreement with prior studies, we define ROA as net income divided by total assets (Wu & Shen, 2013). Net income of a firm in a given year is defined as the earnings after interests, taxes, depreciation and amortization (Barnett & Salomon, 2012). We extract the values for net income and total assets of a firm for a given year from the database ORBIS. The values for net income are reflected in the global standard format under profit and loss account items as P/L after tax (PLAT). Similarly, the values for total assets are retrieved from balance sheet items as total assets.

The accounting-based measure Tobin's Q reflects the investor's evaluation of the firm's capability in creating future profits (Inoue & Lee, 2011). To measure these future profits, Chung and Pruitt (1994) came-up with a simpler approximation of Tobin's Q. They defined Tobin's Q as:

$$\text{Approximate Q} = (\text{MVE} + \text{PS} + \text{DEBT})/\text{TA} \qquad \text{- - - (ii)}$$

where, MVE is the market value of equity calculated as a product of firm's share and the number of common stock shares outstanding, PS is the liquidating value of the firm's outstanding preferred stock, DEBT is the value of the firm's short-term liabilities net of its short-term assets, plus the book value of the firm's long-term debt, and TA is the book value of the total assets of the firm (Chung & Pruitt, 1994).

The studies of Hong and Kacperczyk (2009) and Deng *et al*. (2013) defined Tobin's Q as market value of equity plus assets minus book value of equity over total assets ((Deng, Kang, & Low, 2013) (Hong & Kacperczyk, 2009)). Book value of assets minus book value of equity is the book value of liabilities. Thus simplifying even further, Klapper and Love (2004) defined Tobin's Q as the market value of equity plus total liabilities divided by total assets (Klapper & Love, 2004). Hence, we retrieve values for market value of equity, total liabilities and total assets from ORBIS database. As defined above the market value of equity is the product of firm's share price and the firm's outstanding shares. The stock price is retrieved as the market price – year end and number of common stock shares outstanding is retrieved as shares outstanding from the annual stock data.

Stock-based Measures

Under stock-based measures, the financial performance is measured from the perspective of the shareholders. At the first attempt, this was measured as changes in price per share, which was later rectified with an inclusion of dividend. Further risk was adjusted to this measure so

as to weigh the performance precisely (Cochran & Wood, 1984). These measures are advantageous because they refer to the investor's evaluations and expectations of the firm's performance. Market-based measures (another name for stock-based measures) are also less susceptible to accounting rules and managerial implications. However, they do not always reflect fair evaluation from the investors. McWilliams *et al*. (2006) argued that stock prices should not be used as a measure of financial performance, because they only relate to financial stakeholders. Additionally, the CSR activities affect the non-financial stakeholders as well (Scholtens, 2008).

Our study uses a stock-based measure of financial performance called total shareholder returns (TSR) and is defined as percentage of total share returns made up of share price and dividends (Ntim & Soobaroyen, 2013). Mortanges and Riel (2003) argued that for investors TSR is the most important measure of corporate performance. They defined TSR as dividends plus share price appreciation (Mortanges & Riel, 2003). Numerically, TSR is calculated as:

$$TSR = [(SP)_t - (SP)_{t-1} + (D)_t]/(SP)_{t-1} \quad \text{- - - (iii)}$$

where, SP_t is the share price for the current year, SP_{t-1} is the share price for the previous year and D_t is the dividends per share paid during the current year (Guzmán & Reverte, 2008). In order to calculate the value for TSR, we retrieve data as market price – year end for the stock prices for all the years along with a year before and dividends per share from the annual stock data of ORBIS database. The missing values of dividends per share in ORBIS are then looked in the annual reports of the firms.

Both stock-based measure and accounting-based measure focus on different aspects of performance, and are subject to bias. Also, there is debate over the proper measure of financial performance. Thus, in our study we investigate the relationship between CSR and the financial performance of measure, using both stock-measure and accounting-measure. Our study uses accounting-based measures ROA and Tobin's Q and a stock-based measure Total Shareholder Return (TSR). While ROA is used as a proxy for short-term profitability and is measured by how a firm efficiently creates profits using its assets during a fiscal year, Tobin's Q is used as a proxy for long-term profitability of the firm and is measured as the ratio of market value to the book value of the firm. Stock-based measure TSR reflects the investor's perceptions from the stock market in relation to a firm's accounting value (Kang, Lee, & Huh, 2010).

3.4 Control Variables

The financial performance of firms has a strong influence of many other factors as well. With a view to measure only the impact of CSR on the financial performance of firms, we further employ control variables so as to keep a check on their influence on the financial performance of the firm (Barnett & Salomon, 2012). Our study includes four control variables for firm size, firm age, leverage and year-effects viz. SIZE, AGE, LEV and YD respectively.

Firm-Size (SIZE)

Evidences from prior studies have concluded that firm size has an influence on the CSR practices (Ntim & Soobaroyen, 2013). The study of Ball (1978) suggested that larger firms provide more information to the financial community, leading to less information asymmetry between investors and managers. Thus for larger firms, less information asymmetry decreases the cost of capital which tends to increase the firm value. Also, from the perspective of economy of scale, larger firms tend to perform better than the small firms indicating a positive relationship between the firm size and profitability (Kang, Lee, & Huh, 2010). Therefore, firm-size (SIZE) must be considered as a control variable. Moreover, considering the positive skewness in the firm-size, a natural log transformation of the total assets of the particular year is being used (Wang & Choi, 2013).

Firm-Age (AGE)

Studies also suggested that firms which are older as compared to the recent ones tend to realize economies of scale from their CSR investment (Wang & Bansal, 2012). Hence, another control variable for firm-age (AGE) is being used in the regression model. Firm age is calculated by counting the number of years since the first listing of the firm. This data is being retrieved from the ORBIS database as IPO date under the classification of stock data.

Leverage (LEV)

A firm can take an advantage of increased debt on the grounds that interest expense is tax deductible whereas dividends are not. However on the other hand, with an excessive increase in the firm's debts the market perceives it to be too risky resulting in a dwindling of the equity returns. Leverage is the ratio of debt-to-assets, and acts as a control parameter for the firm-specific capital structure (Kang, Lee, & Huh, 2010). The LEV ratio is calculated by retrieving data for long-term debt and total assets from the financial data of ORBIS database under global standard format.

Year-Effects (YD)

Brammer and Millington (2008) suggested that the degree of link between CSR and financial performance of firms may fluctuate on a yearly basis. Thus in order to keep a check for any year-specific effect, a set of year dummy variables (YD) is also used (Barnett & Salomon, 2012). The code of this variable for an observation is 1 for a focal year and 0 for the other years. Year 2008 is the specified reference year. With 2008 as a reference year, a set of four dummy variables are used that control the year-specific effects from 2009 to 2012. (Inoue & Lee, 2011).

