Corporate Social Responsibility and Financial Performance:

An Empirical Evidence

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Abstract

The aim of this thesis is to investigate the strength and direction of the correlation between corporate social responsibility (CSR) and companies' financial performance. This topic has been long studied by scholars but an agreement has never been reached. The results of the empirical analyses so far show the most diverse outcomes: from a negative correlation to a positive one, including it being neutral. Some of the main issues identified behind this wide range of results, are linked to the way in which the variables are measured, to the sampling technique and to the choice of the control variables.

The second objective of this thesis is to understand if an "industry effect" actually exists: it means to verify if the correlation between CSR and financial performance change when studied in a single industry.

The relationship has been studied through a series of regressions. The results of the analyses confirm the existence of a positive and significant relationship between corporate social responsibility and financial performance. This relationship goes in both directions, as CSR is influenced and influences at the same time the firms' financial performance. In addition, industry is found as a variable able to confound the relationship.

Corporate social responsibility is a living matter topic and it is still not embraced by everyone; it is necessary to help managers and people in general to understand how crucial this concept is

1. <u>Introduction</u>

The industrial development of the last century, on the one hand, increased the level of wealth (intended as the level of life) of the most industrialized countries; on the other hand it caused a drainage, and sometimes even a depletion of natural resources, modifying the future equilibrium of the world.

As a consequence, in the next decades, the pressure on natural resources will suffer of a great acceleration. This condition will change the world as we know it; to avoid being unprepared for these changes, we have to adjust now our behavior.

From a company perspective, the best way to change this destructive behavior is to adopt social responsible practices. In the last decades the theme of Corporate Social Responsibility (henceforth CSR) has been gathering momentum. Many firms started reporting about their ethical, social and environmental conduct under the increasing pressure of shareholders, employees, organizations and all the stakeholders in general, who are asking firms to focus on other issues that go beyond the classical companies' duties.

The concept of social responsibility exists almost since ever but it is only in the last fifty years that scholars gave a greater attention to it. The attempts of formalizing this concept have been various, different theories have been created and different definitions have been given. All this talking about CSR contributes to create greater confusion, rather than making the concept clearer. After an accurate study of the existing literature it was possible to identify the distinctive characteristics of this concept. The main features of corporate social responsibility are three: the integration of the economic dimension with the social and environmental ones; the companies' responsibilities against all the stakeholders (and not only shareholders) and the voluntary character of the introduction of CSR practices. These characteristics make easy to understand that the introduction of CSR into a business reality changes the way in which a company normally operates, as its relationships with the stakeholders: it is necessary to align this new vision with the rooted tradition of profit maximization. It is therefore essential to find a reason to push companies to venture in this complex path: generally, business organizations would not introduce CSR practices just because it is "the right thing to do".

When a company engages in CSR, it has to bear extra costs (e.g. the purchase of new environmental-friendly equipment) on the short-term. On the other side, it is nowadays accepted the idea that social responsible practices bring, on the long-term, benefits (e.g. improve of the reputation). However, this is not enough. Since the first objective of management is profit maximization, companies need more certainties about the increase in value that the introduction of CSR brings. So, what happens if it is possible to demonstrate that the investments in CSR turn into a profit increase? This is the point of tension of this topic. In the last decades scholars discussed the existence of a link between CSR and financial performance, without ever reaching an agreement. Two are the main schools of thought: the neo-classical view and the behavioral view. The first started with Milton Friedman around the '70s: he was a convinced upholder that firms, and in particular managers, have to maximize shareholders' value and that practices like CSR would just push them away from this goal (Friedman, 1970). Managers who support this view would put up resistance against the engagement in CSR, arguing that it is not useful to fulfill their objectives. On the other side, behavioral theorists believe that it is necessary to achieve some social good, regardless of the existence of benefits. In 1976 Holmes stated that "*in addition to making a profit, business should help to solve social problems whether or not business helps to create those problems even if there is probably no short-run or lung-run profit potential*". This way of seeing business is probably too naïve for today's vision: money is the key; organizations are mainly focused on making profits and creating value.

Since the theoretical debate did not bring to any conclusions, researchers started to empirically analyze the relationship between CSR and financial performance. The results found by the empirical studies are heterogeneous: some researchers found a positive correlation (e.g. Barnett & Salomon, 2006; Ruf et al., 2001; Graves & Waddock, 1999; Preston & O'Bannon, 1997); some other stated that the correlation is negative (e.g. Brammer et al, 2006; Boyle et al, 1997; Aupperle, Carroll & Hatfield, 1985) and others sustain that there is no correlation at all (e.g. Moore, 2001; McWilliams & Siegel, 2000; Guerard, 1997).

The variability of these results seems to be due to different issues, concerning in particular the way in which CSR and financial performance are measured. Other issues found in the previous studies concern the sampling technique, the choice of the control variables and the relation of causality.

After a deep study of the theme I formalized the hypotheses and constructed the empirical model to test the relationship between CSR and financial performance. The analysis is divided into two parts:

in the first, the first two hypotheses are tested; they address the problem of the sign and direction of causality of the relationship. The second part proposes to test the third hypothesis, which is aimed at discovering if there is an "industry effect" able to confound the relationship.

This research, conducted through an econometrics analysis, confirms the existence of a positive and significant relationship between CSR and financial performance. Moreover the relation holds in both direction of causality: CSR influences and it is influenced by financial performance. Concerning the second analysis, the first two hypotheses were tested in two mono-industry samples. Differently from the abovementioned findings, in this case the relation depends on the industry on which we focus, leading to support the existence of a sort of "industry effect".

1.1. Research Question(s)

The main research question this work proposes to answer is:

Do Corporate Social Responsibility's activities have a positive impact on the financial performance of a company?

In order to have a better understanding of the topic I will also focus on some sub-questions:

1 – How the concept of CSR has changed during decades and why is it so important in nowadays context?
2 – Why, or why not (advantages and disadvantages), should firms invest in CSR?
3 – About CSR and financial performance's relationship, what are the key issues brought to light by scholars?
4 – Does exist an "industry effect" which influences the whole relationship?

The first question is useful to understand how CSR is seen today and so why today the concerns around this topic arise so much. The second one seeks to theoretically understand if there is a convenience in investing in CSR. The third question serves to better investigate the relationship between CSR and financial performance, trying to understand all the problems that are inherent to it. The fourth question proposes a deeper analysis of the topic, in order to understand if *industry* is a factor able to confound the relationship between CSR and financial performance.

1.2. Structure of the Thesis

The first section introduces the theme of corporate social responsibility and its theoretical development. Section 2 links CSR with financial performance, giving a literature overview of the relationship between the two variables and introducing the most important key issues. The third section describes the model used to test the CSR/financial performance relation and explicates the hypotheses that are tested in the analysis. Section 4 presents the results of the analysis and the relative discussions. The conclusions, the limitations of this work and the suggestions for further researches close the thesis.

2. <u>Literature Review</u>

A CSR Overview

Although the theme of corporate social responsibility (CSR) is becoming more and more popular, there is still a great confusion surrounding it: how the concept can be defined? How is it possible to measure it? Against whom is the responsibility to be held? Who is asking to organizations to be responsible? Many researchers tried during history to answer to these questions giving life to thousand of scripts and theories that, without a close study of all the material, made everything more complex to understand.

Other than the problems linked to the concept of CSR, it is natural to wonder why this theme is so important today. What happened during ages that led to this situation? How CSR evolved during time?

In this chapter I will give an answer to all these questions and to explore the historical evolution of CSR, underlying how its role changed during history.

2.1. Evolution of the Concept

The theme of CSR had a quick evolution in the last forty years but it appeared longer before. Around literature different authors (e.g. Carroll, 1999; Joyner & Payne, 2002; Chirieleison, 2004) tried to analyze the historical evolution of this concept, indentifying, in their opinion, the main interpretations and theories relevant to the CSR topic.

Joyner and Payne (2002), in particular, think that the first author who indentified the concept of social responsibility in companies is Chester Barnard (1938); in the text *The Functions of the Executives*, he pointed out the importance and the influence that the external environment can have on the decision-making processes of which a manager is responsible. In particular, Barnard said that the one who has the leadership, necessarily has to consider how the success of a company depends also on the moral incentives he can bring to it. Subsequently, Joyner and Payne (2002) underline the work of Herbert Simon (*Administrative Behavior*, 1945), who recognized that all the organizations have to be responsible against their community, beyond the constraints imposed by the law. According to Simon, many firms can be considered of public interest and of primary importance for

investors and owners; that is why companies have to establish relationship of trust with their communities.

On the other hand, Carroll (1979) and Chirieleison (2004) agree that the first considerable contribute about the topic, it is to be attributed to Howard Bowen (1953), who gave a definition of CSR related to the "businessman" rather than to the whole company (here CSR was referred to as social responsibility rather than *corporate* social responsibility). Even if this thought is still focus on managers' responsibilities instead of on the responsibilities of a company in its complex, this consideration is relevant since it recognizes firms as power entities able to influence the life of the society. The author gave a first definition of CSR saying that companies have the obligation "*to pursue those policies, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of society*". Thanks to Bowen's contribution the '50s are recognized as the modern era of CSR (Carrol, 1999); in this period CSR entered with full rights in the academic and managerial literature.

Hereafter Carroll, Joyner and Payne agree on attributing a key role in the development of the concept of CSR to Peter Drucker who was the first to use the expression "social responsibilities of business". Unlike Bernard and Simon who put more attention on the ethical and moral dimensions of people behavior inside organizations, Drucker focused more on CSR. In the text *The Practice of Management* (1954) he classified the "public responsibility" as one of the eight primary objectives a company must have. Talking about management, he stated: "*it has to consider whether the action is likely to promote the public good, to advance the basic beliefs of our society, to contribute to its stability, strength, and harmony*" (Drucker, 1954).

As noticed before, the early scientific debate was focused on businessmen' responsibility rather than on that of the whole company; managers were seen as the one able to influence the external context, with duties that go beyond the classical ones (production function, making profit, distribution of goods and services..).

Between the early '60s and the end of the 70s the expression "corporate social responsibility" is finally established. In those years, there was a turning point in the debate about social responsibility; this was mostly due to the work of Milton Friedman (1962, 1970) who considers the profit maximization as the one and only duty of managers and companies. This concept is the pillar of the Neo-Classical view of which Friedman is considered the progenitor (e.g. Carroll, 1991; Preston & O'Bannon, 1994; Beurden & Gossling, 2008).

With extreme harshness he states that: *"few trends would so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their shareholders as they possibly can"* (Friedman, 1962). In his vision it is deeply rooted the primacy of the economic sphere as the sole duty of corporations, as he points out: *"there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud"* (Friedman, 1970).

Friedman does not deny the existence of social problems, but he claims that they should be dealt by states and governments (Margolis & Walsh, 2002); in his opinion if managers wish to pursue some social good, they should do it as individuals and not as executives, meaning that they should not use shareholders' money for their own objectives (Friedman, 1970).

Friedman's rigid point of view was gradually overtaken by other authors, as Davis, Frederick, McGuire and in particular Freeman, who recognizes broader responsibilities than the economic ones and those established by law.

Davis has a name for his "Iron Law of Responsibility" (1960) in which he underlines the strict link between business power and social responsibility: *"social responsibilities of businessmen need to be commensurate with their social power"* (Carroll, 1999). In particular he states that if a manager avoids making decisions in a social responsible matter this could lead to a corrosion of his own power. Davis further proposes the idea that making social responsible decisions can contribute to generate economic advantages in the long run. He was a forerunner but in that time this idea sounded like something unacceptable.

Frederick, on the other side, emphasizes the role of a company against the environment in which it operates. He affirms that: *"social responsibility in the final analysis implies a public posture toward society's economic and human resources and a willingness to see that those resources are utilized for broad social end and not simply for the narrowly circumscribed interest of private persons and firms"* (Frederick, 1960). As a support to Frederick's perspective, we can quote McGuire contribution as well (Carroll, 1999); he reiterates the needs for organizations to consider not only the economic and legislative duties but also the responsibilities that go beyond these duties.

I will discuss later the great contribution of Freeman, the forefather of the Behavioral view, whose Stakeholder Theory constitutes another turning point in CSR literature.

Since in these years the vagueness was still intrinsic in the concept of corporate social responsibility, the contributions aimed at formalizing this concept began to increase considerably, as the interpretative models that analyze from different perspectives the topic of CSR. There are several authors that, in order to limit the area of interest of CSR, tried to identify the behavior that a company should follow to be socially responsible.

Davis (1973), for example, analyzes the pros and cons of the undertaking of social responsibilities, arguing that CSR begins when the law ends. Therefore, it is highlighted the voluntary character of a corporate choice that cannot be considered socially responsible if it just obeys to law.

In this period, an increasing attention is given to the referential socio-cultural context that became essential to define companies' tasks. In this context we find Carroll's innovative thought, who suggests a model of CSR characterized of different priority levels that a company has to take into consideration when defining its objectives and behavior. In a paper named "*A Three-Dimensional Conceptual Model of Corporate Performance*" (1979) Carroll introduces four social responsibility categories which define the total responsibilities an organization has. This conceptual model was the ancestor of the Pyramid of CSR model that Carroll presented in 1991 and that is still used as a reference point.

Carroll (1979) affirms that: "*For a definition of social responsibility to fully address the entire range of obligations business has to society, it must embody the economic, legal, ethical, and discretionary categories of business performance. These four basic expectations reflect a view of social responsibility that is related to some of the definitions offered but that categorizes the social responsibilities of businesses in a more exhaustive manner*". According to Carroll, the concept of CSR should embody four dimensions; only in this way it would be possible to have a complete definition and a clear understanding of the concept. The four dimensions are represented as a four layers pyramid (Figure 2a), where the layers, as said above, are: the economic one, the legal one, the ethical one and the philanthropic (discretionary) one. As Carroll says in the paper "*all of these kinds of responsibilities have always existed to some extent, but it has only been in recent years that ethical and philanthropic functions have taken a significant place*".

Figure 2a: *Carroll's Pyramid*

Source: Carroll, 1991

Let's take a closer look to these dimensions. At the bottom of the pyramid we find the economic responsibility; since the main duty of firms is still the one of producing goods and services for the society (creating an acceptable profit in this process), the economic layer is at the base: it bares all the other layers, to underline the pre-eminence of this function on the others,.

The following level is about legal responsibilities; they go hand in hand with the first level since *"firms are expected to pursue their economic missions within the framework of the law"* (Carroll, 1991). In a free enterprise system, these first two dimensions coexist since a company must follow the law and play by the rules through out each of its operations.

The third level concerns the ethical responsibilities; Carroll (1991) defines these responsibilities as *"those standards, norms, or expectations that reflect a concern for what consumers, employees, shareholders, and the community regard as fair, just, or in keeping with the respect or protection of stakeholders' moral rights"*. This means that in this third level we find all those responsibilities that embody activities and practices that society expects (or prohibits) from an organization, even if they are not codified into law. This level can be considered as an extension of the second layer: it

amplifies the legal responsibilities while placing even higher expectations on businesspersons to overcome law requirements.

On the last level we find the philanthropic responsibilities; these kinds of responsibilities have to be intended as "*those corporate actions that are in response to society's expectation that businesses be good corporate citizens. This includes actively engaging in acts or programs to promote human welfare or goodwill*" (Carroll, 1991). It happens very often that this last dimension is confused with CSR; philanthropic responsibilities are part of CSR, but as already said not the only ones (Fazio, 2006).

Carroll concludes his article saying that these four categories are not mutually exclusive but they must be fulfilled simultaneously. Only pursuing these four dimensions simultaneously a company can say to be really engaged in CSR.

Carroll's contribution is of such importance because it was one of the first attempts of formalizing with a model the concept of CSR. In those years of great confusion, where everyone was talking about CSR and many ideas were spread around, someone who tried to make the CSR concept clear was fundamental.

At the beginning of the '80s the idea that CSR practices should be part of the business was almost completely accepted; the ideas provided by all the contributions of the previous years have fostered the creation of studies on some alternative concepts and themes, as stakeholder theory, corporate social performance, business ethics and so on (Carrol, 1999). This doesn't mean that the CSR was put aside but as Carroll (1999) explains "*the core concerns of CSR began to be "recast" into alternative concepts, theories, models or themes*".

For the purpose of my study, among all this new theories I will analyze the Stakeholder Theory and the corporate social performance (CSP) notion.

2.2. Stakeholder Theory

The moment in which we assist to the shift from shareholder management, based on the creation of value for shareholders as the sole corporate objective, to stakeholder management, based on the creation of a shared value, is the introduction of the *Stakeholder Theory* in 1984 by Edward R. Freeman. As mentioned before, this theory contrasts with Friedman's Neo-Classical view and it gives a new interpretation of business, integrating in it those concepts that for an excessively long time were considered not pertinent with the economic activity.

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The stakeholder theory is used as a basis to analyze those groups to whom the firm should be responsible (Moir, 2001). Freeman (1984) defines a stakeholder as *"any group or individual who can affect or is affected by the achievement of the organization's objectives"*. When the shared view was the shareholder profit maximization (neo-classical theory), those stakeholders to whom firms have responsibilities towards were the primary ones; a primary stakeholder group is defined as "*one without whose continuing participation the corporation cannot survive as a going concern"* (Clarkson, 1995), including in this group shareholders, investors, employees, customers and suppliers. As we can understand from this definition, primary stakeholders are the fundamental ones, the ones that enter in contact with the firm operations, allowing the company's survival. However, they are not the only ones. Secondary stakeholders are defined as "*those who influence or affect, or are influenced or affected by corporation, but they are not engaged in transactions with the corporation and are not essential for its survival*" (Clarkson, 1995). Those stakeholders are the ones to which organizations address when implementing CSR practices: for example the community in which a firm operates.

The stakeholder theory is both a managerial and an ethical theory, with the purpose of finding efficient methods to manage the hard relationship between the organization and its several stakeholders; this practically means to be able to combine the profit maximization with all stakeholder's benefits and expectations.

With the passing of time and the increasing complexity of the relationships a company has to deal with, also the number and the different kinds of stakeholders is broader. According to Freeman (1984), the management of a company must be able to draw a complete map of all these relationships in order to have a clearer view of all the needs of its stakeholders (Figure 2b); only in this way it would be possible to develop business operations in tune with the frame of reference in which the organization operates.

The central idea of the stakeholder theory is indeed that "*the success of an organization depends on the extent to which the organization is capable of managing its relationship with key groups, such as financers and shareholders, but also customers, employees, and even communities or societies*" (van Beurden & Gössling, 2008)

The biggest merit of Freeman's theory is the intuition to link CSR practices to firms' strategic management. To be fully accepted, it is essential for CSR to stop being seen as a window-dressing

operation and to be deeply integrated into firms' corporate governance: to be responsible, it's not enough to draw up a social balance sheet.

