



Dissertação

Mestrado em Negócios Internacionais

**The effects of ethical behavior on the profitability of
firms – a study of the Portuguese construction
industry**

Maria Ermelinda Rendeiro Vieira

Leiria, Novembro de 2013



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Dissertação de Mestrado realizada sob a orientação da Professora Doutora Tânia de Matos Gomes Marques, Professora da Escola Superior de Tecnologia e Gestão do Instituto Politécnico de Leiria

Leiria, Novembro de 2013.

To my daughter Maria, the greatest motivation in my life

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Resumo

O principal objectivo desta dissertação é estudar os efeitos do comportamento ético na rentabilidade financeira das empresas. A responsabilidade social foi utilizada como indicador do desempenho ético. Após analisar os indicadores financeiros ROA e PM, numa amostra das vinte maiores empresas de construção civil em Portugal, entre 2007 e 2011, concluímos que o desempenho ético está significativamente relacionado com o indicador financeiro ROA. No entanto, não obtivemos qualquer evidência estatística que indique que haja uma relação entre o desempenho ético e o PM. Embora a pontuação obtida seja muito baixa em todos os índices da RSC, podemos concluir que as empresas estão mais atentas às questões ambientais do que às questões éticas. Os gestores de topo das empresas de construção civil devem desenvolver um olhar mais atento às suas actividades de RSC, e não devem negligenciar o impacto da inactividade social no desempenho financeiro da empresa. Embora existam alguns bons exemplos a seguir, ainda existe um longo caminho a percorrer para a maioria das empresas deste sector de actividade. As limitações, contribuições e recomendações para investigação futura são apresentadas no final desta dissertação.

Palavras-chave: ética, responsabilidade social, rentabilidade, construção

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Abstract

The main objective of this dissertation is to analyze the effects of ethical behavior on a firm's financial profitability. Corporate social responsibility has been used as an indicator of ethical performance. After analyzing the financial indicators ROA and PM, from a sample of the twenty biggest civil construction companies in Portugal, between 2007 and 2011, we conclude that ROA is significantly related to a firm's ethical performance. However, we did not find any statistical evidence that relates PM to ethical performance. Although the scores are very low on all CSR indexes, we can conclude that companies, who are exporting, seem to be more concerned with environmental issue than ethical issues. The top management in the civil construction should take a deeper look into their CSR activities, and should not neglect the impact social inactivity may have on their financial performance. Although, there are some examples to look up to, there is still a long way to go for the majority of companies in this industry. Limitations and recommendations for future research are provided at the end of this dissertation.

Key-Words: ethics, corporate social responsibility, profitability, construction

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List of Abbreviations

APEE – Associação Portuguesa de Ética Empresarial

BCSD – Business Council for Sustainable Development

BPI – Bribe Payer’s Index

CFP – Corporate Financial Performance

CPI – Corruption Perception Index

CSR – Corporate Social Responsibility

EC – European Commission

EIRIS – Ethical Investment Research Service

FTSE – Financial Stock Exchange

GDP – Gros Domestic Product

IBE – Institute of Business Ethics

INCI – Instituto da Construção e do Imobiliário

PM – Profit Margin

ROA – Return on Assets

ROE – Return on Equity

RI – The Reputation Institute

TI – Transparency International

TRAC – Transparency in Reporting on Anti Corruption

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1. Introduction

The subject of ethics in business has gained a striving importance in today's business research (Chan, Fung & Yao, 2009). In the last decade, we have witnessed the sub-prime crisis in the United States, several financial and economic scandals on a global scale, both at public and private level (Cragg & Matten, 2011; Brassett, Rethel & Watson, 2010). The Euro crisis has spread. It is no longer a peripheral matter of countries like Greece, Portugal, Ireland and Spain, affecting even the most solid and prosperous economies (Longstaff, 2010; Overbeek, 2012). The economic uncertainty that has spread throughout Europe, has resurrected old hatreds and cultural conflicts. Suddenly, countries are culturally designated as lazy deadbeats, long-time corrupted and unable to survive, on the long term, without external aid. Ethics can be defined as a set of principles, rules and codes of conduct, that rule an individual or a group (Treviño & Nelson, 1999). Business ethics is a set of rules, standards and codes, or principles which provide guidelines for morally right behavior and truthfulness in specific situations (Lewis, 1985).

International organizations have acknowledged the importance of ethics, and in the last years, have promoted several studies and reports, aiming to create awareness on ethical behavior and suggest guidelines for better practices. The European Commission published in 2012, the special Eurobarometer 374, on the perceived corruption in the member states of the European Union (EU). This study concluded that the majority of Europeans believe that corruption is a serious problem in their country, and that it has increased in the last years. It also states that the majority of Europeans consider that there is corruption both at public and private levels. Previously, in 2011, the EU Anti-Corruption Report was set up to periodically assess the efforts carried out by the EU to fight and prevent corruption in their member states. In the same year the EU has also made additional efforts, in inviting companies to adopt international corporate social responsibility (CSR) Guidelines. Transparency International (TI) published the Bribe Payer's Index (BPI) which analyzes

the perceived likelihood of companies located in 28 of the largest economies in the world, to be corrupted. Based on the results obtained, TI also launched the Transparency in Reporting on Anti-Corruption (TRAC), which focuses on studying the extent and quality of the information that companies publicly provide on the measures and policies they are taking to fight corruption and bribery. The TRAC shows that companies worldwide, and from different industries, still have much to do on what concerns promoting and publicly disclosing their practices against corruption and bribery.