3.5 Robustness Testing

To determine the accuracy of our results, we further conduct four robustness tests. As the first test of robustness, we examine the whether the average values of our independent variable

maintains a similar impact on the dependent variables as yielded from the main analysis. For this we employ the average value of all our variables across the five years of observations and perform a linear regression (Clubb & Naffi, 2007).

A few researchers such as Griffin and Mahon (1997), Mahoney and Roberts (2007) and Wu and Shen (2013) employed ROE as a measure of short-term profitability. We thus utilize this fact as the second test for our robustness check. We employ ROE as an accounting-based measure of financial performance on a short-term and perform additional regression analysis for all the chosen industries. ROE in our study is defined as the ratio of net income to shareholder's equity (Wu & Shen, 2013).

Next, we re-define our control variable firm-size. In our main analysis, the firm size is defined as natural log of total assets. However, researchers such as Hillman and Keim (2001), Lee and Park (2009) and Waddock and Graves (1997) used firm size as natural log of total annual sales. Thus as a third test of robustness, we employ control variable firm size as natural log of annual sales (Klapper & Love, 2004). With the changed definition of our control variable firm size, we re-execute the regression models for both short-term profitability and long-term profitability using accounting-based measures and stock-based measures. We then check for the results whether the impact of CSR on the financial performance of firms changes or not.

Some of the prior studies have employed log transformation of the accounting-based measures of financial performance. This is done as a measure to correct the positive skewness and enhance normality. Thus in accordance to such studies, our fourth robustness test includes log transformations of the accounting-based measures of financial performance. Further in alignment with the suggestion of Howell (1992), before taking natural logarithmic transformation, 1 is added to each value of ROA for all the years of the sample so as to maintain negative observations with negative values. Thus, for robustness test the true form of ROA is *log(1 + ROA)*, and Tobin's Q is *log(Tobin's Q)* (Kang, Lee, & Huh, 2010).

4. Data

As the study is done on a few industries publicly-listed in UK, this chapter is dedicated to the reasons and justification for the choice of country and the industries. This is then followed by a discussion on the sources of data collection.

According to the study of Holland and Foo (2003), UK firms are found to be practicing environmental reporting much more than US (Holland & Foo, 2003). Moreover, UK is one of the largest European economies and is strategically placed so as to have a wide international influence on corporate environmental practice. As highlighted by Nobes and Parker (2008), British companies are more transparent in their disclosure practice in annual reports and follow voluntary reporting (Beck, Campbell, & Shrives, 2010). Thus with such advantages, we chose to study the firms of UK.

Due to their utmost importance in European economy, our research studies the impact of CSR on the financial performance of firms in industries of petroleum and natural gas, mining of metal ores and pharmaceutical. The importance of these three industries follows below.

Energy is what makes Europe move. Therefore European Union (EU) essentially addresses the major challenges of climate change, increasing dependency on imports and access for all users to affordable and secure energy. With an aim to spark a new industrial revolution, the EU is working towards an ambitious energy policy covering energy from fossil fuels (oil, gas and coal) to nuclear energy and renewable (solar, wind, biomass, geothermal, hydro-electric and tidal). They focus on to deliver a low-energy economy while making the consumed energy more secure, competitive and sustainable (Europa, 2013). By far oil remains the major energy source for transport in Europe and is expected to be so in decades to come. The EU continuously focuses on securing oil supplies and developing the oil market more transparent, fare and competitive (European Commission, 2013). To access energy from gas sustainably in secure manner, a gas committee was set up by the EU Regulation on conditions for access to the natural gas transmission networks (Article 14) and consists of Member States' representatives (European Commission, 2013). This industry is undoubtedly the driving force behind EU and thus qualifies to be the first industry of our study.

The EU is also one of the biggest consumers of non-ferrous metals worldwide and has a large non-ferrous metals refining capacity for processing ores and concentrates as well as for melting recycled metals (scrap). The non-ferrous metals sector accounts for EUR 19.19 billion of EU manufacturing value added at factor cost. According to European Commission (2013), more than 40 non-ferrous metals and their alloys are produced in EU and are used in a wide range of applications. Non-ferrous industries are also considered as one of the basic industries are essential in the value added chain of many investment and consumer goods producers such as mechanical engineering, construction, electricity and energy, transport, etc. (European Commission, 2013). With such a wide application of this industry, we chose to study the impact of CSR on this industry of mining of metal ores.

The European Commission since 1985 has been aiming to achieve a single market for pharmaceutical industry. In addition to providing favourable environment for pharmaceutical innovation and development, the EU aims to harmonize the pharmaceutical market so as to improve consumer choices in pharmaceuticals at affordable prices without compromising quality and safety (Timur, Picone, & DeSimone, 2011). Besides contributing to economic terms, the pharmaceutical industry also contributes majorly in terms of high-quality

employment, investment in the science base and for public health. This industry has two sub-sectors: manufacture of basic pharmaceutical products, and manufacture of pharmaceutical preparations. Thus it plays a double crucial role in manufacturing safe and effective medicines protecting public health and creating a business environment that promotes research and innovation thereby increasing the competitiveness of the European economy. According to facts and figures of 2006, UK ranks among the top five Member States in terms of value added and persons employed, thus motivating us to study this industry (European Commission, 2013).

The source for the intended relevant data collection is ORBIS, which is a global database of Bureau van Dijk (BvD). The BvD are the leading publishers of company information and business intelligence. The BvD Ownership Database is developed by a group of specialized researchers based in Bureau van Dijk's Brussels office. The ORBIS database at the University of Twente contains comprehensive information on around 123 million companies worldwide. The details on companies include financial strength indicator, country profiles and outlook from the EIU, stock data for listed companies, detailed corporate structures, Merger and Acquisition (M&A) deals and rumours, and many more. The ORBIS software has over 100 search criteria, which can be combined using Boolean criteria to clearly identify the company set that will be used for various analysis like, statistical analysis, peer reports, segmentations, etc.

The financial data is extracted with industry classification as NACE Rev. 2. The statistical classification of economic activities in the European community, abbreviated as NACE is the nomenclature of economic activities in the European Union (EU). The term NACE is derived from the French ***N****omenclature statistique des* ***a****ctivités économiques dans la* ***C****ommunauté* ***e****uropéenne*. NACE is a four-digit classification that provides a framework to collect and present a large range of statistical data in accordance to economic activity in the fields of economic statistics such as production, employment and national accounts and in other statistical domains developed within the European statistical system (ESS). Various versions have been developed since 1970. NACE Rev. 2 is the revised classification which was adopted in end of 2006 and its implementation began in 2007 (European Commission, 2013).