Figure 2b: *The View of The Firm According to the Stakeholder Theory*
Source: Freeman, Rusconi, Dorigatti, 2007
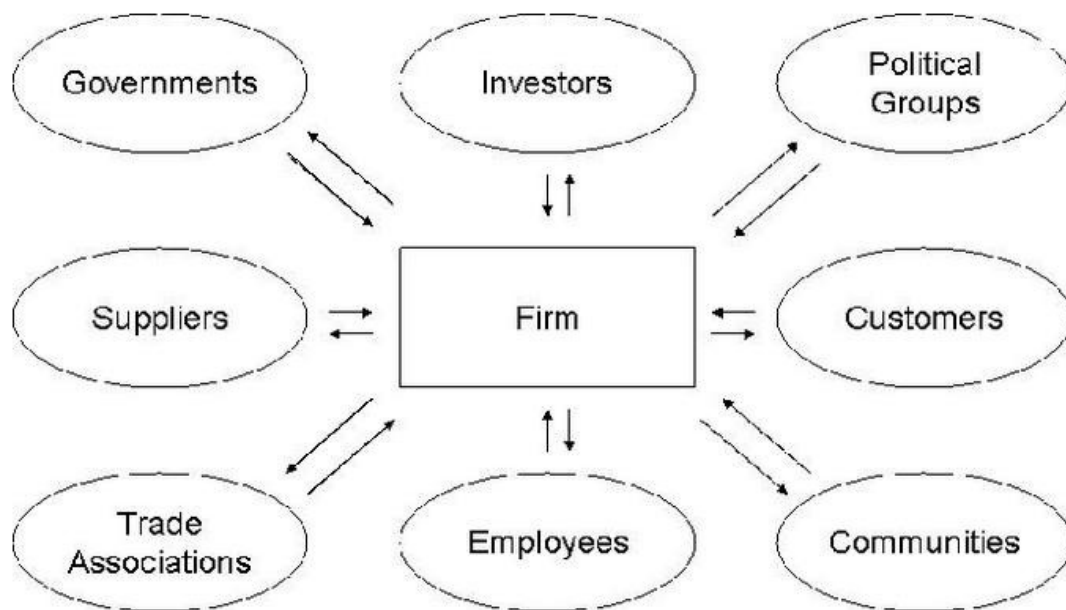
2.3. Corporate Social Performance

After grasping the broad concept CSR, it is necessary for the purpose of this work to understand how to measure it. CSR is not measurable variable. On the other side, corporate social performance, even if not in a straightforward way, can be transformed into a measurable variable that can be compared with financial variables (van Beurden & Gössling, 2008), as it is needed for the purpose of this thesis.

The concept of corporate social performance (henceforth CSP) was hard to define and it had a history similar to that of CSR. In the early literature the two topics were used as synonymous (Watrick & Cochran, 1985). The concept of CSP developed along with the one of CSR, until it assumed its own identity. The first who gave an important contribution to this theme was Carroll in

1979; he constructs a three-dimensional model of social performance, where the three dimensions are the definition of firm's social responsibilities, the identification of the social issues toward a firm must address and the philosophies of social responsiveness. Social responsiveness is defined as "*the philosophy, mode, or strategy behind business (managerial) response to social responsibility and social issues*" (Carroll, 1979). Building on Carroll's work, Wartick and Cochran (1985) proposed their CSP model, defining it as "*the underlying interaction among the principles of social responsibility, the process of social responsiveness, and the policies developed to address social issues*" (Wartick & Cochran, 1985). Since then, this theme received a lot of attention but no noteworthy contributions were brought until 1991, when Wood published her revisiting of CSP concept.

According to Wood, Wartick and Cochran's model is a turning point in the development of this theme, but still it leaves some problems unaddressed. Wood reviews this model and proposes a new definition built on the one of the authors: "*a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships*" (Wood, 1991). This definition overcomes all the problems not covered by Wartick and Cochran that in particular, were: first, the fact that no action was included in the definition; according to Wood the word *performance* speaks of *action and outcomes, not of interaction and integration* as in the previous definition. Second, social responsiveness is a set of processes and not a single one. Third, the last dimension of the CSP model (*the polices developed to address social issues*) is too restrictive: policies are just one of the possible results by which a firm's social performance can be evaluated. Furthermore, the author underlines the flexible character of the definition which is not time-locked, "*but permits CSP to be viewed either as a static snapshot or as a dynamic change-filled sequence*" (Wood, 1991) and the fact that here CSP is not completely isolated but it is somehow linked to business performance. In 1997, Waddock and Graves, in a study about the link between CSR and financial performance, gave another definition of CSP when analyzing the measurement problems linked to this concept. They stated that: "*CSP is a multidimensional construct, with behaviors ranging across a wide variety of inputs (e.g., investments in pollution control equipment or other environmental strategies), internal behaviors or processes (e.g., treatment of women and minorities, nature of product produced, relationship with customers), and outputs (e.g., community relations and philanthropic programs)*" (Waddock & Graves, 1997).

This definition is not far from the one given by Wood, but it says something more: it explicitly defines CSP as a *multidimensional* construct. The authors themselves underline how in many

studies the main problem of CSP measurement was linked to the use of a one-dimensional measure (together with the sample problem, but I will discuss these themes in the next chapter).

As said at the beginning of the paragraph, the measurement of CSP is not a straightforward operation and in literature there is little clarity about it. However, the one point on which there is agreement is the multi-dimensional character of CSP. However, there are many studies, in particular the more ancient ones, which use as measure of CSR single-dimensional indicators (e.g. the level of pollution), but today it is recognized that this is a huge limitation. CSP measures commonly used in the past, and most even today, are forced-choice survey instruments, the Fortune reputation index, the Kinder, Lydenberg, Domini index (KLD), Moskowitz reputation index and so on. All these approaches have pros and cons. I will analyze them in details in the next chapter, focusing in particular on the KLD index, since it is the relevant one for my thesis.

2.4. Recent Years

In the '90s very few unique contributions were brought to the notion of CSR (Carrol, 1999); in those years the theoretical debate about CSR was shifting its focus from the organization reality to the broader competitive and territorial context in which it belongs. In substance there was recognition that firms are part of an environment with which they interact and from which they are influenced, and that it is necessary to investigate the nature of this relationships. One of the first important contributions on this topic arrives in 2003 thanks to the World Business Council for Sustainable Development (WBCSD); other valuables contributions come from Porter and Kramer (2006) and from Freeman and Velamuri (2008).

As a proof of the great impact that the market location can have on the interpretation and implementation of some concepts, in 2003 a report by the World Business Council for Sustainable Development (WBCSD) was edited. Here it is stressed how the views across the world on the understanding of CSR differ considerably; the crucial point is that the context in which you are operating influences the interpretation of CSR that you have. Around different countries there obviously are different cultures, different ways of perceiving things, different external pressures (e.g. the legal and political ones). We have seen how challenging can be the definition and interpretation of CSR, so it is normal (in this case more than in others) to expect that this concept suffers from some transformation when implemented into different countries corporations.

In the WBCSD's report are illustrated the different perceptions that people have of CSR across the world. We can note differences even without going so far in the world: take for example the impersonal North American vision in which "once you have achieved success you give back", in contrast with the more responsible vision that we find in Central America, where CSR is seen as "taking personal responsibilities for your impacts on society". Appendix I shows the different views of CSR across the world.

Even if some differences exist among countries, Porter and Kramer, as Freeman and Velamuri, stress the importance of a strict relationship between companies and societies; these two entities are not separated but they should work together in order to generate a shared value.

In 2006 Porter and Kramer published an article on the *Harvard Business Review* titled "*Strategy And Society: the Link Between Competitive Advantage and Corporate Social Responsibility*"; in this article the authors criticize the perspective that sees business' objectives separated from society's ones, saying, on the contrary, that they are strongly interrelated and complementary to achieve social welfare. The interdependence between firm and society must create a shared value, seen "*as a long term investment in a company's future competitiveness*" (Porter and Kramer, 2006), where both sides have benefits.

The authors identify two kinds of forms that the relationships between company and society can take. The first are called *inside-out linkages* and they are defined as the impacts that business performance has on the society; the second are the *outside-in linkages* that describe the moment in which "*the external social conditions influence corporations, for better or for worst*" (Porter & Kramer, 2006). When a company learns how to deal with these relationships and how to manage them, it will be able to conjugate business's objectives and society's values.

In their opinion CSR "*can be a source of tremendous social progress*" (Porter & Kramer, 2006) and this is why it should be part of the overall strategy of the company; Porter and Kramer use the expression *Corporate Social Integration* instead of CSR, to underline how critic and important the integration of firms and societies is.

This concept of integration between organizations and society is the point of start of other studies that analyze it from different points of view.

Freeman and Velamuri (2008) suggest another version of CSR, called *Company Stakeholder Responsibility*. We have already seen Freeman's Stakeholder Theory in which he underlines the

importance of the stakeholders, saying that it is crucial for a company to recognize its responsibilities against all of them. This is the reason why in the acronym CSR, the "S" now stands for *stakeholder* instead of *social.* However, this is not the only point that needs to change: the use of *company* instead of *corporate* "*signals that all forms of value creation and trade and all businesses, from start-ups to large publicly held corporations, need to be involved*" (Freeman & Velamuri, 2008); and in their view "*responsibilities implies that we cannot separate business from ethics*" (Freeman & Velamuri, 2008). The authors explain that the market system does not represent a mechanism unrelated to social and ethical issues, only aimed at profit maximization, but it is a system that allows players to work together to create value. The company therefore is nothing else than one of the several existent players in the game that want to achieve a common goal.

2.5. Defining CSR

As said at the beginning of this chapter, the great taking around CSR and the rich literature that derives from it, have increased rather than reduced the complexity of the theme and of its analytical perspectives. Hence, even if it is not an abstruse concept it may be difficult to find a universal definition of it. After the long analysis of CSR origins and its development along history, we know which are the elements that a definition of CSR should include; now it is time to give a clear definition of it.

Following Dahlsrud's work, it is possible to identify the definition that best suit the situation. Thinking that the confusion surrounding CSR's definition might be a problem, Dahlsrud (2006) stated that: "*if competing definitions have diverging biases, people will talk about CSR differently and thus prevent productive engagements*". As mentioned before it is normal to some extent that people and companies with different backgrounds and cultures have a different perception of the concept of CSR; on the other side, if there was a clear and univocal definition of it, it would be easier to create a worldwide shared view. Moved from this premises, Dahlsrud felt the need to put all the literature about CSR together in order to find a clear and unbiased definition among all the existing ones.

After a 3-steps analysis (collection of existing CSR definitions; identification of five dimensions of CSR through a content analysis of the definition; frequency counts from Google to understand the definition usage of each dimension), Dahlsrud finds that, in spite of the great amount of existing

definitions, they are all congruent and so *the confusion is not so much about how CSR is defined, as about how CSR is socially constructed in a specific context*" (Dahlsrud, 2006). The latter conclusion of his study is of great importance: all the definitions do not contain any guidelines on how to manage the challenges brought by this phenomenon. That's the real challenge for managers: understand the best way to integrate CSR practices in the business in relation to the context in which they are operating (here we are again).

From my analysis it appeared that the main elements that a definition of CSR should include are three: first of all, the economic dimension that should not be the only concern of a company, but it should be integrated with the environmental and social ones; it is then important to underline that companies have responsibilities not only against shareholders, but also against all the stakeholders. Another fundamental point is the voluntariness of the introduction of CSR practices; this is an action that goes beyond the law and that is not imposed.

These are the three pillars that should be part of a good definition of CSR. The one found by Dahlsrud seems to fit these requirements. From his research it appeared that the most used definition is the one given by the Commission of European Communities; in the Green Paper released in 2001 CSR is defined as:

"*a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis[1]*"

The three main characteristics mentioned above are part of this definition: integration of social and environmental concerns in business, stakeholders instead of shareholders and the voluntary basis of the action.

Today this seems to be the best definition; but there are many others that are still good even if they do not take into account all the three main points, focusing on just some of them.

As an example, let's consider the definition given by the World Business Council for Sustainable Development (WBCSD): "*corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of*

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[1] Commission of the European Communities. (2001). Green Paper. Brussels.

the workforce and their families as well as the local community and society at large"[2]. Here there is no mention at all to the environmental part, but it goes deeper in explaining which are the social responsibilities.

Another example is given by the BSR (Business for Social Responsibility), which defined CSR as "*achieving commercial success in ways that honor ethical values and respect people, communities, and the natural environment*"[3]. Compared with the first definition, we can notice that here the stress is put on against whom the responsibility is to be held: in the one from European Commission is simply said "stakeholders" while in the definition of the BSR, it is explained who these stakeholders are ("people, communities, the natural environment").

McWilliams and Siegel describe CSR as "*actions that appear to further some social good, beyond the interest of the firm and that which is required by law*" (McWilliams & Siegel, 2001). Here the stress is put on the voluntariness character of the implementation of CSR into business. As already noticed, there are no legal impositions about it; organizations are free to do whatever they think it is best.

From this brief analysis of definitions, it is easy to see how all of them are very similar, even if the focus is sometimes different. Overall, CSR could be considered as a set of policies and programs that are integrated into different aspects of the company (operations, supply chain, decision making processes), and usually deal with issues concerning business ethics, community investment, environmental, governance, human rights, the marketplace as well as the workplace.

To conclude this overview about CSR, I will now discuss another concept that nowadays goes hand in hand with the one of CSR. Subsequently there will be a final discussion about CSR in today's world, to see how the concept is perceived today in contrast to the beginning of this chapter.

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[2] Dahlsrud A., (2006). *How The Concept Of Corporate Social Responsibility is Defined: an Analysis of 37 Definitions,* retrieved from Wiley InterScience: www.interscience.wiley.com
[3] Dahlsrud A., (2006). *How The Concept Of Corporate Social Responsibility is Defined: an Analysis of 37 Definitions,* retrieved from Wiley InterScience: www.interscience.wiley.com

2.6. CSR and Sustainability

In recent years, in the debate about corporate social responsibility, the idea of a link between this concept and the one of sustainability has been well established. Regarding this relationship, it is possible to find some hints in the literature of the '90s, but only today the debate has intensified. This discussion developed in the institutional area rather than in the academic debate – as it happened to the discussion about CSR – thanks to the contributions of supranational organizations such as the United Nation (UN), the Organization for Economic Co-operation and Development (OECD) and the European Union (EU).

The concept of sustainability was defined for the first time in 1987 by the World Commission on Environment and Development of the UN; in the Report sustainability is defined as "*a development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (United Nations, 1987). This definition makes very clear the main point of sustainability: whoever wants to act in a sustainable way must be sure to operate every day in a way that does not take away the basis for future generations to do the same.

When applied to CSR, this concept can be interpreted as "*an approach finalized to value creation in the long term – value not only for shareholders but for all the stakeholders – based on the ability of taking the opportunities and managing the risks that are coming from the changes of the context*" (Chirieleison, 2004). The concept of sustainability is traditionally related to the management of the environmental impact of human activities, but when applied to CSR it gains other two dimensions: the economic and the social dimensions. This point is the hub of the Triple Bottom Line (TBL) framework. This theory made its first appearance at the beginning of the '90s and since then it developed hand in hand with the concept of sustainability, and so of CSR (Robins, 2006). The McGraw-Hill book publishing organization defines the TBL frame as "*a calculation of corporate economic, environmental and social performance*" (Robins, 2006). As a matter of fact, some people refer to the TBL as the 3P approach, where the three Ps stand for People, Planet and Profit. According to this theory, the good balance of these three dimensions makes the company sustainable (Figure 2c).

In this perspective CSR is nothing more than an instrument used for the attainment of a three dimensions sustainable development.

Figure 2c: *Triple Bottom Line*

Source: by the author

2.7. CSR in Today's World

After having seen how the notion of CSR evolved during history and how, with a lot of studies, researchers and managers in general changed their mind about it (from a skeptical view to the acceptance of CSR into companies), it is necessary to understand why nowadays CSR is such a big concern.

Since Friedman's neo-classical view (1970), in which CSR was just seen as something that pushes away managers from their first objective (profit maximization), the situation has remarkably changed, and in particular what changed most is the role of organizations and governments (Scherer & Palazzo, 2011; Matten & Crane, 2005; Margolis & Walsh, 2003).

"Twenty years ago, environmental and social issues were for activist. Ten years from now, they are likely to be amongst the most critical factors shaping government policy and corporate strategy. Twenty years ago, we were a series of local states and countries, national and regional businesses

that were partially connected. Ten years from now, we will be globally interdependent as individuals and organizations"[4].

This is how PriceWaterhouseCoopers in 2006 tried to explain what is happening. In fact, this is deeply true. The phenomenon of globalization has changed (and it still is) the rules of the game. We are witnessing to a shift of responsibilities from governments to corporations, and this is particularly true for MNCs, multinational corporations (Scherer & Palazzo, 2011). Many organizations indeed "*have started to assume social and political responsibilities that go beyond legal requirements and fill the regulatory vacuum in global governance*" (Scherer & Palazzo, 2011). Solely quoting the fact that now business firms engage in public health, social security, education and so on. Moreover, we can see that since 2000 over 10,000 firms[5] have subscribed to the United Nation Global Compact's call to engage in self-regulation in order to fulfill that regulatory vacuum mentioned before (Scherer & Palazzo, 2011). According to Matten and Crane (2005) this situation is sometimes exasperated till the point in which corporations assume proper *state-like role*. The authors affirm that this does not happen normally but when the state fails or lacks, corporations start to meet actions that have always be considered responsibilities of the states. Corporations are becoming more and more important political and social actors in this global society.

Scherer and Palazzo (2011) define globalization as "*a process of intensification of cross-border social interactions due to declining costs of connecting distant locations through communication and the transfer of capital, goods, and people*". This means that the world is becoming one from every point of view: technology and innovation, as well as political decisions, such as the reduction of barriers for trade, investments and so on, are making possible to overcome the distance problems, making reachable every corner of the world and therefore creating a new global economy. We are assisting to a new and intensified interconnection between people and places, between social, economic and political actors, where the roles of the global players are no longer clearly defined. International institutions will be responsible for formulating global and regional policies, and local institutions for implementing them at national or local level.

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[4] PriceWaterhouseCoopers, 'Corporate Responsibility: Strategy, Management and Value', 2006
[5] United Nation Global Compact, Participants and Stakeholders,
http://www.unglobalcompact.org/ParticipantsAndStakeholders/index.html

In a world where everything in business is reachable and where companies act on large scale (across the world's boundaries) it is easy to understand how states easily lose their power in favor of MNCs.

In this new framework MNCs have more responsibilities against more people. When implementing CSR they do not have to think about the local context solely, but they are led accountable for all their international stakeholders.