Ethical behavior has also been a subject of extensive academic research. Unethical activities by companies such as, Lehman Brothers, Enron and WorldCom have deeply damaged the trustful relationship that has formed the basis of marketplace relationships between companies and stakeholders. Prahalad and Hammel (1994) stated that the influences over strategic decisions are no longer financial or industry driven, but also social and environmental. Corporate social responsibility (CSR) has been frequently linked to business ethics, by different authors. Carroll (1979) stated that CSR manages the expectations that society has towards an organization, on economical, legal, ethical and discretionary levels. Valentine and Fleischman (2007) state that socially responsible companies are viewed as ethical organizations. The authors associated ethics programs with a greater perception of CSR, on behalf of employees who associate CSR as a form of commitment towards ethical behavior. Some scholars state that codes of ethics say much about a firm, and that there is a positive relation between CSR and financial performance (Bowman & Haire, 1975). Waddock & Graves (1997) also argued that Corporate Social Performance (CSP) is positively related to Corporate Financial Performance (CFP), which indicates that good management is linked to social responsibility. An ethical management is a responsible management that carefully includes not only stockholders, but more importantly stakeholders in their decision making process (Goodpaster, 1991). In fact, literature points out that an ethically responsible management can contribute to better financial performance by reducing the cost of business transactions, building trust with stakeholders, contributing to a successful teamwork environment and maintaining social capital.

In this dissertation we focus on the effects of ethics on an organization's financial performance. The main purpose is to identify the effect of ethics on the profitability of firms, belonging to the civil construction and public works industry, in Portugal. We will

focus on this industry, for the following reasons: first, it was assessed by the BPI, through a survey conducted on over 3,000 business executives worldwide, over companies located in 28 of the worlds' leading economies, as the sector most likely to be corrupted; second, it represents one of the most important industries in the Portuguese economic and social context, one of the largest employers and contributors for GDP (INCI, 2012); third, it is experiencing a deep recession, since the 2008 sub-prime crisis, and is struggling to survive (Instituto Nacional de Estatística, 2013), with the number of licenses for new homes drastically decreasing since 2007 (Table 1). Fourth and last, although there has been wide research on this topic, until date, these effects have not been measured over the profitability of Portuguese construction companies.

Table 1. Number of licenses issued *per annum*

Geographical Location	Residential building permits (Nº) in new build for family dwellings by geographical location and promoting entity; Annual (1)				
	Reference Period				
	2011	2010	2009	2008	2007
	T: Total	T: Total	T: Total	T: Total	T: Total
	Nº	Nº	Nº	Nº	Nº
PT: Portugal	17085	24864	27404	45915	65650

Source: Bank of Portugal database

The dissertation proceeds as follows. We first review the literature on business ethics and approach the different effects of ethics, focusing on profitability as a measure of financial performance. Second, we will approach the literature on CSR as an indicator of business ethics. The research method and findings are then presented, followed by discussion, conclusion, limitations, contributions and recommendations for future research.

2. Literature Review

If by anything else, an organization is comprised of people, with different backgrounds, personalities, ideologies and beliefs. These factors will eventually influence managers' decisions. However, organizational ethics should also consider the role of business "outside" of the organization. Social responsibility can be considered as the ethical performance of an organization on a societal level, towards all of its stakeholders (Treviño & Nelson, 1999). Stakeholders are defined as any person, individual or collective entity that is directly or indirectly influenced by the activity of an organization, such as customers, employees, suppliers, government, stockholders, and the surrounding community (Freeman, 1984). A business must seek to satisfy the needs or interests of those who are directly and indirectly part of the business's social environment: stakeholders. The following literature review will approach three different items: (1) the effects of ethics on an individual level, (2) the effects of ethics on an organizational level, and (3) corporate social responsibility, as an indicator of ethical behavior.

2.1 Ethics in business

Business ethics is described as the ultimate rules which dominate the assessment of "what constitutes right or wrong, or good or bad human conduct in a business context" (Shaw, 2010, p. 8). The theme of ethics in business has been widely approached on a global scale. Sims and Gegez (2004) conducted a cross cultural study, comparing attitudes towards business ethics, in countries such as United States of America, Western Australia, Israel, South Africa and Turkey, confirming the idea that although there are similarities in moral perceptions, cultural differences influence ethical behavior. Rossouw (1997) also studied business ethics in South Africa, both on academic and practical societal levels, and

concluded that business ethics as an academic discipline still needed to be developed, as well as ethical business practices. Many authors and investigators have focused their studies on the theme of ethics in business (Tsalikis & Latour, 1995; Enderle, 1997; Trevino & Nelson, 1999; Husted, 2001; Roussouw, 2002).