With a view to collect all the firms under the three chosen industries, ORBIS database was referred with filtering on publicly-listed firms in UK. The industries are opted from the industry classification as NACE Rev. 2. The first category of industry for crude petroleum and natural gas (NACE Rev. 2 Code: 6) fetches a total of 38 firms from ORBIS database. Similarly, a total of 43 firms are being fetched from ORBIS for industry classification as mining of metal ores (NACE Rev. 2 Code: 7). Further, the ORBIS database fetches a total of 46 firms under the industry of pharmaceutical (NACE Rev. 2 Code: 21). The data is being fetched from ORBIS[3], which also provides key financial data and the direct web link to their respective websites. We use the link to their websites in order to collect the annual reports of the firms of last five years ranging from 2008 till 2012, thereby increasing the robustness and helping us get a clear magnitude of relationship (Beck, Campbell, & Shrives, 2010).

For the purpose of analysis of this study, firms with absolutely no published annual reports and no financial data have been ignored from the final sample selection. These firms are the ones which were incorporated only in 2012 or later. For majority of firms, the variable values

[3] ORBIS Database last updated on 7 February 2014

for dividends per share and total sales are not available on ORBIS database. The missing values are then looked-on from the downloaded annual reports of the firms. Thus, after the basic screening process, a total of 34 firms are available for the industry of crude petroleum, 32 firms for mining metal and a total of 38 firms for pharmaceutical industry qualified for the final sample. The data is further screened out for the bankrupt firms. Any firm with a bankruptcy of 100% or more is ignored while performing the regression analysis.

With all the raw data collected to examine the relationship between CSR and the financial performance of firms, we perform a linear bivariated regression analysis using the statistical software SPSS® 22 owned by IBM.

5. Results

This chapter gives provides an explanation and analysis of the results attained for the observations collected for each industry over the years 2008 – 2012. We first provide an analysis of the descriptive data for all the three chosen industries. This is followed by an analysis of the correlations between the variables of the regression equation. Further we then explain the regression analysis of our sample data for all the three industries. The chapter then concludes with an analysis for various robustness checks.

Descriptive Statistics

Table 1 illustrates a descriptive summary of all the variables employed in the regression model. Panel I displays the descriptive data for the industry of crude petroleum and panel II and panel III showcase the descriptive data for the industry of mining metal and pharmaceutical respectively.

During the five-year period, the independent variable CSR_{Disc} has the highest mean value of 0.008 (0.8%) for the industry of mining metal. The industry of crude petroleum and pharmaceutical have the mean values for CSR_{Disc} as 0.007 (0.7%) and 0.005 (0.5%) respectively. It is evident that two of the three chosen industries viz. mining metal and crude petroleum have incorporated CSR disclosures in their annual reports to a similar extent. However the pharmaceutical industry has the lowest level of CSR incorporation. On an average while the industry of mining metal publishes 8 keywords related to CSR for every 1000 words, the industry of crude petroleum and pharmaceutical publish 7 and 5 CSR keywords respectively for every 1000 words in their annual reports. The maximum number of CSR keywords published was for the crude petroleum industry as 112 CSR keywords for every 1000 words of the annual report. The pharmaceutical industry is found to be least interested towards CSR as the maximum number of CSR keywords found published in their annual reports was 42 on every 1000 words. This is less than even 50% of what the industry of mining metal and crude petroleum publish. Thus it is evident that out of the three chosen industries, the pharmaceutical industry is least inclined towards CSR, while mining metal and crude petroleum tend to have almost the same level of CSR incorporation (Ntim & Soobaroyen, 2013).

For the dependent variables, the mean value for ROA is highest for the industry of mining metal as -0.11. The mean value for ROA for crude petroleum is very close to the value for mining metal at -0.13. The pharmaceutical industry exhibits the lowest mean value of ROA at -0.25. ROA being defined as the ratio of net income to total assets, the negative sign for the values of ROA indicate that all the industries experienced a loss during the five-year period of 2008-2012 of 11%, 13% and 25% for the industry of mining metal, crude petroleum and pharmaceutical respectively. Tobin's Q being defined as the ratio of market value of total assets to book value of total assets has the highest mean value of 3.48 for the industry of pharmaceutical. The industry of mining metal and crude petroleum had the mean values for Tobin's Q as 2.60 and 1.61 respectively. These values indicate that the industry of pharmaceutical witnessed highest growth in the market value of their assets being followed by the industry of mining metal and crude petroleum in the same order. TSR reflects the appreciation in share price and dividends and thus can be attributed as future profitability from the perspective of stockholders. The results indicate the highest growth in share price for the industry of mining metal at 0.31 (31%). The growth in the share price for the industry

of crude petroleum is at 0.07 (7%) and only a nominal growth for the pharmaceutical industry at 0.01 (1%) (Mallin & Michelon, 2011).

From the perspective of control variables, the industry of crude petroleum has the highest size as measured in terms of total assets with a mean value of 11.33 million US dollars. The minimum size is just 43 US dollars and the maximum size being 360.33 million US dollars. The values indicate a huge gap between minimum and maximum values of assets for the firms. Also, the mean value is highly influenced by the large firms. Thus we can consider the median values that on an average the firm size to be 69 thousand US dollars. The mean value of size for mining metal industry is nearly half of that of the crude petroleum at 6.20 million US dollars with a minimum value of just 9 US dollars and a maximum value of 119.55 million US dollars. The huge gap in the extreme values is evident, and the mean value is highly influenced by the higher extreme. Thus, we can consider the median value as the average size of the industry at 38 thousand US dollars. The pharmaceutical industry is the smallest in size with a mean value of 3.38 million US dollars and a minimum and maximum values as a mere 151 US dollars and 69.414 million US dollars. This industry also suffers from a huge gap between the lower and higher end. Thus, the size of this industry can be referred to as with median of 23 thousand US dollars. Moreover, in order to eliminate this large positive skewness, natural log of the values is considered while doing for further analysis (Gray, Javad, Power, & Sinclair, 2001). The average age of firms for mining metal industry is the highest at 8.12 years followed by the pharmaceutical and petroleum industry at 7.94 and 7.41 respectively (Galbreath, 2010). Concerning the huge gap between the minimum and maximum values of firm-age, natural log transformation is considered while performing further analysis. The zero values of age indicate firms that were established in the same year as the year of observation. Such firms were only one or two and hence progressing for analysis, these values were ignored. The pharmaceutical industry has the highest mean value for leverage at 0.10 indicating that the long-term debt for the industry falls short of its total assets by 10%. Similarly for mining metal and crude petroleum the mean values for leverage is 0.09 and 0.07 indicating a long-term debt falling short of their total assets by 9% and 7% respectively (Liao, Luo, & Tang, 2014).