In this new context companies have to face new and difficult challenges in order to answer to all the stakeholders' needs. In this situation "new" societies born and find their places in helping companies to take the right direction in this path. One of these societies is Det Norske Veritas (DNV) business assurance. DNV born in 1864 in Norway, with the purpose of evaluating the technical conditions of the Norwegians' merchant ships. Since then their core business is to identify, assess and advise on risk management. DNV is a world leader classification society. With a full range of certification services, assessment and training, DNV assists its clients in achieving product quality, processes and organization efficiency, in order to develop a sustainable business[6]. In all its operations DNV has always in mind the concept of sustainability and respect to the social themes; their philosophy, that then became also their first objective, is *safeguarding life, property and the environment*[7]. While writing this thesis I had the great opportunity to enter in contact with Valeria Fazio, the director of the Assessment and Training business line of DNV Italy. Her department has the duty of helping companies to deal with the new challenges brought by the new role they assumed. The purpose is to advise them on how to integrate CSR's activities in order to be more sustainable and to reduce costs. During our chat she presented me some important business cases to let me understand how exactly companies like DNV operate in this new context. The case that more than others draw my attention is the one of FATER. FATER, an Italian company based in Pescara, run its business since 1958 and it is the leader company in the market of diapers, tissues and tampons[8]. In 2010 the company made a study in the attempt of demonstrating if they could save (and gain) some money through the introduction of CSR practices. With the advisory of DNV which followed them since the beginning till the very end, they have been able to integrate those principles into their business. Today FATER has the objective of "*becoming in Italy the first*

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[6] Det Norske Veritas, Company Profile: http://www.dnv.it/chisiamo/profile/detnorskeveritas/index.asp
[7] Det Norske Veritas, Company Profile: http://www.dnv.it/chisiamo/profile/detnorskeveritas/index.asp
[8] FATER, Company Profile: http://www.fater.it/azienda.html

company synonymous of sustainability"[9]. The company engagement in CSR turns into a business strategy where sustainability is the key in each operation. The sustainability strategy is based on four pillars:

1. *Environmental Pillar* which includes the logistics and operational processes, the management of the products' life cycle, the energy efficiency projects and the sustainable mobility;

2. *Social Pillar* in which are included all the social and environmental responsibility activities and the quality and safety standards;

3. *Innovation Pillar* which includes product initiatives, packaging, waste management and trade relationships;

4. *Cultural Pillar* which is to intend as the inducement to a sustainable behaviors[10].

Appendix II shows the results that FATER reached in the last years. In all the four areas in which the company decided to introduce CSR, it gained extraordinary improvements.

The FATER case is just one example of how today companies accept the CSR challenge; companies like DNV have the duty of helping and advising firms like FATER to go through this process in the best and most efficient way, following step by step all the process.

Corporate social responsibility is an opportunity and company like DNV can help managers to catch it.

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[9] FATER, Sustainability Pillars: http://www.fater.it/sostenibilita_pilastri.html
[10] FATER, Sustainability Pillars: http://www.fater.it/sostenibilita_pilastri.html

3. <u>Theoretical Framework</u>

The Link Between Corporate Social Responsibility and Corporate Financial Performance

After having seen how the concept and the definitions of CSR developed over time, it is now necessary to analyze the hub of the debate. For this purpose in this chapter I will discuss the costs and benefits of the implementation of CSR into business and how CSR is linked to corporate financial performance (CFP), trying to understand why corporations should integrated it.

Even if a company wants to introduce CSR practices, its first objective must be to make profit. This is the first aim of organizations and the introduction of other objectives must not distract managers from the first one. As we already know, there are some scholars who claim that the economic objective should be the sole one (e. g. Friedman) but we have also seen how in recent years the idea of implementing CSR into corporations has been accepted. Now, it is time to understand why, additionally to the reasons explained before, companies should integrate CSR into their business.

3.1. Costs and Benefits of CSR

When incorporating CSR, corporations have to take into account that they will have to bear extra costs; so, to be willing to invest in it, the integration of CSR should generate benefits as well.

The costs generated by the introduction of CSR are of two different types: sometimes they are easy to measure while other times they concern intangible resources and so it is difficult to quantify them (Molteni, 2004). Starting from the measurable costs, the first expenses in which a company normally incurs are the ones linked to the adoption of new environmentally friendly equipment. These new plants are needed, for example, to reduce the polluting emissions in waters and air, thus reducing the environmental impact.

As I already pointed out, the commitment to CSR entails a bigger attention to all the stakeholders and not only to shareholders. This implies that corporations can incur in extra operating costs designed to better meet stakeholders' needs. For example, they would have to offer additional services to employees (such as providing employees day care, granting paid parental leave..) or they would have to buy special inputs from special suppliers in order to be sustainable (Barnett & Salomon, 2006).

There are also other costs that for their intangible character are difficult to estimate: those costs are linked to a different employment of some resources, such as human resources, tangible resources, or intangible assets. These costs occur when, for example, a manager or an employee has to work on social issues, subtracting time and attention from other corporate activities, or when parts of the equipments and plants are put at disposal of non-profit organizations.

Other hidden costs derive from the limitation of strategic alternatives: a company committed to CSR cannot for example form an alliance with non social responsible partners, or it should avoid to enter in those businesses characterized for example by polluting production processes, or in those geographical areas that for a reason or another are incompatible with CSR principles for political, cultural or legal causes.

These costs create a big limitation for some organizations that want to adopt CSR. Some of these costs require a substantial initial cash outflow (e.g. the purchase of new equipment) while others entail a commitment for the rest of the company's life. For a big company, we can state that in normal circumstances all these costs are not such a big concern, in particular if there are some benefits associated with them. However, if we consider small-medium enterprises (SME) the story changes. First, it is necessary to underline that in this field there is a huge gap: researchers have always been focused on large organizations when studying CSR (Russo & Tencati, 2009) and since SMEs are not "*little big firms*" (Tilley, 2000), they need a particular and different attention. In general, this does not mean that SMEs are less responsible than larger firms, indeed "*they (SMEs) may not know and use the term CSR, but their close relations with employees, the local community and business partners often mean they have a naturally responsible approach to business*" (Sustainable and Responsible Business: CSR and SMEs, 2012). As a support to this thesis, in 2001 the DG Enterprise of the European Commission conducted a study on the European SMEs and found out that more than the 50% of them act in a socially responsible way (Fazio & Luison, 2006). The study also reveled that they do so in a unaware way. The problem connected to this thematic is that SMEs still lack some formal tools (codes, standards, certifications..) because of their shortage in competences and financial resources (Russo & Tencati, 2009; Fazio & Luison, 2006). That is why the European Commission is now promoting a plan to help SMEs (comprising both financial help and guidelines to learn how to deal with CSR) to engage in CSR (Sustainable and Responsible Business: CSR and SMEs, 2012).

The second problem is that, as already pointed out, some of these costs are an immediate cash outflow or they materialize in the short term anyway. This constitutes a problem if a company has a short-term strategy since the benefits brought by CSR normally materialize in the long term. Therefore, if a firm has a short-term perspective, it will be less likely to engage in CSR and to bear a substantial cash outflow, since it will see a positive return only in the long term (Mohr & Webb, 2005).

Even though there are important costs to bear, some firms engage in CSR "just because it is right" even if they are not sure about the benefits; for example SC Johnson, GAP Inc. and Target wrote on their websites that following CSR principles is simply *the right thing to do* (Sprinkle & Maines, 2010). Admittedly, it is difficult to find such altruistic organizations; companies need reasons for spending their money, they are unlikely to do so without a payoff. To be a sustainable business practice, CSR has to generate some benefits.

One of the most recognized benefit brought by CSR is the improvement in brand image and reputation (Sprinkle & Maines, 2010; Waddock & Graves, 1997). For instance, there are customers who are sensitive to social and environmental themes and therefore they chose which product to buy based on the involvement of the company on certain activities. According to Fombrun and Shanley (1990) "*the greater a firm's contribution to social welfare, the better its reputation*". A good reputation may enable companies to charge a premium price and to attract better investors. From this point of view, we can claim that acting in a socially responsible way it is a source of gain. To analyze this matter from the opposite perspective, we can refer to the Nike sweatshop scandal in 1996. When the world discovered that the company was exploiting children labor, Nike history changed forever. Millions of people stopped buying Nike's products and today, even if more than ten years elapsed, the company has not yet regained consumers' trust[11]. This is a good lesson on how an irresponsible action can destroy a company reputation forever.

Another advantage can be seen in the reduction of production costs (Sprinkle & Maines, 2010). A perfect example is given by Wal-Mart; in order to conserve natural resources (and to save money of course), the company launched a program to reduce products' packaging. The result was extraordinary. In one year Wal-Mart reduced transportation costs up to 3,5 million and from a CSR

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[11] Rampini, F. (2002). *Mai più sfruttare i bambini. Ora la Nike cerca il riscatto*. La Repubblica: http://www.repubblica.it/online/esteri/nike/nike/nike.html

point of view they saved *"3,425 tons of corrugated materials, 1,358 barrels of oil, 5,190 trees and 727 shipping containers"* (Wal-Mart to Reduce Packaging, 2006).

Socially responsible companies can also count on a better risk management. The risks related to CSR can be divided into three groups: the one concerning corporate governance; the one related to the environment and those linked to social aspects. For the first group, a socially responsible firm is more transparent and so it has less risk of corruption and bribery. Alexander and Bucholtz (1978) suggest the theory that CSR is directly proportional to management's skills; thus, a socially responsible firm can attract better investments since it is perceived as less risky than a less responsible firm (McGuire, Sundgren, & Schneeweis, 1988). Concerning the environmental aspects, a company may need to adopt environmental friendly plants, to construct new waste reduction systems, or to implement stricter quality and environmental controls; as explained before, these practices are initially expensive, but in the long-term they can lead to elicit savings and to reduce the risk. For example, stricter quality and environmental controls push away the risk of having defective product lines, or the risk of paying heavy fines for excessive wasting and pollution (Bradsher & Revkin, 2001; Waddock & Graves, 1997). For the social aspect, I have already mentioned how firms benefit from CSR. In this context, CSR may reduce the risk of negative social events (see Nike's sweatshops scandal) and the probability of unexpected incidents that can damage the firm's reputation (Sprinkle & Maines, 2010).

Finally, CSR can help to motivate, recruit and retain employees (Turban & Greening, 1996). A good example is offered by the Timberland case: the American firm decided to give its employees the possibility to take a remarkable quantity of paid time to volunteer for a social cause at their choice (Sprinkle & Maines, 2010). According to Sprinkle and Maines (2010) *"the company notes that this program helps to attract and retain valuable talent"*, which results in a reduction of recruitment, turnover and training costs.

When employees are satisfied, and the working conditions are optimal we can also assist to an increase in productivity and a reduction of error rates. Creating these conditions, it is a costly practice but it generates a virtuous circle, which ends up with the generation of positive cash flows. Thus, it seems that firms can actually benefit when acting in a responsible way in terms of productivity and employee morale (Moskowitz, 1972; Soloman & Hansen, 1985).

These are some of the principle benefits that CSR can bring to a firm. It is quite easy to see how they can influence in a positive way companies' life, but *"since CSR is integrated into business*

practices, it is by definition complicated to estimate its effects separately" (Cavaco & Crifo, 2009). How can you exactly quantify the increase in reputation of a company or in the satisfaction of an employee? In particular, how can you exactly connect how much of this increase is due to CSR? Since it is not possible to keep all the other factors constant in order to measure only the CSR's impact, it is necessary to find another way to quantify it. Here the connection with the company's financial performance: using empirical models it is possible to connect corporate social responsibility to financial results to see if there is a correlation between the two, and in case of positive answer, if the correlation is positive or negative.

3.2. The link between CSR and financial performance

We discovered in the previous paragraph that there are some companies that decide to engage in CSR only because they think it is the right thing to do. However, I have also discussed that this is not the normality. This happens because there are costs to bear, and not everyone can afford it. We stated that CSR brings benefits as well, but it is not possible to quantify them on the economical level. For a manager, this is not enough. When Friedman (1970) said that the "*first and sole objective of a company is to profit*" he was wrong only in saying that profit is the sole objective, as it continues to be the first. As a business practice, CSR must have a positive return, otherwise it cannot be a sustainable business. Managers and shareholders need to see this return; they need to be sure that their company will be profitable.

For this reason in the last 40 years many researchers tried to investigate the relationship between CSR and financial performance. In particular between 1972 and 2002, one hundred twenty-seven studies that empirically examined this relationship were published (Margolis & Walsh, 2003). However, only during more recent years the attention to this topic has raised: as a matter of fact, of the 127 studies, 68 were conducted in the '90s. In the period that goes from 1993 to 2002, 63 new studies were published (Margolis & Walsh, 2003); by 2007 the number of studies has increased to 167 (Margolis, Elfenbein & Walsh, 2007).

About the relationship between CSP (Corporate Social Performance, see Chapter 1) and CFP there is plenty of literature and, as understandable from above, there are a lot of studies all aimed to discover if there is a correlation, and in case the sign of this correlation, between a social responsible behavior and the financial performance of a company. Proponents of the stakeholder theory (Freeman, 1984) argue that a correlation between CSP and CFP exists and it is positive; CSR improves the satisfaction of different stakeholders and consequently the firm's reputation, leading

in this way to a better financial performance (Allouche & Laroche, 2005; Preston & O'Bannon, 1994). On the other side, researchers who supported Friedman's (1970) classical vision counter that "*managerial attention to interests other than those of investors is a breach of trust that inevitably reduces the welfare of shareowners*" (Preston & O'Bannon, 1994).

The empirical studies have never been in agreement, as some studies found a positive correlation, some other determined a negative one, while others found no correlation at all.

In the next paragraph, I will review the literature around this topic in order to understand why there are such differences (and which these differences are) on the same topic.

3.3. Brief Literature Review

The first scholars who tried to empirically investigate the relationship between CSP and CFP were Bragdon and Marlin in 1972 (Margolis & Walsh, 2001). Relating environmental performance (measured as the level of pollution) to financial performance (measured using accounting measures such as average return on capital and average return on equity), they were the first to find a significant positive relationship (Wagner, 2001).

Since then, many other people investigated this relationship, both empirically and theoretically, but the results have been mixed. Periodically researchers review all these studies in the attempt to create a clear portrait and to see if an overall picture emerge (Roman, Hayibor, & Agle, 1999; Margolis & Walsh, 2003; Allouche & Laroche, 2005; van Beurden & Gössling, 2008; Orlitzky, Schmidt, & Rynes, 2003). Since 1978 there have been 13 reviews of the published researches on CSP/CFP relation (Margolis & Walsh, 2003) and even more till today.

According to the great majority of the reviewers, it seems that the CSP/CFP relation is positive on the whole: "*a simple compilation of the findings suggests there is a positive association, and certainly very little evidence of a negative association, between a company's social performance and its financial performance*" (Margolis & Walsh, 2003). Orlitzky et al. (2003) came to the same conclusion after developing a meta-analysis of 52 studies: "*the results of this meta-analysis show that there is a positive association between CSP and CFP*" (Orlitzky, Schmidt, & Rynes, 2003). The same story repeats for Beurden and Gössling whose research shows that "*there is clear empirical evidence between corporate social and financial performance*".

The problem is that it is not so easy. Even if the great majority of the studies gave positive results, researchers themselves are not convinced of it: "*even though there is hope in the large number of*

studies that have shown a positive relationship, academics and practitioners alike should be concerned with the variability and inconsistency in these results" (Griffin & Mahon, 1997). On the same hand, Margolis and Walsh (2003) stated that we have to be cautious to just believe to these results. Like them, other researchers affirm that all the studies about this relationship are full of problems of all kinds that can bias the results.

Empirical studies about CSP/CFP relation include essentially two types (McWilliams & Siegel, 2000). The first assess the short-run financial impact (abnormal returns) when firms engage in socially responsible or irresponsible acts. Obviously, the results of these studies have been diversified: for a negative relationship see for example Wright and Ferris (1997); Posnikoff (1997) found a positive relationship, while Teoh, Welch and Wazzan (1999) affirm that there is no relation between CSR and financial performance.

The other set of studies correlates some measures of CSP with long term figures that measure firm performance through accounting or financial profitability data. Needless to say, the results of these studies were disparate as well. Aupperle, Carroll and Hatfield (1985) found no relation between CSP and CFP; Waddock and Graves (1997) located a positive correlation while McGuire, Schneeweis and Branch (1990) reported a negative one. I will focus on this second type of studies since the model I will use for the analysis follows within this category.

An important concept linked to this relation that has been long studied is the causal relationship between CSP and CFP. According to Margolis and Walsh's review (2003) in the 127 studies I mentioned before (all belonging to the second set of studies), CSP has been used as a dependent variable, influenced by financial performance, in 22 of the 127 researches; of these 22 studies, 16 reported a positive relationship between the two variables. In the great majority of the studies (109), CSP has been treated as the independent variable able to influence financial performance. Almost half of these studies (54) reported a positive relationship and only seven of them showed a negative relation. Of the remaining studies, 28 found a non-significant relation and 20 reported mixed results. There are more results than studies because four of them investigate the relationship in both ways. Since there is no agreement on this, Margolis and Walsh (2003) suggestion is to analyze this relationship in both ways, in order to have a more complete vision of the topic.

Even from this brief literature review, it is evident how many different empirical studies can be made on this topic. Some of the reasons for these contradictory results stem from conceptual,

operationalization and methodological differences in the definitions of social and financial performance (Watrick & Cochran, 1985; Cochran & Wood, 1984). Hence, it is essential to choose the right measure for CSR; you have to choose whether to use accounting or market measures for financial performance, you have to decide the causal relationship. A part from these problems, there are other variables that can influence in a crucial way the results. In the subsequent paragraph I will analyze all these variables and differences among the existing studies.

3.4. Key Issues in Literature Reviews

According to Davidson and Worrell (1990) there are three main reasons which prevented the reaching of an agreement in the CSP/CFP field: the use of questionable social responsibility indexes, the poor measurement of financial performance and the unsuitable sampling techniques. Other authors tried to identify the reasons why so many different and opposite outcomes result from all the studies. Griffin and Mahon (1997) strongly affirm that the main explanation for this relies on drawbacks related to measurement problems, both of CSP and financial performance. McWilliams and Siegel (2000) assert that many studies do not consider important variables (control variables) that can influence the relationship (in particular they discuss the role of R&D investments). Another issue is the unclear direction of causality: does social performance influence financial performance or it is the other way around? (Preston & O'Bannon, 1994; Waddock & Graves, 1997). Ruf et al. (2001) add to these problems the lack of theoretical foundation, the lack of methodological rigor, and the mismatch between social and financial variables. Margolis and Walsh (2003) highlight the same issues and state that "*the imperfect nature of these studies makes research on the link between CSP and CFP self-perpetuating: each successive study promises a definitive conclusion, while also revealing the inevitable inadequacies of empirically tackling the question.*" It is like a vicious cycle: every time a scholar finds a gap in the research, other authors are ready to plug that gap creating every time new questions that are then left unsolved (Margolis & Walsh, 2003). This is how we reached today's situation, in which we have a lot of material and studies but not a clear answer to the topic.