Table 1: Summary of descriptive statistics of all the industries for the years 2008-2012

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as percentage of share price appreciation and dividends; Size is the size of the firm in terms of total assets in million US dollars; Age is the age of the firm and is measured as number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets.

Variables	N	Mean	Median	Standard Deviation	Minimum	Maximum
Panel I: Crude Petroleum						
CSR_{Disc}	155	0.007	0.005	0.012	0.000	0.112
ROA	163	-0.13	-0.05	0.22	-0.90	0.21
Tobin's Q	153	1.61	1.31	1.18	0.05	6.40
TSR	150	0.07	-0.13	0.93	-0.96	6.55
Size	170	11.33	0.069	55.95	0.000043	360.33
Age	163	7.41	5.00	7.52	0.00	39.00
Leverage	110	0.07	0.00	0.13	0.00	0.66
Panel II: Mining Metal						
CSR_{Disc}	131	0.008	0.004	0.014	0.000	0.093
ROA	134	-0.11	-0.08	0.27	-0.84	0.39
Tobin's Q	125	2.60	1.41	3.57	0.13	22.48
TSR	121	0.31	-0.25	1.68	-0.96	9.25
Size	160	6.20	0.038	21.71	0.000009	119.55
Age	154	8.12	6.00	7.76	0.00	39.00
Leverage	122	0.09	0.04	0.12	0.00	0.50
Panel III: Pharmaceutical						
CSR_{Disc}	172	0.005	0.005	0.005	0.000	0.042
ROA	166	-0.25	-0.18	0.33	-0.97	0.29
Tobin's Q	177	3.48	1.99	3.81	0.14	20.97
TSR	171	0.01	-0.10	0.87	-0.93	6.46
Size	187	3.38	0.023	13.29	0.000151	69.41
Age	188	7.94	6.00	6.49	0.00	40.00
Leverage	125	0.10	0.01	0.16	0.00	0.87

Pearson's Correlation Analysis

Table 2 displays the Pearson correlation analysis for all the three industries over the period of five years ranging from 2008 till 2012. For the industry of crude petroleum, both ROA and TSR had a significant correlation with CSR at the significant level of 5%. The values indicate a significant negative correlation (-0.227) of CSR disclosure with ROA suggesting a negative impact of CSR on the short-term profitability as measured by ROA. On the other hand, CSR disclosure is found to have a significant positive correlation (0.497) with future profitability as measured by TSR. However, Tobin's Q had no significant correlations with CSR for the industry of crude petroleum. For the mining metal industry, only ROA is found to have significant negative correlation with CSR disclosure at a level of 10%. This suggests a

negative impact (-0.212) of CSR disclosure on short-term profitability ROA. The other measures of financial performance viz., Tobin's Q and TSR do not exhibit any significant correlation for the industry of mining metal. For the pharmaceutical industry, the results show that none of the measures of financial performance are significantly correlated with CSR disclosure. The data of table 2 also indicates that none of our independent variables (size, age, leverage) are significantly correlated with each other. This suggests that multicollinearity does not affect our results severely (Clubb & Naffi, 2007).

Table 2: Summary of Pearson's correlation of all the industries for the years 2008-2012

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as percentage of share price appreciation and dividends; Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets.
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	CSR_{Disc}	**ROA**	**Tobin's Q**	**TSR**	**Size**	**Age**	**Leverage**
Panel I: Crude Petroleum							
CSR_{Disc}	1						
ROA	-0.227**	1					
Tobin's Q	-0.004	-0.214**	1				
TSR	0.497**	0.034	-0.037	1			
Size	-0.179*	0.284**	0.044	-0.045	1		
Age	0	0.035	-0.082	0.002	0.142	1	
Leverage	0.012	0.095	-0.111	0.111	-0.065	0.079	1
Panel II: Mining Metal							
CSR_{Disc}	1						
ROA	-0.212*	1					
Tobin's Q	-0.050	-0.005	1				
TSR	-0.092	0.095	0.072	1			
Size	-0.188*	0.101	0.087	0.134	1		
Age	0.006	-0.027	-0.047	-0.144	0.108	1	
Leverage	-0.002	0.033	-0.178*	-0.090	-0.038	-0.074	1
Panel III: Pharmaceutical							
CSR_{Disc}	1						
ROA	0.023	1					
Tobin's Q	-0.028	-0.158*	1				
TSR	-0.034	-0.006	0.012	1			
Size	-0.039	0.034	-0.294**	-0.053	1		
Age	0.140	0.049	0.061	-0.073	-0.006	1	
Leverage	0.056	-0.007	-0.061	-0.197*	0.022	0.045	1

Regression Analysis

Table 3 displays the results obtained after performing a linear regression on the whole sample data for all the three industries over a period from 2008-2012.

Hypothesis 1

Panel I presents the regressed values for ROA. The data reveals that there is significant correlation ($p < 0.05$) between CSR_{Disc} and ROA for the industries of crude petroleum and mining metal. However, the coefficients for both the industries are negative. A possible explanation of the negative sign may be that CSR_{Disc} does not have adequate competences to improve the short-term profitability of the firm/industry and is an extra burden for the industry when considered on a short-term profitability (Mallin & Michelon, 2011). The pharmaceutical industry however displays an insignificant correlation between CSR_{Disc} and ROA. Thus the hypothesis 1 is justified for the chosen industries that there are no significant positive impacts of CSR on short-term profitability as measured by ROA.

Hypothesis 2

Panel II of table 3 put-forward the results of linear regression performed on the whole sample data for Tobin's Q. The data reveals that there exists an insignificant correlation between CSR_{Disc} and Tobin's Q for all the three industries. In general it is expected to have a significant positive impact of CSR on the financial performance of firms in long-term. But, for the industries of crude petroleum, mining metal and pharmaceutical, our results suggest insignificant relationship for Tobin's Q.

Panel III of table 3 displays the regressed values for TSR. The data reveals a positive significant correlation ($p < 0.01$) between CSR_{Disc} and TSR only for the industry of crude petroleum. This is in accordance to the study of Baird *et al*. (2012) which suggested a significant ($p < 0.05$) positive impact of CSR on the stock returns for industry of crude petroleum and natural gas (Baird, Geylani, & Roberts, 2012). For the mining metal industry our results yield insignificant correlation which is in contrast to the study of Baird *et al*. (2012) which suggests a significant ($p < 0.01$) negative impact of CSR on the stock returns (Baird, Geylani, & Roberts, 2012). The results for the pharmaceutical industry also displays an insignificant correlation which is in accordance to the study of Baird *et al*. (2012) that suggested insignificant impact of CSR on the stock returns (Baird, Geylani, & Roberts, 2012). Now for the majority of industries the correlation is insignificant suggesting that CSR does not yield significant positive impact on the financial performance in long-term for these industries. Thus our results do not support our hypothesis 2 (Gray, Javad, Power, & Sinclair, 2001). The obtained results are quite similar to the study of Baird *et al*. (2012) indicating that CSR does not yield positive economic returns for these industries on the long-term.

The descriptive statistics indicate towards a low CSR involvement of the firms of the chosen industries. Our regression results also find support from another study on mergers which suggested firms with low CSR do not yield high stock returns (Deng, Kang, & Low, 2013).

To ensure that our results are not influenced by a strong relationship between variables for a particular year, we performed regression analysis on our sample data for each year of observation separately. The data suggests that none of the year had a significant impact on the financial performance of industries and thus is not presented in the thesis. Also in order to test the true behaviour of our results, we ran an alternative regression analysis on our sample data. For this analysis we included the outliers that were ignored earlier for the main analysis. The results are displayed in Appendix 3 and suggest similar results, thus indicating that outliers do not have the competence to change our results. In other words, the regression analysis of table 3 presents a true picture of the impact of CSR on the financial performance of firms for the industries in UK.

Hypothesis 3

The magnitude of impact of CSR_{Disc} on the industries is reflected in the values of coefficients. From the perspective of short-term financial performance when measured in terms of ROA, the industry of crude petroleum has the lowest impact (-0.218) of CSR_{Disc}. The industries of mining metal and pharmaceutical have a CSR_{Disc} impact of the order of -0.201 and 0.008 respectively. This can be interpreted as CSR_{Disc} has a negative effect on the industry of crude petroleum and mining metal while for the pharmaceutical industry, CSR_{Disc} yields a positive impact on ROA.

With respect to the long-term financial performance as measured by Tobin's Q, the impact of CSR_{Disc} for the industries of crude petroleum, mining metal and pharmaceutical is of the order of -0.029, -0.045 and 0.022 respectively. Again the impact is negative for the two industries, viz., crude petroleum and mining metal, but positive for the industry of pharmaceutical. When measured by TSR, the impact of CSR_{Disc} is 0.475, -0.049 and 0.005 for the industry of crude petroleum, mining metal and pharmaceutical respectively. While CSR_{Disc} exhibits a positive impact on the industry for crude petroleum and pharmaceutical, the impact is negative for mining metal industry.

Hence, it is clear that CSR_{Disc} affects the three industries at different levels. The results attained justifies hypothesis 3 that the CSR impact is different for different industries.

Table 3: Results of linear regression with whole sample on all the dependent variables of all the industries for the years 2008-2012

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as ratio of difference in the share price for the current year and previous year plus the dividends paid in the current year to the share price of the previous year; Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	**-0.218**	**-0.201**	0.008
	(-2.370)**	**(-2.153)****	(0.084)
Size	**0.322**	0.119	**0.178**
	(3.497)***	(1.281)	**(1.937)***
Age	-0.038	-0.029	0.035
	(-0.402)	(-0.312)	(0.362)
Leverage	0.14	0.032	-0.029
	(1.512)	(0.354)	(-0.304)
N	110	122	125
Adj-R sq	0.145	0.011	-0.021
F-value	3.632	1.162	0.632
Panel II: Tobin's Q			
CSR_{Disc}	-0.029	-0.045	0.022
	(-0.292)	(-0.489)	(0.243)
Size	-0.011	0.082	**-0.298**
	(-0.112)	(0.886)	**(-3.373)*****
Age	-0.022	-0.075	0.012
	(-0.212)	(-0.806)	(0.125)
Leverage	-0.152	-0.175	-0.043
	(-1.545)	(-1.931)	(-0.478)
N	110	122	125
Adj-R sq	0.033	0.016	0.051
F-value	1.532	1.248	1.949
Panel III: TSR			
CSR_{Disc}	**0.475**	-0.049	0.005
	(6.281)***	(-0.548)	(0.054)
Size	0.034	0.128	-0.058
	(0.443)	(1.438)	(-0.669)
Age	-0.033	**-0.167**	-0.026
	(-0.422)	**(-1.866)***	(-0.288)
Leverage	0.056	-0.094	-0.125
	(0.741)	(-1.081)	(-1.401)
N	110	121	125
Adj-R sq	0.423	0.099	0.078
F-value	12.402	2.655	2.489

Robustness Analysis

With a view to test the robustness of our results, we employed a number of alternative models. The results attained in table 3 clearly shows that the industries exhibit a significant impact for only two variables, viz., CSR_{Disc} and size. This means that the other two variables viz., age and leverage are redundant in nature. Hence to confirm that they do not have any influence on the results, we perform another regression with only two variables CSR_{Disc} and size. The results attained are very similar to the results of the main analysis suggesting that the left out variables age and leverage do not have an influence on the impact of CSR over the financial performance of firms for the chosen industries. The results are presented in Appendix 4.

The second robustness test is performed on the average values of all the variables for all three chosen industries. Our results suggest that CSR_{Disc} does not have a significant impact on both the short-term profitability (measured by ROA) and long-term profitability (measured by Tobin's Q and TSR). The results suggest no significant impact of CSR both on the financial performance. The results are in accordance to the findings of our main analysis and are presented as Appendix 5.

For the third test of robustness, we employ ROE as an alternative measure of short-term profitability. We then re-executed our regression models and found that there are no significant effects of CSR_{Disc} on ROE for either of the chosen industries, thus justifying the main analysis for ROA. The results of regression for ROE are presented as Appendix 6.

Concerning the fourth test of robustness, we replaced our control variable being defined in terms of assets by another definition utilizing sales. The results are more or less identical to the main analysis with a difference in the values of coefficients. These results suggest that CSR_{Disc} has a significant impact on ROA for both the industry of crude petroleum ($p < 0.01$) and mining metal ($p < 0.1$). For both the industries, the coefficients are negative which indicate the incapability of CSR disclosure to yield a positive economic return in short-term. The industry of pharmaceutical displays an insignificant impact on ROA. CSR_{Disc} are found to be insignificantly correlated to long-term financial performance as measured by Tobin's Q for all the three industries. With reference to long-term financial performance as measured by TSR, CSR_{Disc} has a significant ($p < 0.01$) impact only for the petroleum industry. The results of this robustness check can be referred in Appendix 7.