In general researchers recognize in the measurement problems, in the choice of the control variables and in the sample size (both in terms of size and composition), the first causes of the different outcomes of all the empirical studies. I will now individually analyze the issues mentioned so far, paying particular attention to the measurement problems of both CSP and CFP and to the problems linked to the choice of the control variables.

3.4.1. Measurement of CFP

Since it is a quite straightforward concept, so far I have not defined what is meant for financial performance; but in order to make this work as more complete as possible, I stop for a second on this concept. The financial performance of a company is a measure of how a firm is able to use assets from its core business to generate revenues (Dallocchio & Salvi, 2005). Orlitzky et al. (2003) defined CFP as "*the extent to which a company achieve its economic goals*". Corporate financial performance is the expression of companies' wealth; it is the translation into numbers of the first objective of companies: to make profit.

As the definition says, even the measure of firms' financial performance is not such a mystery and normally it is considered a simple task. It may seem a straightforward operation but, as the literature shows, there is little consensus even about this. The discussion here is about which is the right measure to choose. Between 1971 and 2001, one hundred twenty-two studies have been published; among these, seventy different measures of financial performance have been used (Margolis & Walsh, 2002). The problem is that of these 70 measures, some of them were used only once leading to the impossibility of checking their validity or reliability (Griffin & Mahon, 1997), as there are no other bases for comparison. Orlitzky et al. (2003) made a broad subdivision of all the financial measures used in the past into three major groups: market-based, accounting-based and perceptual measures. This last group of measures is the one that has been less used, and for this reason I have excluded it from my study; it consists of "*asking survey respondents to provide subjective estimates of, for instance, the firm's soundness of financial position, wise use of corporate assets, or financial goal achievement relative to competitors*" (Orlitzky, Schmidt, & Rynes, 2003). Market and accounting financial measures are the most used; in particular among the 122 studies I mentioned before, 47 used market-based measures; 43 used the accounting-based ones and 24 used both of them. The remaining eight used different measures of performance (Margolis & Walsh, 2002).

Both market-based and accounting-based measures are taken into consideration because, even if they carry different theoretical and empirical implications, both can be useful to answer questions about the CSP/CFP relation (Allouche & Laroche, 2005). Accounting measures consist of profitability measures, such as return on asset (ROA), return on equity (ROE), earning per share (EPS); asset utilization, asset turnover, and so on. Accounting measures captures only the past performance of the firm, meaning that using this kind of measures you can only see how historical

record has been influenced by social performance (Margolis & Walsh, 2002; McGuire, Sundgren, & Schneeweis, 1988). Another aspect of the accounting measures is that they are a projection of managerial choices: since they are subject to managers' choices, they represent the internal decision-making capabilities and the managerial performance, rather than the external impact of the firm's actions (McGuire, Sundgren, & Schneeweis, 1988; Orlitzky, Schmidt, & Rynes, 2003). So, accounting-based measures are biased by differences in accounting procedures.

Market-based measures include stock performance, market return, Tobin's Q, price per share, market value to book value and others. These measures focus on market performances, and they are therefore forward looking, meaning that they evaluate the firm's ability to generate future cash flows (McGuire, Sundgren, & Schneeweis, 1988). These measures reflect the fact that shareholders are the primary stakeholder group and that from their satisfaction it depends the fate of the company (Orlitzky, Schmidt, & Rynes, 2003). This is one of the criticized aspects of this kind of measurement system: market measures catch shareholders expectations and evaluations, and this is not sufficient since firms are made up of different aspects.

As I said above, both kinds of measures have been used through history since both of them have advantages. There are authors who support market measures, arguing for example that the use of this kind of measures makes easier to isolate CSR activities; market measurements for CSP relate more closely to shareholders' wealth (Davidson & Worrell, 1990). Other researchers prefer accounting measurements since they are a better predictor of social performance than market measures and the use of market measure capture a smaller relationship between CSP and CFP (Wu, 2006).

According to Margolis and Walsh (2002) "*without a clear causal theory linking CSP and CFP, the prudent approach is to use both sets of measures and let the empirical evidence inform our theoretical understanding*".

3.4.2. Measurement of CSP

CSP is inherently much more difficult to measure than CFP. The measurement of CSP is still a hard task and little clarity has been reached about it. I have already explained the evolution of the concept and the multi-dimensional character that it has; to recall the three dimensions of which it is made up I rewrite the definition given by Wood (1991): "*CSP is a business organization's*

configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships". According to Beurden and Gössling this definition makes social performance suitable for measurement. Throughout history different measurement methods have been used: forced-choice survey (e.g. Aupperle, Carroll and Hatfield, 1985), the Moskowitz Reputation Index (e.g. Cochran & Wood, 1984), the Fortune reputation and social responsibility index (e.g. McGuire, Sundgren, and Schneeweis, 1988; Preston and O'Bannon, 1994), the Kinder, Lydenberg Domini (KLD) rating system (e.g. Waddock and Graves, 1997), content analysis of documents, behavioral and perceptual measures and case study methodologies resembling social audits, are just some of the most frequent (Waddock & Graves, 1997). Among the one-dimensional measures that have been used, the most frequent are the Toxic Release Inventory (TRI), the pollution control investments (Waddock & Graves, 1997; Griffin & Mahon, 1997) or charitable contributions and the extent of social disclosure (Wood & Jones, 1995) . Since the multi-dimensional characteristic of CSP, the one-dimensional measures are not the best way to evaluate it; according to Rowley and Berman (2000) a single-dimensional measure *cannot represent the full breadth of the CSP construct*. For example, the pollution control only catches one aspect of CSR. It is easy to understand how the use of so many different instruments made it difficult to compare the existent studies; again, it is necessary to find a global measure shared by everyone.

Among all these measurement systems, in recent years the two most used have been the Fortune and KLD ratings (van Beurden & Gössling, 2008). These two CSP sources are discussed below, paying particular attention to the KLD.

Every year the Fortune magazine publishes the Corporate Reputation Survey, a list of America's most admire firms. In Fortune's surveys "*senior executives, outside directors, and financial analysts rate the ten largest companies in their own industry on eight attributes of reputation, using a scale of zero (poor) to ten (excellent)*" (Fortune, 1994). The results of this process are summed up to create an overall reputation index. The eight attributes on which companies are evaluated are management quality, quality of products and services, innovativeness, long-term investment value, financial soundness, ability to attract and retain talented people, social responsibility to the community and the environment, and wise use of corporate assets. In recent years a ninth attribute was added: effectiveness in doing business globally. Recalling the analysis that I carried on in the first chapter on globalization and its implications, this new attribute perfectly fits in the context. The Fortune ranking has been long criticized when used as a measure of social performance: among the

attributes use to evaluate firms not all are related to social performance. This rank is to some extent useful to understand the general reputation of a company rather than its social performance; for instance, a firm can reach an overall high score, but still it can have a lack in social performance's dimensions (Wood & Jones, 1995). To overcome this limit, some authors (e.g. Preston and O'Bannon, 1994) used in their analyses only some of the Fortune's attributes, like social responsibility against community and environment, ability to attract and retain talented people and quality of products and services (Preston & O'Bannon, 1994). According to Wood and Jones (1995) this is still not enough: "*there is no theoretical basis for using the Fortune scale as a measure of corporate social performance, although it can certainly be used as an indicator of corporate reputation among executives and the financial community*".

The fortune rating has been long used in the past, but since the appearance of the KLD, it has been overshadowed.

The Kinder, Lydenberg, Domini (KLD), seems today the best way to measure CSP (Wood & Jones, 1995). This index was developed in 1991 by the Kinder, Lydenberg, Domini & Co Research and Analytics Inc., a financial analysis firm specialized in social investing. The KLD rates company on seven CSR-relevant dimensions that are considered significant for the different groups of stakeholder (Margolis, Elfenbein, & Walsh, 2007). The seven dimensions are: corporate governance, community relations, diversity, employee relations, environment, human rights and product characteristics[12]. These dimensions are then subdivided into other sub-categories on which companies are evaluated (in the next chapter I will give an exhaustive explanation of these). In addition to the seven dimensions, firms are evaluated on other six controversial business areas: alcohol, gambling, military, firearms, nuclear power and tobacco[13]. Since its born the KLD evolved, along with its categories. Initially, the analyzed dimensions (as the sub-categories) were slightly different; we can detect these differences looking at Waddock and Graves's study (1997). Here the dimensions were eight; of these eight, the first five were similar to today's dimensions and were closely related to relationships with stakeholders (community relations, employee relations, performance with respect to the environment, product characteristics, and treatment of women and minorities). The other three dimensions were indirectly related with stakeholders groups, but still they covered areas in which companies used to receive (and for some of these dimensions, still are

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[12] Morgan Stanley Capital International, MSCI ESG Historical Data and STATS:
http://www.msci.com/products/esg/stats/
[13] Morgan Stanley Capital International, MSCI ESG Historical Data and STATS:
http://www.msci.com/products/esg/stats/

receiving) a lot of pressure: military contracting, participation in nuclear power, and involvement in South Africa. The first two dimensions can be found even today in the controversial business areas, while the involvement in South Africa was meaningful at that time, when the Apartheid led South Africa a country in need of help. Today, even if South Africa is not a country free of problems, it does not deserve such a special attention, or better, as South Africa there are a lot of other countries in need. In the recent dimensions, the involvement and attention of firms to other countries' problems can be partly found in the human rights category (in this category in fact some scores are given based on the presence of companies in Sudan and Burma).

The information about the dimensions is gathered through a combination of different instruments: surveys, articles on companies, government reports, academic journal and financial statements (McWilliams & Siegel, 2000).

Based on the information given by the analysis of the dimensions, the Domini 400 Social Index (DSI 400) is constructed; the DSI 400 mirrors the Standard and Poor's 500 but for socially responsible firms. In order to be included in the DSI 400, firms must respect some criteria: less than the 2% of their gross revenue must be derived from the production of military weapons, any involvement in nuclear power (or in the other controversial business areas) is forbidden and they must have positive results in the other categories (McWilliams & Siegel, 2000).

The KLD seems to be the most comprehensive instrument to measure CSP. It rates firms on multiple dimensions (all linked to social performance unlike the categories of the Fortune reputation index) and it uses largely objective screening criteria, resulting in a more objective and meaningful rating system (Griffin & Mahon, 1997). This does not mean neither that the KLD is perfect nor that it does not have any limits.

Different authors (e.g. Waddock and Graves, 1994; Wood and Jones, 1995; Griffin and Mahon, 1997) underline the lack of a weighting system for the categories; all the dimensions have the same importance, whereas most researchers consider that some dimensions are more important than others.

Another criticized aspect (even if this is more a theoretical limit than an empirical one) is that there is no explanation supporting the use of these aspects rather than others and especially why someone decided that only these aspects are expressive of social performance (Wood & Jones, 1995). There are some important social concerns like the exploitation of child labor, which are not even considered.

Wood and Jones (1995) pound away the KLD database for using "very crude numerical ratings" and for using qualitative judgments to evaluate firms. In its defense, Ruf et al. (2001) argued that every numerical measure can be criticized for being numerically crude if there are no quantitative measures and that when talking about social performance it can be very difficult not to use qualitative judgments.

The last critic that the KLD received concerns the fact that everything is summarized in a unique index: according to some, in this way the multidimensional vision is lost and the categories are hidden.

However "*the benefits derived from the KLD database far out-weigh the problems associated with it*" (Ruf, Muralidhar, Brown, Janney, & Paul, 2001). That is why today the KLD is considered the best way to measure CSP.

3.4.3. Control Variables

Control variables are variables that are held constant in order to assess or clarify the relationship between the other variables (Dallocchio & Salvi, 2005). Control variables are potential confounding variables, meaning that they can influence the relationship between CSP and CFP (van Beurden & Gössling, 2008).

Concerning the control variables, the problem is not about their measurement, but about which variables should be used; it is a "choice problem". Many researchers made specific studies to understand if one or another control variable has an impact on the relationship between CSR and financial performance.

Studying the previous literature, it appears the most used and discussed control variables are: the size of the company, the industry in which the company operates, and the risk tolerance of the firm. Subsequently these variables are discussed one by one.

The size of the company seems to be an important variable to control for. Some studies report how smaller firms tend to invest less in CSR than bigger companies (Ullmann, 1985; Waddock & Graves, 1997). Orlitzky (2001) affirms that since bigger companies have greater visibility they engage in more and better social initiatives than smaller firms with lower visibility. This seems to be likely since bigger firms have for sure more resources that can be invested in CSR activities (Margolis, Elfenbein, & Walsh, 2007) and they attract more attention from different stakeholders

whose needs are of primary importance (Waddock & Graves, 1997). Wu (2006) shows that firm size has a positive relationship with both CSP and CFP. However, this positive effect is not significant; this means, as Wu affirms, that the variable size has no visible effect on this relationship (van Beurden & Gössling, 2008). Orlitzky (2001) arrives at the same conclusion, confirming that size is not a confounding variable in the relationship between CSP and CFP: "*the hypothesis that large firms are more likely to engage in socially responsive activities and, at the same time, are more likely to perform well financially has failed to garner empirical support*". On the other side, Chen and Metcalf (1980) demonstrate that firm size has a relevant impact on financial performance but none on social performance (that in this case was intended as an index of pollution control). Pava and Krausz (1996) identify a positive correlation even with social performance: in their study, they found that the most social responsible firms were considerably larger than the ones not engaged in CSR. According to Waddock and Graves (1997), firm size has visible effects on the whole relationship: they find out that smaller companies do less CSR activities than bigger companies.

As we can see, again the results are mixed and no final agreement has been reached on this topic. Beurden and Gössling, in their 2008 review, state that firm size is the most important confounding factor, but they are aware that the effects it has on CSP, CFP or on the relationship between the two, are still unclear. For this reason, they suggest to take the firm size into account when studying this relationship. This mixed evidence can also be linked to the scarce existing studies on the small-medium enterprises (Russo & Tencati, 2009). As mentioned before in this chapter, researchers focused their attention on big firms, leaving SMEs outside the whole picture. Maybe if a bigger attention would be given to them the answers will be less disparate.

Regarding the sample composition, an important issue is represented by the industry in which the companies composing the sample operate. The great majority of researchers concluded their studies suggesting to future scholars to investigate this relationship in a single industry context. However, nearly all of the studies have focused on multiple industries. According to Griffin and Mahon (1997) more than the 78% of the articles they analyzed had a sample of firms coming from different industries; only three studies focused on a single industry. Firms that come from different industries have to deal with different external context, and so with distinct environmental, social and financial concerns, as well as with different stakeholders' needs. (Chand, 2006). When making a study across different industries there are some industry-specific effects that are masked and covered by the overall research (Griffin & Mahon, 1997). Griffin and Mahon conclude their research stating that

the use of industry as a control variable in a multi-industry research tends to confound the relationship between CSP and CFP. Without any analysis, it is quite immediate to understand that in a single industry both the external and internal pressures experienced by different firms are expected to be the same. Chand's (2006) research, as Beurden and Gössling's (2008) review, confirm this theory. When industry is used as a boundary condition in a one-sector study, the relationship between CSP and CFP is not confounded. Chand (2006) suggests to focus on a single industry to increase the accuracy and validity of the study.

Previously, I discussed how firms that engaged in CSR could benefit of a better risk management. For this reason, the variable risk is used as a control variable to investigate the relationship. Following the previous literature, the level of debt is used as a proxy for the firm's risk tolerance (e.g. Waddock & Graves, 1997; McWilliams & Siegel, 2000).

There are other control variables, whose validity has been discussed in the past literature, that is helpful to analyze for the end of my thesis: these are the R&D investments and the market location.

McWilliams and Siegel (2000) affirm that one of the biggest limitations of the literature concerning the relationship between CSR and financial performance is the omission of important variables; according to them, the most important missing variable is the intensity of Research and Development (R&D) expenses. In their research, they studied the impact that CSR has on CFP before and after introducing R&D as a control variable. Before the introduction of R&D they found the relationship to be positive; after controlling for R&D expenses "*CSP is shown to have a neutral effect on profitability*" (McWilliams & Siegel, 2000). It is highly demonstrated that CSP and R&D are deeply correlated, thus the idea of introducing R&D as a control variable it is well accepted (McWilliams & Siegel, 2000; Lin, Yang, & Liou, 2009; Padgett & Galan, 2010).

The other variable is the market location. It is quite intuitive to understand how the country in which a company is settled can have different influences on firms' everyday life. The external pressures coming from governments, stakeholders and all the agents that enter in contact with firms change among countries: there are different legal and political constraints, different cultures and different mentalities (recall the discussion about the different interpretations of CSR among countries in the previous chapter). To overcome this problem, the companies grouped in my sample have their headquarters all settled in the United States.

3.4.4. Sample Size

Another cause of the mismatch in the previous literature is the chosen sample for the analysis. I already mentioned one sample problem: the industry in which a company operates. Now I will discuss the issue linked to the size of the sample.

Not only in this context, but whenever a study is made or a survey is conducted (from the financial world to the marketing one), the sample size is an important feature of any empirical study. It is supposed to be a representation of a bigger population that would be too hard to measure; if the sample is too small it loses significance, which means that the results cannot be extended to the whole population since the chosen sample is not representative of it (Mahlotra, 2007). Cochran and Wood (1984) state that "*most of the previous work in this area employed samples that were too small to result in any safety generalizable results*"; Waddock and Graves (1997) highlight the "*clear need for a multidimensional measure applied across a wide range of industries and larger samples of companies*". Other authors (e.g. Allouche & Laroche, 2005; Chand, 2006) underline how crucial is the choice of the sample, stating that the bigger, the better. As a matter of fact, during the search of data it can happen that some companies miss relevant data and therefore they are excluded from the sample. If the initial sample is not big enough, at the end of the data search the risk is to end up with a sample too small.

The determination of the sample size is not an easy work; a lot of factors have to be taken into consideration. Factors like the nature of the research, the number of variable included in the analysis, the sample sizes used in similar studies and the constraints linked to time and money to spend, are all considerations that should be done when determining the sample size (Mahlotra, 2007). I made all these considerations when deciding which sample to use; but I have to say that in my case my choice was mostly drove by the constraints linked to the accessibility of resources and data. Looking at the previous studies (Appendix III shows an extract of Beurden and Gössling's literature review in which they explicate the size of the samples used in previous studies), it can be noticed that there are authors who used samples far bigger than mine, but still there are some studies (e.g. Oyeono, Samy & Bampton, 2001; Griffin & Mahone, 1997; Waddock & Graves, 1997) that used reduced samples, closer to the size of mine. In particular for this reason, I can state that my sample is significant. My initial sample was made up of 500 companies, which fell to 322 after the data collection.