Lastly for the fifth test of robustness, we use log transformations of ROA and Tobin's Q. These results are shown in Appendix 8. The data reveals a similar characteristic to the main analysis. CSR_{Disc} is found to have a significant impact on ROA for the industry of crude petroleum ($p < 0.05$) and mining metal ($p < 0.1$). Again the coefficients are negative in magnitude indicating towards the incapability of CSR_{Disc} to generate significant positive economic benefits in short-term. The industry of pharmaceutical witnesses an insignificant correlation between CSR_{Disc} and ROA. With respect to the long-term financial performance as measured by Tobin's Q, none of the industries are found to have a significant impact of CSR_{Disc}. This is also in alignment with the main findings of our regression analysis.

6. Conclusions and Limitations

Since last 4 decades, firms have been under pressure to engage in CSR. Many firms have responded to these pressures by implementing CSR activities in their operations, while many of them opposed. Firms which opposed to CSR have appealed for a compromise between CSR and profitability. Thus, management researchers have then been attempting to demonstrate the effect of CSR on profitability. However, the empirical studies have suggested inconclusive results citing the relationship between CSR and profitability with positive, negative and neutral results (McWilliams & Siegel, 2000).

This study is an attempt to explore an impact of CSR on the financial performance of firms publicly-listed in UK. UK has a market-based governance system, wherein the firms decide to volunteer in industry- or government-sponsored sustainability programs. Our study suggests that UK firms have taken initiatives for being corporate socially responsible and have publicly disclosed their efforts in their annual reports (Liao, Luo, & Tang, 2014).

Our study evaluates the impact of CSR disclosure on the financial performance of firms, both in short-term scenario and long-term scenario. We measures CSR in terms of keyword count and referred to this as CSR_{Disc}. We measure financial performance of firms as ROA for short-term, and Tobin's Q and TSR for long-term. For this purpose we used linear regression analysis on a sample of data over a time period of 2008 till 2012. In order to validate the impact of CSR disclosure only, we employ a few control variables such as size of the firms, age of the firms and leverage. Also, we used dummy variables for any year-specific effects (Wu & Shen, 2013).

Our empirical results suggest that CSR affects the financial performance of firms in short-term scenario negatively. We hypothesize that this negative impact is an extra cost burden to the firms. Thus, CSR does not generate economic benefits for the firms in short-term. This is in accordance to the study of Barnett and Salomon (2012) which suggests that firms with weak social performance produce a negative relationship between corporate social performance and corporate financial performance (Barnett & Salomon, 2012). The results are consistent with prior studies suggesting no immediate economic benefits for CSR applications. With respect to long-term financial performance, majority of our results suggest no significant economic benefits for the firms. This is contrast to the prior findings. The data for individual firm under an industry confirmed the low-performance of firms. Keeping a control on other factors, it can be concluded that whether CSR earns a positive return on the financial performance of firms in long-term scenario is dependent on many other factors such as performance of industry during the sample of observation, individual performance of firms within the industry (Kim, Park, & Wier, 2012). Further our results also confirmed that CSR affects each industry differently.

The limitations of this study are mainly with regards to the sample size and data sources. The results of this study must be interpreted with caution. It is realized that longitudinal data represent the most powerful test of the merits. When data samples are collected over time with respect to behaviour and attitude, predicting value of prior effects in terms of latter ones is justifiable. However, the data sample for this study considered only a nominal of five years of observation. This limits the generalizability of our results to the industry as a whole (Murray & Vogel, 1997). The study believes that as the size of the sample increases, some of the insignificant results in the correlation analysis would become significant (Vong & Wong, 2013).

Websites and annual reports are generally considered as reliable data sources for CSR activities. However, our data is essentially partial. In order to avoid subjective interpretation, we have considered only a few keywords to measure CSR disclosure and ignored reading through all the pages and images of the annual report. This has led to a bias in calculating exact CSR disclosure. We thus encourage future students/researchers to seek third-party sources and bigger sample of longitudinal data so as to build further reliability and validity of the findings (Wang & Bansal, 2012).

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Appendix 1: Variable Definitions

VARIABLE	DEFINITION	SOURCE(S)
Measure of Corporate Social Responsibility		
CSR Disclosure (CSR_{Disc})[4]	Ratio of summation of manually-counted individual CSR keywords to the total number of words published in the annual report for a particular year	(Wang & Bansal, 2012)
Measures of Financial Performance		
Return on Assets (ROA)	Ratio of net income[5] to total assets	(Barnett & Salomon, 2012) (Wu & Shen, 2013)
Return on Equity (ROE)	Ratio of net income to total shareholders' equity	(Wu & Shen, 2013) (Hong & Kacperczyk, 2009)
Tobin's Q	Ratio of (market value of equity[6] *plus* total liabilities) to book value of assets	(Deng, Kang, & Low, 2013) (Hong & Kacperczyk, 2009) (Klapper & Love, 2004) (Chung & Pruitt, 1994)
Total Shareholder Return (TSR)[7]	Ratio of (share price for the current year *minus* share price of the previous year *plus* dividends paid in the current year) to share price of the previous year	(Mortanges & Riel, 2003) (Guzmán & Reverte, 2008) (Ntim & Soobaroyen, 2013)
Control Variables		
Firm Size (SIZE)	Natural log of total assets OR Natural log of annual sales	(Ghoul, Guedhami, Kwok, & Mishra, 2011) (Goss & Roberts, 2011) (Deng, Kang, & Low, 2013) (Wang & Choi, 2013) (Klapper & Love, 2004)
Firm Age (AGE)	Natural log of number of years since the first listing of the firm	(Kim, Park, & Wier, 2012) (Kemper, Schilke, Reimann, Wang, & Brettel, 2013)
Leverage (LEV)	Ratio of long-term debt to total assets	(Brammer, Pavelin, & Porter, 2006) (Bhagat & Bolton, 2008) (Lanis & Richardson, 2012)
Year Dummies (YD)	Code as 1 for focal year, and 0 for all other years	(Barnett & Salomon, 2012) (Inoue & Lee, 2011)

[4] Equation (i)
[5] Net income = Profit or Loss after tax
[6] Market value of equity = Share price at the year-end * Number of outstanding shares
[7] Equation (iii)

Appendix 2: **CSR Keywords**

Accountability	Future	Recycle
Carbon	Global warming	Reduction
Charity	Green	Renewable
Community	Harmful	Responsibility
Compliance	Hazard	Reuse
Conservation	Health	Risk
Contamination	Honest	Safety
Corporate citizen	Impact	Security
Donation	Improvement	Social
Eco-	Integrity	Sponsor
Efficiency	Issue	Support
Emission	Nature	Sustainability
Energy	Non-invasive	Transparency
Environmental	Non-toxic	Treatment
Equality	Philanthropy	Trees
Ethics	Power	Trust
Event	Preservation	Utility
Foundation	Process	Waste water
Fuel	Program	Water
Fundraising	Protection	Well-being

Source: (Wang & Bansal, 2012) and (Tate, Ellram, & Kirchoff, 2010)

Appendix 3: Results of linear regression for the whole sample on all the dependent variables of all the industries for the years 2008-2012 with inclusion of outliers

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is return on assets calculated as the ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as ratio of difference in the share price for the current year and previous year plus the dividends paid in the current year to the share price of the previous year; Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	**-0.391*** (-5.307)**	**-0.279*** (-3.428)**	0.013 (0.149)
Size	**0.483*** (6.577)**	**0.329*** (4.059)**	**0.317*** (3.811)**
Age	-0.071 (-0.950)	0.099 (1.218)	-0.002 (-0.027)
Leverage	0.016 (0.224)	0.039 (0.487)	0.053 (0.626)
N	115	122	134
Adj-R sq	0.43	0.245	0.09
F-value	13.289	5.903	2.88
Panel II: Tobin's Q			
CSR_{Disc}	-0.028 (-0.285)	-0.045 (-0.489)	-0.032 (-0.373)
Size	0.015 (0.149)	0.082 (0.886)	**-0.331*** (-3.940)**
Age	-0.088 (-0.868)	-0.075 (-0.806)	0.058 (0.662)
Leverage	-0.079 (-0.826)	**-0.175* (-1.931)**	0.024 (0.281)
N	115	122	134
Adj-R sq	-0.023	0.016	0.071
F-value	0.627	1.248	2.461
Panel III: TSR			
CSR_{Disc}	**0.466*** (6.156)**	-0.049 (-0.548)	-0.028 (-0.320)
Size	0.026 (0.343)	0.128 (1.438)	-0.047 (-0.555)
Age	-0.038 (-0.492)	**-0.167* (-1.866)**	**-0.157* (-1.776)**
Leverage	0.001 (0.020)	-0.094 (-1.081)	0.022 (0.254)
N	115	121	134
Adj-R sq	0.399	0.099	0.058
F-value	11.813	2.655	2.167

Appendix 4: Results of linear regression for the whole sample on all the dependent variables of all the industries for the years 2008-2012 excluding control variables age and leverage

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as ratio of difference in the share price for the current year and previous year plus the dividends paid in the current year to the share price of the previous year; Size is the size of the industry calculated as natural log of total assets; Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	**-0.196****	**-0.199****	0.022
	(-2.459)	**(-2.211)**	(0.275)
Size	**0.248*****	0.065	0.039
	(3.167)	(0.733)	(0.496)
N	155	131	166
Adj-R sq	0.086	0.005	-0.032
F-value	3.424	1.117	0.144
Panel II: Tobin's Q			
CSR_{Disc}	-0.016	-0.048	-0.035
	(-0.191)	(-0.520)	(-0.468)
Size	0.048	0.078	**-0.297*****
	(0.583)	(0.858)	**(-4.019)**
N	153	125	172
Adj-R sq	0	0.001	0.066
F-value	0.995	1.017	3.019
Panel III: TSR			
CSR_{Disc}	**0.436*****	-0.055	-0.022
	(6.510)	(-0.615)	(-0.289)
Size	0.040	0.114	-0.063
	(0.603)	(1.271)	(-0.838)
N	150	121	171
Adj-R sq	0.376	0.081	0.046
F-value	15.94	2.758	2.37

Appendix 5: Results of linear regression using average values of variables over the years of observations 2008 – 2012 for all the industries

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as ratio of difference in the share price for the current year and previous year plus the dividends paid in the current year to the share price of the previous year; Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	-0.118 (-0.688)	0.166 (0.773)	0.019 (0.122)
Size	**0.669***** **(3.359)**	**0.877***** **(5.126)**	**0.572***** **(3.102)**
Age	-0.018 (-0.102)	-0.140 (-0.954)	-0.126 (-0.728)
Leverage	-0.011 (-0.059)	-0.198 (-1.001)	0.224 (1.187)
N	26	25	29
Adj-R sq	0.398	0.543	0.358
F-value	5.139	8.141	4.909
Panel II: Tobin's Q			
CSR_{Disc}	-0.012 (-0.056)	-0.395 (-1.338)	-0.168 (-0.978)
Size	-0.388 (-1.581)	**-0.566**** **(-2.396)**	**-0.416*** **(-1.987)**
Age	-0.041 (-0.188)	0.241 (1.201)	0.308 (1.568)
Leverage	-0.130 (-0.566)	0.130 (0.469)	-0.230 (-1.076)
N	26	26	29
Adj-R sq	0.086	0.096	0.174
F-value	1.59	1.663	2.472
Panel III: TSR			
CSR_{Disc}	-0.052 (-0.220)	-0.306 (-1.487)	-0.231 (-1.393)
Size	-0.096 (-0.349)	-0.149 (-0.711)	-0.176 (-0.874)
Age	-0.031 (-0.129)	-0.152 (-0.775)	-0.187 (-0.987)
Leverage	0.229 (0.898)	0.296 (1.497)	**0.664***** **(3.220)**
N	26	29	29
Adj-R sq	-0.138	0.015	0.232
F-value	0.242	1.107	3.115

Appendix 6: Results of linear regression for the whole sample on the dependent variable ROE of all the industries for the years 2008-2012

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROE is return on equity calculated as the ratio of net income to total shareholder's equity; Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included

ROE	**Crude Petroleum**	**Mining Metal**	**Pharmaceutical**
CSR_{Disc}	-0.007 (-0.073)	0.007 (0.069)	-0.01 (-0.111)
Size	0.123 (1.246)	-0.021 (-0.222)	-0.03 (-0.328)
Age	0.122 (1.190)	-0.067 (-0.699)	0.087 (0.915)
Leverage	0.067 (0.675)	0.035 (0.370)	0.017 (0.187)
N	110	122	125
Adj-R sq	0.014	-0.049	-0.009
F-value	1.218	0.295	0.842