3.4.5. Direction of Causality

In this chapter I will analyze the last key issue that has been faced in the previous literature: the direction of causality of this relationship. Is that CSP influences CFP or it is the other way around? Again, the answers given to these questions are not clear.

In their study, Waddock and Graves (1997) divided all the authors who studied the relation of causality into two groups; the division was based on the choice of the dependent/independent variables. The slack resources theorists argue that when financial performance is positive and so some "slack resources" are available it is easy that a company invests them in socially responsible actions. According to these theorists, it is then financial performance that influences CSP. On the other side, supporters of the good management theory argue that social performance influences the financial one: this happens because a greater attention to CSR themes helps the relationship, and draws the attention of different stakeholders, resulting in a better financial performance. For example, an improvement in the relationship with employees can lead to a better morale, satisfaction and so productivity (Waddock & Graves, 1997).

Preston and O'Bannon's study (1994) empirically supports the slack resources theory (together with the possibility of a synergetic effect between the two variables): the authors made a broad study to understand both the sign of the relationship between CSP and CFP (which was found always positive) and the direction of causality. Even though the results supported all the hypotheses (the one which prevented a positive sign of the relationship), the most significant hypothesis is the one that supposed that the causal relationship is from financial to social performance. On the other side, there are many theorists who used financial performance as the dependent variable, and found an empirical support (McGuire, Sundgren, & Schneeweis, 1988; Griffin & Mahon, 1997; Graves & Waddock, 2000).

Waddock and Graves (1997) test both possibilities, placing, first CFP and then CSP, as the independent variable. Their results suggest the possible existence of what they defined as a *virtuous circle*. In this virtuous circle CSP and CFP are synergetic: "*better CSP, based on these findings, seems to be positively related to better financial performance, whichever measure we choose as the dependent variable*".

On this topic as well there is no agreement: there are empirical demonstrations of a positive relationship between CSP and CFP either using one or the other as the independent variable. Since this lack of agreement, it is better to test all the possibilities, using CSP and CFP as both depend and

independent variables. The reasons why it happens can be assimilated to the reasons why there is still no agreement on the sign of this relation.

Now that we have a full understanding of the relationship between social and financial performance and of all the issues linked to it, it is time to come into action. In the next section, I will explain how I dealt with all the problems discussed in this chapter and which methodology I chose to follow. I will also formalize the hypotheses that will be tested in the analysis chapter.

4. <u>Methodology</u>

From Theory to Practice

The rationale behind this chapter is to illustrate the study and methods I chose to test the relationship between CSR and corporate financial performance. In the previous chapters, I explained the concept of corporate social responsibility, making a complete overview about its development, theoretical implications and models. Then I moved forward to explain the connection between CSP (a measure of CSR) and CFP: I have analyzed the rich existing literature related to this topic and the key issues that have been highlighted by researchers. The next step is to create a model to empirically test all the concepts I mentioned above, in the attempt to answer to the research question(s).

Firstly, I will introduce my research philosophy. I will then explain how my sample is composed and the reason behind my choice. Subsequently I will illustrate the process of the data collection. I will express the hypotheses on which the analysis is based and then the empirical model will be presented; I will provide a deeper explanation of each variable, underlying the rationale behind the choice of some variables and not some others.

4.1. Research Philosophy

The primary objective of this thesis is to empirically test the relationship between CSP and CFP; for this reason, I thought that a quantitative approach would have best answered to the research question. Since "*theory cannot be generated without data, and data cannot be collected without a theoretical framework*" (Swartz, Money, Remenyi, & Williams, 1998), a strong theoretical background supports the empirical research in this thesis. In a good work there should be a balance between theory and empirical research: both are central to obtain a well done outcome (Swartz, Money, Remenyi, & Williams, 1998). Since the starting point is the theoretical framework, from which the hypotheses and the model are derived, the research method is the deductive one. The deductive method contrast the inductive one, in which there is a specific starting point which then leads to the creation of a general theory. To empirically test the CSP/CFP relation, I will use a series of statistical regressions.

4.2. Choice of the Sample

One of the most crucial steps in an empirical, and not only, research is the choice of the unit of analysis. This choice can affect the whole study if it is not made in the right way. My objective was to create the most exhaustive sample as possible, in order to have a better representation of the whole population. I have already mentioned in the previous chapter how important is to have a big sample: if it is not of an acceptable size, the risk is to end up with an insignificant sample that can negatively affect the whole research (Malhotra, 2007).

The sample I chose is made up of 322 companies. Initially, my sample was composed by the 500 companies belonging to the Fortune 500, which is a list compiled and published by the Fortune magazine; this list includes the top 500 U.S. companies ranked by their gross revenues. One of the reasons that drove my sampling choices is that, as a student, I have access to limited sources of information; by choosing a sample made up of the biggest U.S. companies it would have been easier for me to collect both social and financial data. Despite this, the number of companies has sharply decreased (from 500 to 322), because some relevant data were missing (with relevant data I mean CSP or CFP data, if some control variables' data was missing I kept the company in the sample). Another reason is that collecting social data is not as easy as collecting the financial one: in order to avoid problems in the data-gathering process, I thought that choosing well-known and economic important firms like the one in the Fortune 500, would have helped me to find CSR data without any complication.

I have created the dataset with the companies name manually. I used ORBIS, a database containing comprehensive information on companies worldwide, to create the companies' list. The first step was to search the companies using their TICKER symbol. The TICKER symbol is an abbreviation to identify publicly traded shares of a particular stock on a particular stock market. After this first step, I ended up with a list containing far more companies than 500. Since all the companies in the Fortune 500 are located in North America, to identify the right ones, I sorted these companies by the country. Since there still were some duplicates, I have manually deleted the extra companies that were in the ORBIS output list, crossing it with the Fortune 500 companies' names. Other companies were missing in the ORBIS list due to different reasons: sometimes they recently delisted (and so impossible to be found using the TICKER symbol), or they changed name (e.g. *Sara Lee Corporation* changed its name in July 2012 into *Hillshire Brands*): to be sure of picking and deleting the right companies I've searched them online. After all these steps my sample was

ready. As mentioned before the initial sample was made up of 500 companies; during the data collection, the companies have fallen to 322. From now on when I talk about my sample, I will refer to the 322 companies.

I have already outlined how different authors found out problems concerning the sampling technique in previous studies; the main issues were the size of the sample, the industries in which the companies belong and the market location of the companies. As said at the beginning of the paragraph, the sample size issue is solved: I have chosen a big sample that can be considered significant (see the previous chapter and Appendix III). The market location problem is solved as well, since all the companies in my sample are settled in the United States. Concerning the last issue, the firms that compose my sample operate all in different industries; even if I have used "industry" as a control variable, still this is a limitation of my study. To partly overcome this problem, I have decided to make a second smaller analysis, to investigate if the relationship between CSP and CFP holds both in a mono-industry study and in a multi-industries context.

After creating the sample, I had to gather all the necessary data. As it should be clear by this time, for the purpose of my study I needed to collect both social and financial data, as well as information to construct the control variables. In the subsequent paragraph I will explain this process.

4.3. Data Collection

Due to the nature of my thesis, the data-collecting phase can be divided into two steps. The first step concerns the gathering of the financial data, while the second is about the collection of the CSP data. Before explaining how I have faced these two steps, I want to make a precision about the period of the analysis: the data collected to measure the CSP came from the 2010 KLD. For this reason, also the financial data downloaded from ORBIS belong to this period. The whole analysis in made in this time period.

To collect the financial data I have used ORBIS. As already mentioned, ORBIS is a product of Bureau van Dijk, a leading provider of global business solutions[14]. ORBIS in particular, is a database containing all the relevant information of companies all over the world, created with the integration of all the information gathered by the main international information providers[15].

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[14] Bureau van Dijk, General Information: http://www.bvdinfo.com/Home.aspx?lang=it-IT
[15] Bureau van Dijk, Company Information Around the Globe: http://www.bvdinfo.com/Products/Company-Information/International/Orbis.aspx

After the construction of the sample, I end up with a list of 322 companies with their TICKER symbols. To create the dataset with the information I needed, I uploaded this list on ORBIS. I have then started to create my dataset. For this purpose, I searched both the financial and not financial data I needed. For example, regarding the "size" control variable, I needed the information about the number of employees; I wrote "number of employees", ticked the column, selected the years, and added it to the dataset. I repeated this process for all the financial information I was looking for and to seek all the other non-financial variables I needed (such as the codes that helps me to recognize the industries in which the companies operate). I experienced some problems only with the values of the R&D variable: on ORBIS I could only find the values for 82 companies. If I had used these values when making the regressions, all my results would have been distorted. To solve this problem I sought the R&D data on another database: Bloomberg. On Bloomberg I found a lot more R&D data (223) and I added it to the dataset.

After collecting all the data I needed, I have exported the created list in excel, using the ORBIS *export function*. The subsequent step consisted in the creation of those variables that I could not find on ORBIS. For example, it does not contain some accounting variables, such as ROS (Return on Sales); ROS is calculated as EBIT on sales: therefore, I downloaded from ORBIS these two variables and calculated the return on sales for the whole sample. I have followed this process for all those variables that I could not find already calculated (e.g. firm's equity, debt to asset ratio, Tobin's Q). Once I finished, in my excel file I had a list of all the 322 companies, with their names, different codes to identify them (e.g. TICKER symbol, BvD Identification number), the industries identification code, and all the financial data useful to measure the CFP and to calculate the control variables.

After the construction of the dataset, I uploaded it on SAS. SAS is a statistical software which allowed me to convert the excel file into a statistical language recognized by STATA. STATA is another statistical software created in 1985 by StataCorp[16]. STATA provides *integrated statistics, graphics, and data-management solution for anyone who analyzes data[17]*. This is the statistical software I used for the econometric analyses.

After importing the dataset on STATA, I collected the CSP data, in order to uploaded them on STATA as well and be able to start the analysis. By this time, it should be clear that to measure the

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[16] STATA, Data Analysis and Statistical Software http://www.stata.com/
[17] STATA, Company Profile, Stata Corp. LP: http://www.stata.com/company/

CSP I decided to use the KLD database. For all the reasons already expressed in the previous chapter, the KLD seems to be so far the best approximation measure for CSP. I have already discussed this measure and I will again in the next paragraph; here it is necessary to say how the KLD works and how I have integrated it with the financial data.

Here it is necessary to make a clarification and to introduce the MSCI (Morgan Stanley Capital International) ESG (Environmental, Social and Governance) STATS (Statistical Tool for Analyzing Trends in Social and Environmental Performance). MSCI is a leading provider of investment decision support tools[18]. In 2009 the KLD Research and Analytics company was sold to RiskMetrics, which was consequently acquired by MSCI in 2010[19]. As the new owner of KLD, MSCI renamed it as ESG. Thus, the new provider of the social ratings is now MSCI ESG Research: they provide annually the ESG STATS spreadsheet, consisting of a snapshot of the social and environmental situation of a company at the end of a given year[20]. From now on ESG and KLD STATS will be used as synonymous. Since 1991, when the KLD was created, the number of the companies covered, increased from 650 to more than 3000 (KLD Research and Analytics, 2008).

The yearly-published EGS STATS spreadsheet contains the following information:

- Companies Identifiers:

    Unique Company ID   Company Official Name
    TICKER Symbol   CUSIP

- Over 50 ESG strength and concern indicators across the seven categories:

    Governance   Environment
    Community   Human Rights
    Diversity   Product
    Employee Relations

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[18] Morgan Stanley Capital Information, General Information: http://www.msci.com/
[19] Environmental Finance (2010), MSCI Takes Over KLD's ESG Indexes, http://www.environmental-finance.com/news/view/1307
[20] Morgan Stanley Capital International, MSCI ESG Historical Data and STATS: http://www.msci.com/products/esg/stats/

-   Concerns for the six controversial business issues:

Alcohol	Military
Firearm	Tobacco
Gambling	Nuclear Power

-   Summary counts for each strengths and concerns of each category

The seven major dimensions are defined with both positive and negative aspects (strengths and concerns), while for controversial business areas only negative ratings have been included, since if a company is involved in such businesses there is no way it can be a positive thing.

The data in the spreadsheet are displayed with a binary representation: if a company demonstrates strength in one analyzed area it is shown with a "1", if it lacks strength, there will be a "0". In the same and opposite way, if a company shows raising concerns in those areas, it will be displayed with a "1", if not with a "0". For the concerns of the controversial business areas, it works in the same way. Thus, in the strength sub-dimensions "1" is preferable to "0", while for the concerns it is the opposite. The overall score of a company it is given by the number of its concerns (negative number) plus the number of its strengths (positive number). If a company is not evaluated on a particular area it is shown with "NR" (Not Rated) to indicate the missing value.

In each dimension then strengths and concerns are subdivided into other small indicators that are a representation of the main one. For example, the "community" parameter's strengths are subdivided into four categories: charitable giving, innovative giving, community engagement and other strengths. Each of these indicators is identified in the excel spreadsheet by an abbreviation: e.g., "charitable giving" is written as "COM-str-A". In the next paragraph, I will give a comprehensive explanation of the seven dimensions in terms of all strengths and concerns sub-categories.

4.3.1. The KLD/EGS Dimensions

As already pointed out in the previous chapter, during history KLD's dimensions have changed. Some sub-categories were eliminated/added when KLD was acquired by MSCI and other long before this acquisition. In this paragraph I will review the categories included in the "new KLD", because they are the one included in my database. Appendix IV shows all the changes occurred in the categories before and after the change in property of the KLD.

(1) <u>Corporate Governance</u>

The strengths of this dimension are just two: *transparency strength* and *public policy strength*. As mentioned above these categories are indicated in the excel spreadsheet with an abbreviation: respectively, the first one is CGOV-str-D, while the latter is CGOV-str-F. Transparency strength refers to the ability of a company in reporting on its CSR or sustainability efforts. Public policy strength measures the firm's support to those initiatives that have a remarkable impact on the environment, communities, employees or consumers.

The concerns of governance are grouped into four indicators. The first is *transparency concern* (CGOV-con-H) that is the mirror of the transparency strength: in this case we will find a "1" on the spreadsheet when the company is weak in reporting. Always following the strengths indicators, the second sub-category is *public policy concern* (CGOV-con-J): it evaluates when a company lacks of support to those public policies mentioned before. Another concern is *governance structure controversies* (CGOV-con-K): this indicator assesses the severity of controversies taking into considerations executives compensation and governance practices inside the firm. The last sub-category is *other concerns* (CGOV-con-X) that includes all the other corporate governance's controversies that are not covered by the other KLD's indicators.

(2) <u>Community Relations</u>

Four indicators represent community's strengths: *charitable giving* (COM-str-A) concerns the degree of how much a company has given to charity. *Innovative giving* (COM-str-B) is about donation to NGOs, in particular the 25% of its profit or more must be donated to have a positive score in this dimension. The *community engagement* (COM-str-H) evaluates the level of involvement of a company with its community. Finally, *other strengths* (COM-str-X) will grant a positive score whenever a company carries out remarkably donation in-kind programs or perform notably positive community activities.

The only concern takes into consideration in this dimension is the *negative economic impact* (COM-con-B). What it evaluates it is quite clear from the name of the indicator itself: the economic impact that a firm has on the community, meaning every action that influences in a negative way the quality of life of the community.

(3) <u>Diversity</u>

Many strengths indicators analyze the diversity dimension. *Promotion* (DIV-str-B) concerns the progress that a company has made in the promotion of women and minorities, both inside and outside the company. The *board of directors* (DIV-str-C) indicator measures the composition of the board of directors, in which women, minorities or disabled must hold some seats. *Work/life benefits* (DIV-str-D) concerns the engagement of the company in programs aimed at solving some work and life concerns, such as childcare, elder care or flextime. The subsequent indicator is DIV-str-E that stands for *women and minority contracting*: to get a positive score in this category, a company should have stable and strong business relations with women- and/or minorities-owned businesses. Another indicator is *gay and lesbian policies* (DIV-str-G) which concerns the company's commitment toward its gay and lesbian employees. The *employment of underrepresented groups* (DIV-str-H) category measures the company's effort to promote diversity in its workforce. Last but not least we have the *other strengths* (DIV-str-X) category in which are included all the other efforts to promote diversity that are not included in the other KLD's indicators.

Diversity's concerns are divided into three subcategories: *controversies* (DIV-con-A), *non-representation* (DIV-con-B) and *board of directors* (DIV-con-C). The first indicator measures the involvement of a company in controversies, which resulted into the payment of fines or civil penalties. The second concerns the diversity in the company's workforce and it can be seen as the mirror of the underrepresented groups. The last category evaluates the non-presence of women in the board of directors or among its senior line managers.

(4) <u>Employee Relations</u>

This category is subdivided into many indicators, for both strengths and concerns. Starting from the strengths, we find at first *union relations* (EMP-str-A) which measures the company's progresses in its relations with its unionized workforce. EMP-str-C stands for *cash profit sharing*; in this case the score will be positive if the company has a good cash profit sharing program through which it makes distributions to the majority of its workforce. The third indicator is *employee involvement* (EMP-str-D) that is reached trough different instruments, such as stock options, gain sharing, sharing of financial information, involvement in management decision-making. Then we find the *health and safety strength* (EMP-str-G) category which simply evaluates if the company has strong health and safety programs. A new sub-category that was introduced in 2002 is *supply chain policies, programs and initiatives* (EMP-str-H): this indicator assesses a firm's policies and

management systems designed to monitor the human and labor rights of all suppliers and contractors. Finally, we have the *other strengths* (EMP-str-X) sub-category, which as usual covered all those employee relations' issues that are not included in the other dimensions.

For the concerns, employee relations category is evaluated by four sub-categories. These four indicators are the exact mirror of some of the sub-categories already seen in the strengths' list; for this reason I will just list them without adding any further explanation. The concerns indicators are: *union relations* (EMP-con-A), *health and safety concern* (EMP-con-B), *supply chain controversies* (EMP-con-F) and *other concerns* (EMP-con-X).

     (5) <u>Environment</u>

Environment is the dimension with the largest number of indicators; let's start from the strengths. *Beneficial products and services* (ENV-str-A) measures the portion of revenues that is derived from products or services that have some kind of environmental benefits. The subsequent two sub-categories are self explaining: *pollution prevention* (ENV-str-B) and *recycling* (ENV-str-C). A company is then evaluated on the level to which it contributes to climate change and air pollution, for example through the use of renewable energy; this category is labeled *clean energy* (ENV-str-D). The next indicator is *management systems* (ENV-str-G): it measures the firm's monitoring and management of its environmental practices. The last category as we can expect is *other strengths* (ENV-str-X).