Appendix 7: Results of linear regression for the whole sample on all the dependent variables of all the industries for the years 2008-2012 with changed definition of control variable *Size*

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as ratio of net income to total assets; Tobin's Q is the ratio of market value of assets to book value of assets; TSR is the total shareholder's return and is approximately calculated as ratio of difference in the share price for the current year and previous year plus the dividends paid in the current year to the share price of the previous year; Size is the size of the industry calculated as natural log of annual sales; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	**-0.277*** **	**-0.214***	-0.006
	(-2.859)	**(-1.709)**	(-0.064)
Size	0.073	0.168	**0.269*** **
	(0.756)	(1.361)	**(2.999)**
Age	0.007	0.002	0.032
	(0.065)	(0.014)	(0.348)
Leverage	0.111	-0.029	-0.028
	(1.123)	(-0.236)	(-0.310)
N	107	69	125
Adj-R sq	0.048	-0.01	0.021
F-value	1.765	0.891	1.384
Panel II: Tobin's Q			
CSR_{Disc}	-0.036	0.004	0.04
	(-0.372)	(0.030)	(0.433)
Size	-0.124	0.087	-0.127
	(-1.290)	(0.700)	(-1.387)
Age	-0.008	-0.057	-0.005
	(-0.081)	(-0.459)	(-0.051)
Leverage	-0.141	-0.136	-0.049
	(-1.434)	(-1.091)	(-0.519)
N	107	69	125
Adj-R sq	0.055	-0.025	-0.025
F-value	1.883	0.72	0.575
Panel III: TSR			
CSR_{Disc}	**0.465*** **	-0.017	0.004
	(6.250)	(-0.146)	(0.046)
Size	-0.072	0.008	**0.308***
	(-0.972)	(0.065)	**(3.375)**
Age	-0.017	**-0.228***	-0.05
	(-0.217)	**(-1.980)**	(-0.579)
Leverage	0.06	-0.043	-0.131
	(0.797)	(0.369)	(-1.557)
N	107	69	125
Adj-R sq	0.437	0.112	0.173
F-value	12.769	2.429	4.696

Appendix 8: Results of linear regression for the whole sample with log transformations of ROA and Tobin's Q of all the industries for the years 2008-2012

Notes:
CSR_{Disc} is the ratio of summation of CSR keywords to the total number of words published in the annual report; ROA is the return on assets calculated as logarithmic value of (1 *plus* ratio of net income to total assets); Tobin's Q is the logarithmic value of (ratio of market value of assets to book value of assets); Size is the size of the industry calculated as natural log of total assets; Age is the age of the firm and is measured as natural log of number of years since the first listing of the firm; Leverage is the ratio of long-term debt to total assets. Year Dummies included
*** denotes significance at the level of 1%, ** denotes significance at the 5% level, * denotes significance at the 10% level based on a two-tail test.

	Crude Petroleum	**Mining Metal**	**Pharmaceutical**
Panel I: ROA			
CSR_{Disc}	**-0.227**** **(-2.427)**	**-0.16*** **(-1.718)**	0.113 (1.218)
Size	**0.284***** **(3.025)**	0.146 (1.569)	0.008 (0.091)
Age	-0.021 (-0.220)	-0.055 (-0.595)	0.026 (0.274)
Leverage	0.115 (1.223)	0.032 (0.348)	0.076 (0.817)
N	110	122	125
Adj-R sq	0.115	0.01	-0.02
F-value	3.024	1.151	0.645
Panel II: Tobin's Q			
CSR_{Disc}	-0.008 (-0.081)	0.136 (1.467)	-0.007 (-0.078)
Size	-0.034 (-0.342)	0.123 (1.336)	**-0.233**** **(-2.591)**
Age	0.071 (0.701)	-0.022 (-0.243)	0.063 (0.680)
Leverage	0.032 (0.328)	-0.09 (-0.996)	-0.03 (-0.324)
N	110	122	125
Adj-R sq	0.034	0.026	0.023
F-value	1.549	1.41	1.411

Appendix 9: **List of companies under the chosen three industries viz., petroleum, mining metal and pharmaceutical**

Crude Petroleum	Mining Metal	Pharmaceutical
Royal Dutch Shell	Rio Tinto	Glaxosmithkline
BG Group	Anglo American	Astrazeneca
Premier Oil	Antofagasta	Shire
Nostrum Oil & Gas LP	Kazakhmys	Hikma Pharmaceuticals
Faroe Petroleum	Ferrexpo	Dechra Pharmaceuticals
JKX Oil & Gas	Zimplats Holdings Limited	Sinclair Is Pharma
Max Petroleum	Centamin	Skyepharma
Regal Petroleum	London Mining	Alliance Pharma
IMPAX Asset Management Group	African Cooper	Allergy Therapeutics
Mediterranean Oil & Gas	Weatherly International	Puricore
Heritage Oil	Rambler Metals and Mining	Vectura Group
Northern Petroleum	Zincox Resources	Cyprotex
Serica Energy	Jubilee Platinum	Oxford Biomedica
Leni Gas & Oil	Red Rock Resources	Taihua
Baron Oil	Beacon Hill Resources	Nanoco Group
Ascent Resources	Regency Mines	Avacta Group
Nighthawk Energy	Landore Resources Limited	Ark Therapeutics Group
Matra Petroleum	Marshall Lake Mining	Summit Corporation
Longreach Oil & Gas Limited	Agricola Resources	Proteome Sciences
Oxford Advance Surfaces Group	Thor Mining	Plethora Solutions Holdings
Quadrise Fuels International	Kefi Minerals	Oxford Pharmascience Group
Gasol	LP Hill	Evocutis
Pantheon Resources	Anglesey Mining	Physiomics
Tower Resources	Beowulf Mining	Silence Therapeutics
Cap Energy Limited	Universal Coal	Ixico
Lansdowne Oil & Gas	Tri-Star Resources	Futura Medical
Hardy Oil & Gas	Sirius Minerals	Tissue Regenix Group
Hurricane Energy	Stratmin Global Resources	Eden Research
International Mining & Infrastructure Corporation	Uranium Resources	Reneuron Group
Borders & Southern Petroleum	Baobab Resources	Amarin Corporation
Sound Oil	African Energy Resources Limited	E-Therapeutics
Chariot Oil & Gas Limited	Bellzone Mining	Sarem Holdings
Bahamas Petroleum Company		Veron Pharma
Cairn Energy		Renovo Group
		Alexander David Investments
		Worldwide Healthcare Trust
		Synairgen
		Scancell Holdings