The first subcategory of the concerns is labeled *regulatory problems* (ENV-con-B) and it evaluates if a company has ever violated some environmental regulations. The *substantial emissions* (ENV-con-D) indicator measures the level of toxic chemicals emissions. We then have the *climate change* (ENV-con-F) category, which measures the severity of climate change controversies related to firm's policies and initiatives. The next indicator is the *negative impact of products and services* (ENV-con-G) and it measures the negative impact that the company's products and services can have on the environment. ENV-con-H stands for *land use and biodiversity* and it concerns the use of natural resources. The subsequent one concerns the level of non-carbon emissions of a company and it is labeled *non-carbon emissions* (ENV-con-I). Finally we have the *other concerns* (ENV-con-X).

(6) Human Rights

The first strength is expressed by the *indigenous people relations strength* (HUM-str-D): this indicator concerns the relations that a company has established with indigenous people, both inside and outside U.S.; they must respect the land, culture, human rights and intellectual property of indigenous people. In the sub-category of *others strengths* (HUM-str-X) companies gain a positive score if they are particularly active in some activities concerning the human rights in general.

The first concern is labeled *Burma concern* (HUM-con-C) and, as understandable, it measures the company direct investments or operations in Burma. The next category measures exactly the same but in Sudan (*Sudan concern*, HUM-con-H). *Other concerns* (HUM-con-X) is the same, and opposite, of other strengths.

(7) Product Characteristics

The first strength of this dimension is *quality* (PRO-str-A) and it evaluates the level of the quality programs of companies. The second sub-category concerns the provision of products or services for the economically disadvantaged and it is labeled *benefits for economically disadvantaged* (PRO-str-C). The third and last products' strength is the *access to capital* (PRO-str-D) which measures the positive impact of a company's products.

The first concern is about the *product safety* (PRO-con-A) that is strictly related to the quality of the products or services. We then have the *marketing/contracting concern* (PRO-con-D) that measures the level of controversy in which a company incurred linked to their marketing and advertisement activities. Then it is evaluated the level of controversies related to the company's anti-competitive business practices (*antitrust*, PRO-con-E). Finally we have the *other concerns* (PRO-con-X).

Above it is the summary of all the dimensions and sub-categories included in the excel spreadsheet. For each dimension, in particular for each strength and concern of each dimension, there is another column, labeled with an ash instead of the letter (e.g. PRO-str-# or HUM-con-#) which is the sum of the scores of the strengths or concerns of the related dimension.

The source of all these descriptions is the report issued by the KLD Research and Analytics in 2008; not all the new sub-dimensions were explained in this report since some were introduced after the publication of it. To gain information about the other sub-categories I have conducted a research on the web.

After calculating the CSP (in the Model paragraph I will explain how I did it), it was necessary to include this measure in the final dataset (the one created on STATA). I followed the same process I did for the financial data. I put the CSP data into SAS and then into STATA. The result was that I had two different STATA output, one for the financial data and the other for the CSP. Using the STATA function *merge*, I was able to put together these two outputs and to create an only and final database with all the needed information to start the analysis.

After explaining how I collected the data, it is time to formalize the hypothesis I have formulated in order to answer to the research question(s).

4.4. The Hypotheses

Let me recall the research question in which this all work finds its born:

Do Corporate Social Responsibility's activities have an impact on the financial performance of a company?

In the previous chapters I went through all the theoretical issues and answers that have been given to this question. I have already said, when comparing costs and benefits, that from a theoretical point of view, it seems that CSR can actually have a positive impact on financial performance. My aim is to empirically test this concept.

By now, it should be clear that the first objective of this thesis is to test the relationship between CSP and CFP. There are different themes that I want to test and verify (e.g. the direction of causality), but the first issue I want to address is the sign of the relationship. I want to verify if companies that engage in CSR are more profitable than those which do not. As a result, the first hypothesis is:

Hypothesis 1 (hp1): *Corporate social performance has a positive impact on corporate financial performance. The sign of this relationship is therefore positive*.

In other words, it means that a higher level of social responsibility lead to a higher level of financial performance. Here I assumed that CSP and CFP are positively correlated; historically, when testing this relationship, researchers expected different and mixed outcomes: I believe that the initial cash outflow that companies have to bear when engaging in CSR is minimal compared to the potential benefits that can derive from it. For this reason I expect a positive sign in the regression. Those researchers (e.g. Aupperle et al., 1985) who expected negative results believed that the initial costs

are substantial, that they can be avoided or they should be borne by others, e.g. governments; according to them there is no reason in engaging in CSR, since these costs will lead to a competitive disadvantage (Waddock and Graves, 1997). Other scholars (e.g. Ullman, 1985), stated that, simply, CSP and CFP cannot be compared because there are too many elements to take into consideration that can bias the results (Griffin and Mahom, 1997). These researchers expected from the analysis a neutral result. They affirmed that the positive/negative results that other researchers found, happened by chance.

The other issue that emerged in my review is the direction of causality. In the previous chapter, I have explained the problems linked to this topic. Some researchers think that financial results influence social performance: if you have some extra resources (slack resources), you can invest them into social responsible plans. Others, on the other side, affirm that CSR's investments draw stakeholders' attention, resulting in a better relationship with them that leads to a better financial performance (good management theory). The first hypothesis I made, implicitly supports the good management theory, since the independent variable is CSP. To understand which is the relation of causality, I need to make a second hypothesis, in which CFP is the variable able to influence CSP. Again, I expect a positive relationship between the two variables. Therefore, the second hypothesis is:

Hypothesis 2 (hp2): *Corporate financial performance has a positive impact on corporate social performance.*

Comparing and combining the results of this second hypothesis with the ones of the first hypothesis, I will be able to state which is the relation of causality.

Among the literature's key issues that I analyzed, I think it would be interesting to focus my attention on the industry in which a company operates. There is a certain level of agreement among researchers: it seems that industry is an important variable which can bias in a definitive way the CSP/CFP relationship. For this reason the great majority of scholars suggest to make these studies in a mono-industry context, but despite that, there is a lack of mono-industry studies. Since my lack of resources, it was impossible for me to find a significant mono-industry sample on which I could make my whole analysis. That is why I have decided to divide the analysis into two parts: the first part is about testing the sign and the direction of the relationship between CSP and CFP (hypothesis 1 and 2) on the whole sample (322 companies coming from different industries); the second part anticipates doing the same, but on a mono-industry situation. In the first part, industry is used as a

control variable. In the second part I will re-test the first two hypotheses using two sub-samples. Using the North America Industry Classification System (NAICS), I will explain later what it is and how it works, I found out that in the *manufacturing* industry (NAICS 31-35) and in the *retail trade* one (NAICS 44-45), there are more companies than in the other industries. The manufacturing sector in particular is made up of 142 companies, while the retail trade of 44. This difference in the samples composition must be taken into account when analyzing the results. The principle of "the bigger, the better" applies even here, so a bigger sample would be more desirable but still these numbers allow me to conduct a significant study.

I will test the first two hypotheses both in the manufacturing and in the retail trade samples and then I will make a comparison of the obtained results. If in both the sub-samples the first two hypotheses are verified, the third one will be refused. The third hypothesis is:

Hypothesis 3 (hp3): *the variable industry works as a confounding variable in the relationship between CSP and CFP*.

After formalizing the hypotheses, I will express the model I have used to test them. In the next paragraph, I will comment on the model and on each variable composing it. I will explain the choices I have made concerning the issues presented in the previous chapter.

4.5. The Model

To test all the hypotheses I used a regression model. The regressions model is always the same; what will change is the role of CSP and CFP (as dependent or independent variables) and the one of the control variables: the variable industry will be used as a control variable to test the first two hypotheses (hp1 and hp2) and then will be removed from the equation for logical reasons; in the second analysis also the R&D expenses will be removed, due to a lack of data. In the sample selection paragraph I have explained that I did not delete those companies that were missing some not-relevant data; in the bigger sample this is not a huge concern, but in a sample made up of 44 companies, each data is crucial in order not to reduce the sample even more.

To test the hypotheses I have decided to use multiple linear regressions models using cross-sectional data. Linear regressions are an econometrics instrument useful to test a theory or estimate a relationship. Multiple regressions refer to an equation in which the dependent variable depends on more than one factor (Wooldridge, 2002). The general equation of this kind of model is:

$$y = f(\beta_1 x_1, \beta_2 x_2, \dots, \beta_k x_k) + u \quad [21]$$

where y is the dependent variable, and $x_{1,k}$ are the independent one. The constants $\beta_{1,k}$ are the parameters of the econometric model and they describe the strengths and directions of the relationship taken into consideration. The term u represents the unobserved error; no matter how many control variables are used in the regression, there will always be a certain degree of error (expressed by u) that can never be eliminated entirely.

When using a regression model different types of data set can be used. In my case I have used a cross-sectional data set: it "*consists of a sample of individuals, households, firms, cities, states, countries, or a variety of other units, taken at a given point in time*" (Wooldridge, 2002). The particularity of this kind of data is that they are collected in the same time period. In my analysis the time period is 2010.

The equation to test the first hypothesis is:

$$CFP_i = f(CSP_i, SIZE_i, industry_i, RISK_i, R\&D_i) + u \qquad (1)$$

The equation to test the second hypothesis is:

$$CSP_i = f(CFP_i, SIZE_i, industry_i, RISK_i, R\&D_i) + u \qquad (2)$$

The equations to test the third hypothesis are:

$$CFP_i = f(CSP_i, SIZE_i, RISK_i) + u \qquad (3)$$

$$CSP_i = f(CFP_i, SIZE_i, RISK_i) + u \qquad (4)$$

Now I will singularly explain and analyze each variable.

4.5.1. CFP Measurement

Concerning the measure of financial performance, there are some issues linked to which kind of measure, if an accounting or a market one, best suits this situation. Accounting measures only catch the effect that, in this case CSP, has on past performances (Margolis & Walsh, 2002; McGuire, Sundgren, & Schneeweis, 1988); on the other side, the use of market measures give a better evaluation of the firm's capacity of generating future cash flows (McGuire, Sundgren, &

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[21] Wooldridge, Jeffrey M., 2002, Introductory Econometrics: A Modern Approach, South-Western.

Schneeweis, 1988). In general, both (1) accounting and (2) market measures have their pros and cons. Following Margolis and Walsh (2002) suggestion, I have decided to make my regressions using both kinds of measures.

(1) Following the literature (e.g. Ruf et al., 2001; McWilliams & Siegel, 2000; Griffin and Mahone, 1997; Preston & O'Bannon, 1997; Waddock & Graves, 1997), for the accounting measures, I have decided to test the equation using the return on equity (ROE), the return on asset (ROA) and the return on sales (ROS).

Concerning ROE, it is a measure of companies' profitability, which express how much profit the company generates with shareholders' invested money; it is expressed as a percentage: the higher the percentage is, the better the company is using the invested capital (Dallocchio & Salvi, 2005). ROE is calculated as:

$$ROE = \frac{\frac{P}{L} \, before \, TAX}{Shareholders \, Equity} \, x100$$

I have downloaded this formula from ORBIS. In general, ROE can be calculated in two different ways: ROE using Profit/Loss (P/L) before Tax (the one calculated above) and ROE using Net Income. I decided to use the first one because it is a better measure of companies' profitability since it is calculated before tax. Some companies (according for example to the sector in which they operate) can be subject to different taxation systems and so, if using net income to calculate it, the result can be skewed.

The other accounting-based measure is ROA. This is another measure of profitability, relative this time to the company's total assets. It measures how efficiently the management uses its total assets to generate profits (Dallocchio & Salvi, 2005). ROA is expressed as a percentage. Even ROA, and for the same reasons as ROE, it is calculated using P/L before tax instead of Net Income:

$$ROA = \frac{\frac{P}{L} \, before \, TAX}{Total \, Assets} \, x \, 100$$

This formula as well was directly downloaded from ORBIS.

The last accounting measure of performance used is ROS. The return on sales is a measure of operational efficiency; it estimates the company's economic efficiency in relation to its sales. I did not find this measure on ORBIS, so I have downloaded from the database the necessary data and calculated it on excel before importing the list on STATA. ROS is expressed as a percentage and it is calculated as follow:

$$ROS^{22} = \frac{EBIT}{Sales} x100$$

(2) For the market-based measure, I have decided to use the Tobin's Q indicator. Among literature the market measures used are different; if for the accounting one there is a certain level of agreement (the great majority of researchers used indicators like ROA and ROE), for the market measures the frame is more fragmentized. I have decided to use Tobin's Q mainly following Cavaco and Crifo (2009). Tobin's Q is a measure of return based on the stock market (Cavaco & Crifo, 2009) and it is calculated in the following way:

$$Tobin's\ Q^{23} = \frac{equity + total\ debt}{total\ asset}$$

The Tobin's Q is a good market measure because is a neutral indicator; it is more sensitive to variations "*that may be independent of the operations and social activities of and which can affect market values. The Tobin's Q is more dependent on industry-specific factors*" (Cavaco & Crifo, 2009). When Tobin's Q value is bigger than one, it means that the company has a convenience in making new investments, since the profit generated would exceed the cost of firm's assets; on the contrary, when it is smaller than one the company would be better selling off its assets, since the cost of them is higher than their replacement.

On ORBIS the Tobin's Q measure does not exist already calculated; I have followed the same process as ROS to calculate it. From ORBIS I have downloaded the data I needed, and in particular:

- Equity is calculated as the value of the market price at the end of the year times the number of the outstanding shares;

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[22] Dallocchio M. & Salvi A. (2005) Finanza d'Azienda, EGEA
[23] Cavaco, S., & Crifo, P. (2009). The CSP-CFP missing link: complementarity between environmental, social and governance practices? Journale of Economic Literature.

- Total Debt is given by the sum of long-term debt and short-term debt;
- Total Asset is the sum of all the assets of a company, and so fixed, current and non-current assets.

I have decided to measure CFP with different indices in order to have a general overview of it. All these measures evaluate a different perspective of the company's financial performance and for this reason I do not expect positive results from all of them. What I do expect when testing the hypotheses is to have a positive result overall.

Now let's see the process which led to the measure of CSP.

4.5.2. CSP Measurement

After having fully explain how the KLD works, it is time to understand how from the KLD can be calculated the final measure for CSR. I have said that the overall score of a company is given by the sum of its strength and its concern. The overall score calculated in this way though, can distort the results. This happens because not all the companies have the same number of strengths and concerns. To solve this problem, I followed the method proposed by Mănescu (2011). She suggests to make an average, summing up the strengths and concerns of to the total number of strength and concern indicators in a particular dimension. Let me use an example to give a better understanding. The screenshot down here (Figure 4a) illustrate the Community dimension, with its strength and concern and all their sub-categories; the columns *Sum C* and *Sum S* represent the overall score a company gets in a dimension divided in strengths and concerns (this score is also expressed in the column labeled, in this case, COM-con/str-#). In the column *Count* the sub-dimensions are counted: e.g. community's strengths are four plus one concern (in the first line the count is only four since COM-str-X is not rated, and so not counted). Then to calculate the average, the columns *Sum C* and *Sum S* are summed, and then divided by the column *Count*.

Community Relations											
Concerns		Sum C	Strengths					Sum S	Count	Average	x Weight
COM-con-#	COM-con-B		COM-str-#	COM-str-A	COM-str-B	COM-str-H	COM-str-X				
1	1	-1	1	0	1	0	NR	1	4	0,000	0,000
0	0	0	2	0	1	0	1	2	5	0,400	0,059
0	0	0	0	0	0	NR	NR	0	3	0,000	0,000
0	0	0	2	0	1	1	0	2	5	0,400	0,059
0	0	0	0	0	0	0	NR	0	4	0,000	0,000
1	1	-1	0	0	0	0	NR	0	4	-0,250	-0,037
0	0	0	2	1	1	NR	NR	2	3	0,667	0,099
0	0	0	0	0	0	NR	NR	0	3	0,000	0,000
0	0	0	1	0	1	0	NR	1	4	0,250	0,037
0	0	0	0	0	0	0	NR	0	4	0,000	0,000
0	0	0	0	0	0	0	NR	0	4	0,000	0,000
1	1	-1	3	1	1	1	NR	3	4	0,500	0,074
0	0	0	0	0	0	0	NR	0	4	0,000	0,000
0	0	0	2	1	1	0	NR	2	4	0,500	0,074
0	0	0	0	0	0	0	NR	0	4	0,000	0,000
1	1	-1	2	1	1	0	NR	2	4	0,250	0,037
1	1	-1	0	0	0	0	NR	0	4	-0,250	-0,037
1	1	-1	0	0	0	0	NR	0	4	-0,250	-0,037
1	1	-1	2	0	1	1	NR	2	4	0,250	0,037
0	0	0	1	1	0	NR	NR	1	3	0,333	0,049

To calculate the final number, which is the measure of each dimension, I have then multiplied the average for the weights. When talking about CSP, I have already outlined that one of the limitations that researchers recognized in the KLD is the lack of a weighting system for the dimensions. According to these authors (e.g. Waddock and Graves, 1994; Wood and Jones, 1995; Griffin and Mahon, 1997), some categories are more important than others, and so it is necessary a weighting system to underline these differences within the dimensions. I do not have any expertise in this field, other than the researches made for this thesis, and so I cannot create alone a proper weighting system; thus, I have decided to follow Waddock and Graves (1997) study. They felt the need of having proper weights for each dimension, and so they asked to some experts to assign these weights. The figure below shows the results.

Figure 4b: Weightings of CSP attributes by experts in Waddock and Graves

Source: Waddock, S. A., & Graves, S. B. (1997). *The Corporate Social Perfomance-Financial Performance Link.* Strategic Management Journal.

Weight	Attribute
0.168	Employee relations
0.154	Product
0.148	Community relations
0.142	Environment
0.136	Treatment of women and minorities
0.089	Nuclear power
0.086	Military contracts
0.076	South Africa

As you can recall from the theoretical framework, the dimensions existing at that time where slightly different: South Africa involvement, military contracts and nuclear power, do not exist anymore or are included in other dimensions (military contracts and nuclear power are two of the business controversial areas). The dimension named "treatment of women and minorities" only changed its name into "diversity". So how this weighting system can work on today's dimensions? For five categories (employee relations, product, community relations, environment and diversity), the weights used are the same proposed by Waddock and Graves (since the dimensions are the same). For the other two new dimensions, governance and human rights, I have decided to equally divide the weights of the no-more existing categories for two. This means that the weight of governance and human rights is 0.126, that is given by $(0.089 + 0.086 + 0.076)/2$.

The final score assigned to each category is in this way calculated, and it is visible in the column *xWeight* in the table above (Figure 4a). This is the CSP measure for each category. To calculate the total CSP for a company, it is simply necessary to sum the final score of each dimension (so all the columns *xWeight* of every dimension). Here it is necessary to specify that in my analysis I did not take into consideration the scores of the controversial business areas. I made this choice because in the overall calculation of the CSP they represent an extremely small part, since the great majority of companies reported positive scores in them. Another reason that led to this choice is that it was not possible to find a proper weight system for them.

4.5.3. Control Variables Measurement

I have already talked about all the issues connected to the control variables in the previous chapter; here I will explain how I have decided to measure them.

The first control variable is size. There are different ways to measure it. The most common ways to measure firms' size are *total assets* and *number of employees*. I have downloaded these data directly from ORBIS. The total assets is expressed in million of USD.

The other important control variable is the industry in which a firm operates. To identify the industry of each company I used the North America Industry Classification System (NAICS). The NAICS system was developed and adopted in 1997 by the Office of Management and Budget (OMB), to substitute, and integrate, the SIC (Standard Industrial Classification) system[24]. The SIC system is the ancestor of the NAICS: it was created in the 1930's and, even if less, it is still used[25]. One of the news introduced by the NAICS is that other than U.S. industries, it includes also Canadian and Mexican ones, in order to allow for a higher level of comparability among North American countries[26]. The NAICS system identifies industries by a 2 to 6-digit code (versus the maximum 4-digit codes of the SIC). The figure below explains the structure of the NAICS in relation to the number of digits:

Figure 4c: NAICS Hierarchical Structure

Source: http://www.naics.com/info.htm

XX	Industry Sector (20 broad sectors up from 10 SIC)
XXX	Industry Sub sector
XXXX	Industry Group
XXXXX	Industry
XXXXXX	U.S., Canadian or Mexican National specific

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[24] United States Census, North America Industry Classification System, Introduction to NAICS, http://www.census.gov/eos/www/naics/
[25] NAICS Association, The History of NAICS, http://www.naics.com/info.htm
[26] United States Census, North America Industry Classification System, Introduction to NAICS, http://www.census.gov/eos/www/naics/

All the codes made up of two, three, four and five digits are comparable among the three states mentioned before, while the six-digit codes may differ. For the purpose of my thesis, I have used the 2-digit code: I needed a broad division of companies in their main industry and so any further sub-division would have biased my results. With the NAICS system, my companies resulted divided into 15 different industries (out of the 20 existing in the NAICS), as diverse as mining, quarrying and oil and gas extraction (NAICS 21), finance and insurance (NAICS 52), health care and social assistance (NAICS 62), etc. Once I had all the companies divided into industries, I have created the industry dummy variable. The dummy variable is a variable that allows qualitative factors to become measurable, in this way they can be incorporated into the regressions (Wooldridge, 2002). The dummies work as binary variables; it means that they assumes value "1" to indicate the presence of the observation, and value "0" to indicate the absence.

When constructing a dummy, it is necessary to create a *base group* which is the group that will be used as benchmark. That means that when creating this kind of variables, one of the categories (in this case one of the industries) should not be included: the dummies in the regression should be equal to the number of the categories minus one (Wooldridge, 2002). If this condition is not respected, there would be a case of *perfect collinearity*: when including all the observation without creating a base group, the sum of all the dummies is equal to one (Wooldridge, 2002). This situation is often referred to as "dummy variable trap".

As anticipated earlier, the industries *manufacturing* (NAICS 31-33, 142 companies) and *retail trade* (NAICS 44-45, 44 companies) are the biggest one. For this reason, I have decided to use them for my mono-industry analysis.

The other two control variables have been quite easy to calculate. As a proxy of risk I have used the level of debt, calculated as long-term debt on total assets. I have downloaded these values from ORBIS and then calculated the level of debt on excel.

As already mentioned, the R&D expenses created me some problems: the values found on ORBIS were not enough; I have then used Bloomberg to make up for this lack.

In this chapter I have fully explained model I have used to reach my objective and I have deeper analyzed each variable contained in it. Now it is finally time to find an empirical result. In the next chapter, the one strictly concerning the analysis, I will explain how I have used all these data to reach my final purpose, that is to answer to the research question(s).

5. Analysis

In the previous chapter, I have shown the regression model and the data I have used to test the CSP/CFP relation. In this chapter, I will present the results and the relative discussion. Let me recall that the analysis is divided into two parts: in the first one, the hypotheses (hp1 and hp2) will be tested in a multi-industry sample. In the second one I will do a mono-industry study to test hp3.

Appendix V shows the descriptive statistics and Appendix VI shows the correlation matrix of all the variables taken into consideration.

5.1. Regression Analysis: Multi-Industry Context
5.1.1. Results

In this part, I will test hp1 and hp2 using equations (1) and (2):

$$CFP_i = f(CSP_i, SIZE_i, industry_i, RISK_i, R\&D_i) \qquad (1)$$

$$CSP_i = f(CFP_i, SIZE_i, industry_i, RISK_i, R\&D_i) \qquad (2)$$

Corporate social performance is measured with the KLD data, CFP is measured with both accounting (ROE, ROA and ROS) and market measures (Tobin's Q); the control variables are size (number of employees or total assets), the industry dummy variable, the level of risk (long-term debt on total assets) and the R&D expenses.

The table below (Table 5a) shows the results of the regression model (1), the one that considers CSP as the independent variable. The table has two columns to indicate whether the numbers of employees (1a) or the total assets (1b) are used as a proxy of the firm size.

The results showed in Table 5a confirm the hypothesis that corporate social performance has a positive impact on corporate financial performance. The coefficients are positive and significant: CSP positively influences the measures of profitability ROA and ROS ($p \leq 0.01$); the impact is still positive when using the Tobin's Q market measure, even if at a different confidence level ($0.05 < p \leq 0.1$). According to Orlitzky et al. (2003) CSP is more highly correlated with accounting measures rather than to market one, as show by my results (see Appendix VI, correlation matrix). Only when using ROE as the dependent variable the relation is no more significant, even if the sign is the same. In the attempt of understanding why when using ROE the

results are so different, I have firstly tried to test the relationship without control variables; subsequently, I have added the control variables one by one trying to understand if one of them was biasing the model. In this way I noticed that when the R&D variable is excluded from the regression, CSP is significant. As already explained, I was not expecting a positive result from all the indicators (that is also why I chose to use different measures for the CFP). My model does not address the relation between ROE and CSP as it explains the other ones. In the past literature is possible to find some examples that support this result. For example, Waddock and Graves's (1997) empirical study shows than when ROE is used as dependent variable the relationship is not significant.

The size control variable is never significant when using either accounting or market measures; the sign is positive in all but three cases. The variable risk in general is significant (not when using ROS) and negative (not when using ROE). This result perfectly fit the previous studies about the topic: the financial performance and the level of debt (remember that it is used as a proxy for risk) are inversely correlated, ceteris paribus. The R&D control variable assumes significance only when studied with ROS, otherwise it is always positive but not significant. When investing in R&D the final object is an improvement or an innovation of the products or services in order to have a return. Thus, when testing the relation between the CSP and the return on sales, we should definitely expect a positive and significant coefficient for the R&D variable (in case of a good investment). As it can be noted in the table below (Table 5a), the results of the industry control variable have been omitted (mostly for space reasons). In all the regression models studied the coefficient obtained are quite variable: as expected, some industries show a significant correlation while some other do not. Also the sign of the relation change between different types of industries. All these findings brought me to detect the existence of a sort of industry effect.

Table 5a: Regression Analysis Hp1

Variables	Regression Model (1a)	Regression Model (1b)
Dependent Variable		
ROE		
Independent Variable		
CSP	11.287	13.400
Control Variables		
Size		
Number of Employees	1.1e-05	

Total Assets		1.61e-08
Risk	22.345*	22.423*
R&D Expenses	0.0015	0.0014
Constant	3.209	3.445
R^2	0.10	0.10
F	1.53*	1.48*

Dependent Variable *ROA*		
Independent Variable		
CSP	13.417***	15.356***
Control Variables		
Size		
Number of Employees	2.85e-06	
Total Assets		5.54e-09
Risk	(7.383)**	(7.938)**
R&D Expenses	3.46e-04	2.54e-04
Constant	7.562***	7.809***
R^2	0.13	0.14
F	2.15*	2.37***

Dependent Variable *ROS*		
Independent Variable		
CSP	0.175***	0.181***
Control Variables		
Size		
Number of Employees	(2.06e-08)	
Total Assets		7.88e-11
Risk	(0.006)	(0.005)
R&D Expenses	1.62e-05***	1.47e-05***
Constant	0.118***	0.117***
R^2	0.35	0.35
F	7.57***	7.73***

Dependent Variable *Tobin's Q*		
Independent Variable		
CSP	0.971*	0.911*
Control Variables		
Size		
Number of Employees	(2.06e-07)	
Total Assets		(3.47e-09)
Risk	(1.424)***	(1.588)***

R&D Expenses	3.77e-05	7.48e-05
Constant	1.224***	1.301***
R²	0.24	0.26
F	4.31***	4.92***

Table 5b shows the results when testing hp2, changing the perspective. I now detect if the financial performance impacts the CSP. Here the model used is the (2). As before, in the regression model (2a) I used the number of employees as proxy for the firm size, while the model (2b) considers the company's total assets.

As in the previous case, this relation is positive and significant; the relationship between CFP and CSP is significant in all but the ROE case (the reasons why it happens are assimilated to the one discussed previously). When CFP is measured with the other accounting measures (ROA and ROS) the relation is still positive and significant at a confidence level of 99% ($p \leq 0.01$); when the Tobin's Q is used the sign does not change, but at a different confidence level ($0.05 < p \leq 0.1$). As mentioned before, this result can be expected.

The variable size has always a negative sign. The variable risk has positive sign in all but two cases. Neither of them is significant.

Lastly, in this model the R&D variable is significant and positive in all the models used. Here again, if we assume that the companies in the sample invest in R&D to be more sustainable and to embrace CSR principles, the positive correlation between CSP and R&D finds its why.

Table 5b: Results Regression Analysis Hp2

Variables	Regression Model (2a)	Regression Model (2b)
Dependent Variable		
CSP		
Independent Variable		
ROE	0.0002	0.0003
Control Variables		
Size		
Number of Employees	(3.39e-08)	
Total Assets		(2.14e-10)
Risk	0.005	(0.022)
R&D Expenses	2.08e-05***	2.23e-05***

Constant	(0.011)	(0.002)
R²	0.16	0.16
F	2.60***	2.58***

Dependent Variable		
CSP		
Independent Variable		
ROA	0.002***	0.003***
Control Variables		
Size		
Number of Employees	(3.51e-08)	
Total Assets		(2.00e-10)
Risk	0.021	0.005
R&D Expenses	1.95e-05***	2.09e-05***
Constant	(0.025)	(0.022)
R²	0.19	0.19
F	3.23***	3.36***

Dependent Variable		
CSP		
Independent Variable		
ROS	0.207***	0.221***
Control Variables		
Size		
Number of Employees	(2.38e-08)	
Total Assets		(2.02e-10)
Risk	0.005	(0.015)
R&D Expenses	1.69e-05***	1.84e-05***
Constant	(0.032)	(0.026)
R²	0.19	0.19
F	3.30***	3.32***

Dependent Variable		
CSP		
Independent Variable		
Tobin's Q	0.015*	0.015*
Control Variables		
Size		
Number of Employees	(2.26e-08)	
Total Assets		(1.45e-10)
Risk	0.026	0.006
R&D Expenses	2.00e-05***	2.1e-05***
Constant	(0.027)	(0.019)

R^2		0.16	0.16
F		2.77***	2.70***

Note: *** $p \leq 0.01$; ** $0.01 < p \leq 0.05$; * $0.05 < p \leq 0.1$.

5.1.2. Discussion

The objective of this first analysis was to empirically discover if corporate social responsibility is linked to financial performance, and in case of positive answer, which is the direction of the relation. First thing to be noticed is that among all the models the CSP coefficient were always positive and significant as it was expected; when ROE is used as measure of CFP the relationship is not significant, but not negative. According to the results CFP does depend on CSP, and vice versa. Thus, hypothesis 1 and hypothesis 2 are both verified, bringing to important implications for the direction of causality of this relationship.

As already largely explained in the previous chapters, this result is supported by many previous studies (e.g. Preston & O'Bannon, 1997; Waddock & Graves, 1997; Ruf et al., 2001; Barnett & Salomon, 2006). If on the one hand the sign of this relationship has been largely studied, on the other hand the direction of causality finds less literature support (and the results are obviously mixed). As already mentioned, the most complete study about it is the one conducted by Preston and O'Bannon in 1997. The results of their research support both the idea that the direction is from CFP to CSP, as well as the possibility of a *positive synergetic relationship*. This second possibility is in accordance with Waddock and Graves's finding of the 1997's study: as you can recall from the theoretical framework chapter, the authors suggest the possible existence of a *virtuous circle* between CSP and CFP. The results of my analysis support this thesis as well. The assumption that is CFP which influences CSP implies that when a company has resources in excess, it would be more willing to invest them in social responsible actions (recall "the slack resources theory", chapter 3); it is quite straightforward that a company in financial troubles would be less inclined to invest in CSR practices. When alternatively CSP influences CFP, it means that the management decides to undertake some social responsible actions that then turn into an increase in profits ("the good management theory", chapter 3); e.g. the improvement of the relationships with the employee can lead to an increase in satisfaction, morale and so productivity, or an engagement in a certain social activity can pleased the community, and so the clients, resulting in an increase in sales. These two theories are both empirically supported by my analysis: the two variables mutually influence each other.

5.2. Regression Analysis: Mono-Industry

In this section hypothesis 3 is tested using equations (3) and (4):

$$CFP_i = f(CSP_i, SIZE_i, RISK_i) \tag{3}$$

$$CSP_i = f(CFP_i, SIZE_i, RISK_i) \tag{4}$$

The objective of this analysis is to understand if it exists an industry effect which influences the CSP/CFP relationship. As largely explained in the previous chapter, I will test the model in two separate industries, the manufacturing and retail trade one. In this case I have decided to test the relationship using as measures of performance the return on assets and the return on sales. I have omitted ROE because of the abovementioned problems using this measure. The market measure used is again the Tobin's Q. The measures for size are always two (number of employees and total assets). As already discussed, the R&D variable has been removed from the model. I did that because there were some missing values. On a sample of more than 300 companies, some missing values are almost irrelevant (Malhotra, 2007), but on a sample made up of 44 companies the number can drastically fall, making the model insignificant.

5.2.1. Results

Table 5c shows the results of the regressions using equations (3) and (4) (following the same logic as before the model (a) and (b) indicate how the size is measured) in the manufacturing sector.

As can be seen in the table, when CSP is treated as the independent variable (3a and 3b), all the results are perfectly in line with the results obtained in the first analysis. In the manufacturing sector, the relation between CSP and CFP is significant and positive ($p \leq 0.01$), no matter what kind of CFP measures is used. It worth to be noted that in this case (unlike what happened in the first analysis), also when using the market measure for CFP the relationship is significant at the higher confidence level (99%): in fact, recalling the definition of the Tobin's Q from the previous chapter, this measure is more sensitive to industry-specific factors.

When CSP is treated as the dependent variable (4a and 4b) the relationship between CSP and CFP is positive and significant as well. This mono-industry study confirms the existence of a virtuous circle between CSP and CFP.

Table 5c: Regression Analysis Hp3, Manufacturing Industry

Variables	Regression Model (3a)	Regression Model (3b)	Variables	Regression Model (4a)	Regression Model (4b)
Dependent Variable			Dependent Variable		
ROA			*CSP*		
Independent Variable			Independent Variable		
CSP	14.335***	14.468***	*ROA*	0.003***	0.003***
Control Variables			Control Variables		
Size			*Size*		
Number of Employees	9.67e-06		*Number of Employees*	1.94e-07	
Total Assets		1.73e-08	*Total Assets*		8.03e-11
Risk	(15.252)***	(14.481)***	*Risk*	(0.020)	(0.022)
Constant	11.332***	11.161***	Constant	0.006	0.012
R^2	0.13	0.13	R^2	0.06	0.06
F	6.54***	6.99***	F	3.29**	2.99**
Dependent Variable			Dependent Variable		
ROS			*CSP*		
Independent Variable			Independent Variable		
CSP	0.225***	0.211***	*ROS*	0.378***	0.362***
Control Variables			Control Variables		
Size			*Size*		
Number of Employees	(3.22e-08)		*Number of Employees*	2.30e-07	
Total Assets		3.54e-10	*Total Assets*		7.88e-12
Risk	(0.122)**	(0.091)	*Risk*	(0.022)	(0.036)
Constant	0.139***	0.123***	Constant	(0.009)	0.004
R^2	0.12	0.14	R^2	0.10	0.09
F	6.11***	7.43***	F	5.24***	4.40***
Dependent Variable			Dependent Variable		
Tobin's Q			*CSP*		
Independent Variable			Independent Variable		
CSP	1.876***	1.842***	*Tobin's Q*	0.049***	0.049***
Control Variables			Control Variables		
Size			*Size*		
Number of Employees	(1.08e-06)		*Number of Employees*	2.69e-07	
Total Assets		(1.65e-09)	*Total Assets*		1.98e-10
Risk	(1.744)***	(1.834)***	*Risk*	0.028	0.032
Constant	1.539***	1.557***	Constant	(0.033)	(0.028)
R^2	0.18	0.18	R^2	0.11	0.10
F	8.99***	9.43***	F	5.18***	4.74***

Note: *** $p \leq 0.01$; ** $0.01 < p \leq 0.05$; * $0.05 < p \leq 0.1$.

Table 5d shows the regressions results of the analysis conducted in the retail trade industry. As it can be easily seen in the table, in all the cases the relationship between the two principle variables is no more significant. Some cases even show a negative relation, in particular when the Tobin's Q is used as measure of CFP. This happens because of Tobin's Q greater sensitivity to industry effects.

Table 5d: Regression Analysis Hp3, Retail Trade Industry

Variables	Regression Model (3a)	Regression Model (3b)	Variables	Regression Model (4a)	Regression Model (4b)
Dependent Variable			Dependent Variable		
ROA			CSP		
Independent Variable			Independent Variable		
CSP	4.987	14.928	ROA	0.0006	0.002
Control Variables			Control Variables		
Size			Size		
Number of Employees	1.20e-06		Number of Employees	(3.39e-08)	
Total Assets		7.16e-09	Total Assets		(4.93e-10)
Risk	(18.377)*	(20.654)***	Risk	0.046	0.033
Constant	14.033***	14.616***	Constant	(0.007)	(0.012)
R²	0.16	0.21	R²	0.02	0.05
F	2.37*	3.50**	F	0.32	0.77
Dependent Variable			Dependent Variable		
ROS			CSP		
Independent Variable			Independent Variable		
CSP	(0.028)	0.018	ROS	(0.087)	0.067
Control Variables			Control Variables		
Size			Size		
Number of Employees	(6.73e-09)		Number of Employees	(3.38e-08)	
Total Assets		(5.59e-12)	Total Assets		(4.93e-10)
Risk	(0.029)	(0.039)	Risk	0.033	(0.005)
Constant	0.07***	0.073***	Constant	0.007	0.012
R²	0.02	0.02	R²	0.14	0.02
F	0.21	0.32	F	0.02	0.35
Dependent Variable			Dependent Variable		
Tobin's Q			CSP		
Independent Variable			Independent Variable		
CSP	(2.352)	(1.665)	Tobin's Q	(0.026)	(0.022)
Control Variables			Control Variables		
Size			Size		
Number of Employees	(2.26e-07)		Number of Employees	(3.57e-08)	

Total Assets		(2.16e-09)	*Total Assets*			(5.41e-10)
Risk	(1.965)**	(2.116)***	*Risk*		(0.029)	(0.068)
Constant	1.866***	1.883***	Constant		0.049	0.059
R^2	0.23	0.22	R^2		0.07	0.06
F	3.42**	3.33**	F		0.98	0.83

Note: *** $p \leq 0.01$; ** $0.01 < p \leq 0.05$; * $0.05 < p \leq 0.1$.

5.2.2. Discussion

The purpose of this second analysis was to verify hypothesis 3, and so to discover if the relationship between corporate social responsibility and financial performance is influenced by the industry in which the company operates. Looking at these results we have to keep in mind the difference in the samples used. The manufacturing industry's sample is much bigger (almost 100 companies more) than the retail trade one.

According to my analysis, hp 3 is confirmed. In fact, in the manufacturing sector the relationship is positive and significant in both directions, while in the retail trade industry the relationship is in some cases even negative and never significant. So depending on the sector in which the analysis is conducted the results are different. The manufacturing and retail trade industries are two really different sectors: the way in which the businesses are run, the differences in the environment and context in which they operate, and the different needs that the stakeholders have, can explain the difference in the results. When studying this relationship in single industries all these factors are not masked and consequently the CSP/CFP relation is not confounded.

6. <u>Conclusion</u>

The purpose of this thesis was to answer to what has become a crucial question among researchers: whether or not corporate social responsibility's (CSR) practices have an impact on the company's financial performance, and in case of positive answer, which is the direction of causality of this relationship. In the attempt of answering to this question, I firstly draw a theoretical picture in order to have a better understanding of the topic. In particular, I deeply analyzed the concept of CSR, drawing its development throughout history, since Friedman skeptical view till the acceptance of the concept, and discussing the theories linked to it (e.g. stakeholders theory). In this way I was able to give a univocal and clear definition of CSR that, in my opinion, reflects all its characteristics. Once the concept of CSR was established, I showed the link with the financial performance. Analyzing the existing literature it was easy to notice how much attention this topic received in the last decades. In particular, today the concept of CSR has became a hot topic, mainly due to globalization and to the shift of roles from States to MNCs; since the growing importance that CSR is acquiring in companies' everyday life, it became even more crucial to understand which relationship links CSR to financial performance. For this reason researchers tried to find an empirical demonstration of this phenomenon. However, the literature is really confused about it: the existing empirical studies gave life to all possible results (neutral, positive and negative relationship). In the attempt of understanding why such a large spectrum of results exists, scholars focused their attention on the singular components of this relationship, indentifying a series of problems that probably were responsible of this great variability. Among this major issues, the most discussed have been the way in which both CSR, or better CSP (corporate social performance), and CFP (corporate financial performance) have been measured. Even the choice of the control variables creates some debates, insomuch as some researchers made specific studies aimed at understanding if one variable rather than another is crucial when analyzing the relationship. After analyzing these problems I was able to choose the way in which to construct my model. To measure CSP I chose the measure that so far seems the best one: the Kinder, Lydenberg, Domini (KLD); to measure CFP I decided to use both accounting and market measures in order to have a more complete vision of it. When choosing the control variables I have followed the literature and selected the most critical ones. The analysis was then divided into two parts: the first aimed at discover if there is a relationship between CSP and CFP and which is the causal relation; the second tried to demonstrate the existence of an industry effect which confounds the relationship.

This research found that between CSP and CFP a significant relationship actually exists and it is positive. This result supports the several existing studies which analyzed this topic. Moreover I found that the relationship goes in both directions: CSP influences and it is influenced by CFP. This result supports the *virtuous circle* theory proposed by Waddock and Graves (1997). Investments in corporate social responsibility's activities have a positive return on the company's financial performance. A positive financial performance brings the company to accumulate some slack resources; it is then probable that a company will invest them in CSR, making the circle beginning again. Said it with different words, the results both support the *do well by doing good*, as *do good by doing well* philosophies. It was already demonstrated that CSR brings some benefits to companies (chapter 2), but it does it along with costs; now that there is also empirical evidence of the financial benefits (which in the long-term will cover the initial cash outflows), companies should catch the opportunity of engaging in CSR. CSR represents for companies the opportunity of *doing good* and *doing well*, no matter from where it starts.

The second analysis focused on one particular factor: the industry in which a company operates. From the theoretical analysis it results that the great majority of the studies made on this topic focus their attention on multi-industry samples. One research in particular (Chand, 2006) demonstrates that industry is a confounding factor in the relationship between CSP and CFP. For this reason I decided to test the relationship on two sub-samples made up of companies belonging to the same industry. Comparing the results obtained by this analysis, I found that the first two hypotheses do not held in both circumstances, confirming the validity of the third hypothesis. If the virtuous circle is verified in the manufacturing sector, the hypotheses are rejected when the relationship is tested in the retail trade industry. In this sector in fact, the relationship resulted non significant, and in some cases even negative. This kind of reasoning probably works also for another factor that was analyzed in the past: the country in which the company operates. I did not test this factor as well because all the companies composing my sample operate in the United States, but the underlying concept is the same. When companies operate in different sectors or countries they are exposed to different external and internal pressures; the environment, the legal requirements, the stakeholders' needs are different and consequently it is normal that this relationship has different outcomes based on the industry.

Despite the general positive result of my analysis, it should be kept in mind that still there are a lot of doubts about the effects that CSR has on the company's financial performance: a univocal answer from the academic world still does not exist. Some business people started to accept CSR

because of the changing world in which they operate; others need more certainties to be willing to engage in CSR. A lot has been said on this topic but there is still a lot to say: the variability and inconsistency of the studies must be eliminated.

6.1. Limitations

The first limitation connected to this work is that the analysis considers only one time period (2010). This is due to the impossibility for me to access to CSP data. However, there are previous studies that investigated the relationship through more than one year and found that the results still hold; for this reason my analysis can be considered valid.

Another limitation is linked to the sample sizes of the second analysis. The sample of the manufacturing industry can be considered valid for all the reasons already expressed; the size of the retail trade sample on the other hand is limitative. In particular, when comparing the results obtained in the two samples this difference should be kept in mind.

Lastly, there is the limit connected to the weights used in the calculation of the CSP. First these weights were assigned more than ten years ago, and so maybe today the order of importance they have it is different. Second, and more important, to the *governance* and *human rights* categories I have assigned "random" weights, just based on a mathematical calculation. I can assume that *governance* for example is not less important than *diversity* and that probably it should have a weight closer to the one of the *employee relations* category.

6.2. Future Research

Firstly I would suggest concentrating the efforts on mono-industry studies, in order to have a more precise idea of the effects that CSR can have on different contexts. If the study conducted is still made on a multi-industry sample, a good idea can be to assign to each industry a different weight, just as in the case of CSP dimensions; in this way in the calculation of the CSP it would be included the industry effect.

Another area that deserves more attention is the world of the small-medium enterprises. The literature about them is really scarce; it would be interesting to give a closer look to these business realities to understand if the discussions made for "the big companies" apply in the same way to the SMEs. It would be interesting to understand in which way SMEs approach CSR and, in particular, if for them as well there is the possibility of an increase in profits. Moreover, since size is always used as a control variable, a deeper study of this context could maybe help to reduce the variability of the empirical results.

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Appendix I: *Views of Corporate Social Responsibility Across the World*

Source: World Business Council for Sustainable Development, 2003, "Corporate Social Responsibility"
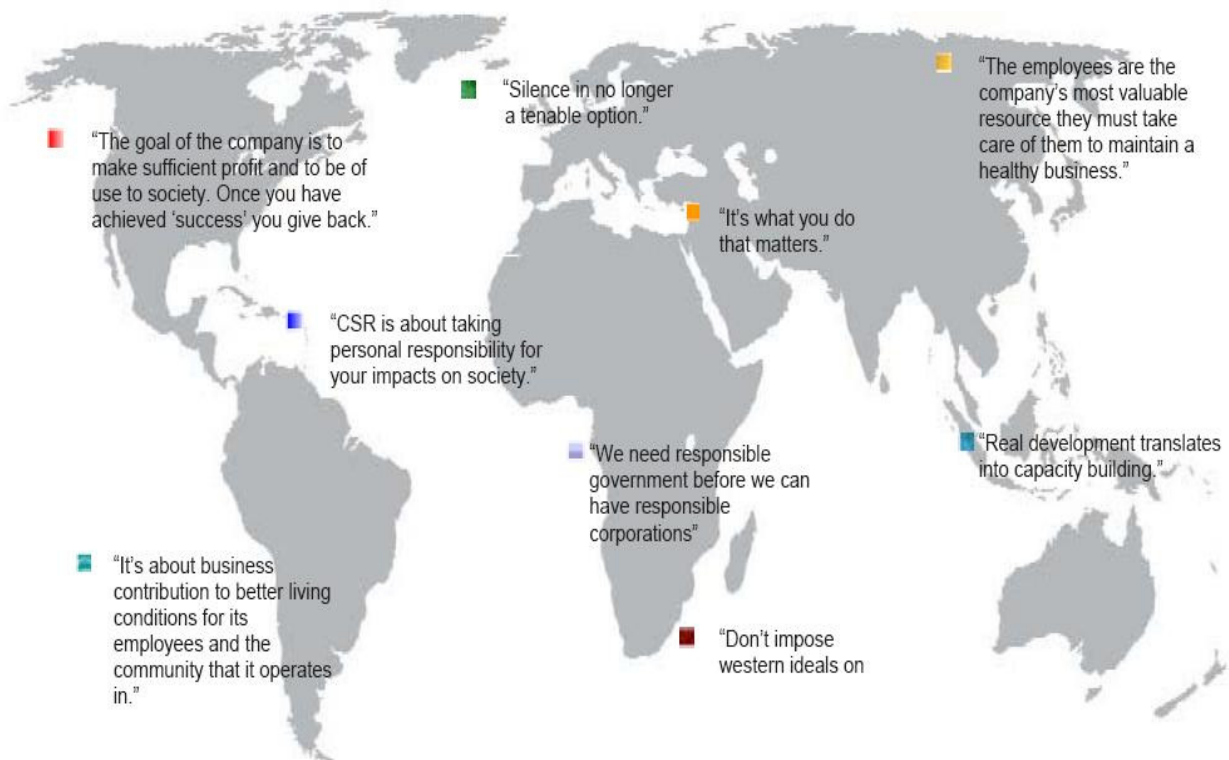
Appendix II: FATER's results after the introduction of CSR

Source: FATER, Sustainability Results. Retrieved from http://www.fater.it/sostenibilita_cifre.html#

ENVIRONMENTAL	SOCIAL	INNOVATION	CULTURAL
- 45,7% of Methane per unit	A new Network of Bicycle Paths in Pescara	- 45% diapers weight	A Scorecard in every Department
- 6580 Trucks	+ 4 Certification Standards (EMAS, ISO 14001, ISO 9001, OHSAS 18001)	100% of Waste Recycling	Employee Discount on the Purchase on Bicycles (Number of purchased bikes till today: 150)
+ 4 Zero Impact Transportation MEZZI	Training for Safety at Work (Total Incident Rate 2011 = 0)	Implementation of Renewable Energy	Separate Collection of Rubbish

Appendix III: Extract from Beurden & Gossling literature review explicating the sample sizes of the previous studies

Source: van Beurden, P., & Gössling, T. (2008). *The Worth of Values – A Literature Review on the Relation Between Corporate Social and Financial Performance.* Journal of Business Ethics.

Relationship	Author (Year)	N
Positive	He et al. (2007)	438
	Luo and Bhattacharya (2006)	113
	Barnett and Salomon (2006)	67
	Peinado-Vara (2006)	2
	Schnietz and Epstein (2005)	416
	Goll and Rasheed (2004)	62
	Kumar et al. (2002)	87
	Ruf et al. (2001)	488
	Carter et al. (2000)	437
	Dowell et al. (2000)	89
	Graves and Waddock (1999)	653
	Brown (1998)	197
	Judge and Douglas (1998)	217
	Stanwick and Stanwick (1998)	125
	Russo and Fouts (1997)	243
	Waddock and Graves (1997)	469
	Preston and O'bannon (1997)	67
	Hart and Ahuja (1996)	127
	Klassen and McLaughlin (1996)	82
	Pava and Krausz (1996)	53
	Blacconiere and Patten (1994)	47
	Herremans et al. (1993)	96
	Freedman and Stagliano (1991)	27
Non-significant	Van de Velde et al. (2005)	315
	Seifert et al. (2004)	225
	Seifert et al. (2003)	135
	Moore (2001)	8
	McWilliams and Siegel (2000)	524
	Balabanis et al. (1998)	56
	Guerard (1997)	1300
	Hamilton et al. (1993)	400
	Arlow and Ackelsberg (1991)	146
Negative	Brammer et al. (2006)	451
	Boyle et al. (1997)	32

Appendix IV: Historical Changes in the KLD sub-dimensions

Source: KLD Research and Analytics (2008) revised by the author.

Corporate Governance		Community Relations		Diversity		Employee Relations	
Strengths	*Concerns*	*Strengths*	*Concerns*	*Strengths*	*Concerns*	*Strengths*	*Concerns*
Limited Compensation (1991-2009)	High Compensation (1991-2009)	Charitable Giving	Investment Controversies (1991-2009)	CEO (1991-2009)	Controversies	Union Relations	Union Relations
Ownership Strength (1991-2009)	Ownership Concern (1991-2009)	Innovative Giving	Negative Economic Impact	Promotion	Non-Representation (from 1993)	No-Layoff Policy (1991-1993)	Health and Safety Concern
Transparency Strength (from 1996)	Transparency Concern (from 2005)	Support for Housing (1991-2009)	Tax Disputes (1991-2009)	Board of Directors	Board of Directors	Cash Profit Sharing	Workforce Reductions (1991-2009)
Political Accountability Strength (2005-2009)	Political Accountability Concern (2005-2007)	Support for Education (1994-2009)	Other Concerns (1991-2009)	Work/Life Benefits	Other Concerns (1991-2009)	Employee Involvement	Retirement Benefits Concern (1992-2009)
Public Policy Strength (from 2007)	Public Policy Concern (from 2007)	Non-US Charitable Giving (1994-2009)		Women and Minority Contracting		Retirement Benefits Strength (1991-2009)	Supply Chain Controversies (from 1998)
Other Strengths (1991-2009)	Accounting Concern (2005-2009)	Volunteer Programs (2005-2009)		Employment of the Disabled (1991-2009)		Health and Safety Strength (from 2003)	Other Concerns
	Governance Structures Controversies (from 2010)	Community Engagement (from 2010)		Gay and Lesbian Policies (from 1995)		Supply Chain Policies, Programs and Initiatives (from 2002)	
	Other Concerns (from 1992)	Other Strengths		Employment of Underrepresented Groups (from 2010)		Other Strengths	
				Other Strengths (from 1991)			

Environment		Human Rights		Product Characteristics	
Strengths	*Concerns*	*Strengths*	*Concerns*	*Strengths*	*Concerns*
Beneficial Products and Services	Hazardous Waste (1991-2009)	Positive Record in South Africa (1994-1995)	South Africa (1991-1994)	Quality	Product Safety
Pollution Prevention	Regulatory Problems	Indigenous People Relations Strength (from 2000)	Northern Ireland (1991-1994)	R&D, Innovation (1991-2009)	Marketing/Contracting Concern
Recycling	Ozone Depleting Chemicals (1991-2009)	Labor Rights Strength (2002-2009)	Burma Concern (from 1994)	Benefits for Economically Disadvantaged (from1991)	Antitrust
Clean Energy	Substantial Emissions	Other Strengths (from 1994)	Mexico (1994-2001)	Access to Capital	Other Concerns
Property, Plant, Equipment (1991-1995)	Agriculture Chemicals (1991-2009)		Labor Rights Concern (1998-2009)	Other Strengths (1991-2009)	
Management Systems (from 2006)	Climate Change (from 1999)		Indigenous People Relations Concern (2000-2009)		
Other Strengths	Negative Impact of Products and Services (from 2010)		Operations in Sudan (from 2010)		
	Land Use and Biodiversity (from 2010)		Other Concerns (from 1994)		
	Non-Carbon Emissions (from 2010)				
	Other Concerns				

Appendix V: Descriptive Statistics

	CSP	ROE (%)	ROA (%)	ROS (%)	Tobin's Q	Number of Employees	Total Assets (th USD)	Risk (%)	R&D (mln USD)
Mean	0.02	14.95	8.65	12.90	1.14	57317	24448746	23.44	600.65
Standard Deviation	0.096	12.41	7.38	10.67	0.83	134221	36763003	14.57	1468.66
Min	(0.226)	(35.98)	(11.69)	(20.63)	(0.03)	695	914339	0	0
Max	0.302	47.42	33.96	61.80	5.04	2100000	302510000	81.84	10991
N	322	322	322	322	322	316	322	320	223

Appendix VI: Correlation Matrix

	CSP	ROE	ROA	ROS	Tobin's Q	N. of Employees	Total Assets	Risk	R&D
CSP	1								
ROE	(0.032)	1							
ROA	0.269	0.577	1						
ROS	(0.025)	0.265	0.502	1					
Tobin's Q	(0.038)	0.352	0.700	0.224	1				
N. of Employees	(0.024)	(0.002)	(0.029)	(0.008)	(0.052)	1			
Total Assets	0.009	(0.010)	(0.026)	0.109	(0.065)	(0.006)	1		
Risk	(0.003)	(0.009)	(0.039)	0.034	(0.011)	(0.024)	(0.015)	1	
R&D	0.008	0.133	0.152	0.265	0.119	0.020	(0.025)	(0.028)	1