Business ethics is sometimes referred to as management ethics or organizational ethics, limiting its framework to organizations (Beekun, 1996). However, research has noted the impact of multiple aspects of organizational contexts on individuals' ethical behavior. For example, individuals' perceptions of organizations' ethical climate (Victor, & Cullen, 1988), are potential influences on organization members' ethics-related attitudes and behavior.

2.2 The effects of ethical behavior

Much literature has been published on the effects of ethical behavior. Some authors studied the effects of ethics on employee behavior (Ferrell & Gresham, 1985; Treviño, 1986; Abratt, Nel and Higgs, 1992; Treviño, 1992; Ashkanasy, Windsor & Treviño, 2006), and on an organizational level (Goodpaster, 1991; Enderle, 1997; Jones, 1995; Lovett, Simmons & Kali, 1999; Robertson & Fadil, 1999; Somers, 2001; Treviño, Weaver & Reynolds, 2006; Singh & Del Bosque, 2008).

In the following section we will approach two different types of effects of ethics: individual and organizational effects. There has been a long ongoing debate between scholars, on whether unethical behavior and decision making is a consequence of "bad apples" or "bad barrels" (Treviño & Youngblood, 1990). While the former theory argues that organizational unethical behavior is caused by the personal characteristics of its employees; the latter states that it is the organizational behavior or climate that influences employee behavior. Given the main objective of this dissertation, our greatest emphasis will be on the effect of ethics on a firm's financial performance, more specifically, to what extent a firm's ethical behavior will influence its profitability, although we will briefly mention the effects on individuals. Ethical behavior will be linked and measured in accordance to a firm's social responsibility.

2.2.1 Individual and Organizational Ethics

“In business, when people talk about ethics they’re talking about behavior” (Treviño & Nelson, 1999, p. 148). It is stated that individual characteristics, such as values and moral issues, influence ethical conduct (Treviño, 1986; Jones, 1995). People frequently face ethical dilemmas such as whether to use office supplies for personal purposes, cheat on a test, inflate their business results, or fail to report an additional source of income on a tax return. “Employees are not just organizational drones; they are individual human beings who are concerned about their relationships and their personal reputation” (Treviño & Nelson, 1999, p. 28). Some scholars suggest that people engage in unethical behavior, when they are faced with an opportunity to do so (Mazar, Amir, & Ariely, 2008). The fact that one’s behavior is forbidden or reprehensible may strengthen this experience (Wood, 1995). Brass, Butterfield and Scaggs (1998) suggest that unethical behavior of one person may influence the behavior of another, enhancing the importance of relationships among employees.

Employees are also more committed to organizations, in which the top management represents highly ethical and credible standards, supporting and rewarding ethical conduct, and disciplining unethical behavior (Treviño, Butterfield & McCabe, 1997). Another study showed that managers, who believe in the credibility of their senior management, also feel more attached and committed to the organization (Posner & Schmidt, 1992). Stevens, Steensma, Harrison and Cochran, (2005) found that financial managers are willing to consider the company’s code of ethics in the decision- making process when they are obliged to do so, when faced with pressure from the company’s stakeholders or, if and when they believe that a code can promote a better external image of the company. Much research has focused on understanding the factors that influence ethical conduct in organizations, specifically the conduct of its members. However, employees express the company’s organizational ethics in the way they are personally treated. (Treviño & Nelson, 1999). Ethical climate, as introduced by Victor and Cullen (1988) and adapted by others (Schminke, Ambrose & Neubaum, 2005) is defined as a shared perception among organization members, reflecting organizational practices with moral consequences. Cullen, Parboteeah and Victor (2003) found that the ethical climate of a company can influence its compromise, stating that a favorable climate has a positive relationship with

organizational commitment, while a selfish climate has a negative relationship with commitment (Victor and Cullen, 1987).

On an organizational level, “organizational ethics is a company’s adoption of desired ethical standards and business practices” (Valentine & Fleischman, 2007, p. 160), and therefore, organizational ethics should be a fundamental management concern, at all levels of an organization (Treviño & Nelson, 1999). Unethical business practices can possibly undercut the development of trusting, long-term business relationships. Among venture partners, unethical behavior can cause conflicts between partners, creating suspicion and lack of trust, which may end up terminating the relationship (Fassin, 2009). Unethical behavior can lead to negative publicity, substantial fines, and ultimately decreased sales and profits (McGuire, Sundgren & Schneeweis, 1988).

The effects of ethics on a company’s reputation have taken on particular urgency, given the struggle with an increased media scrutiny of governance, social and environmental issues. The Reputation Institute (RI) finds that corporate ethics has become an indelible feature of stakeholder engagement — not just as a set of principles but as a cultural process affecting decision-making at all levels. Ethical culture has been defined as a slice of the organizational culture that influences employees’ ethical behavior through formal and informal organizational structures and systems (Trevino, 1992). Ethics play in fact a very important role in long-term business sustainability, and will gradually form the basis of serious executive leadership (Fombrun & Foss, 2004).

Although some organizations still view ethical business decisions as an additional cost, ethical performance can actually add value to all stakeholders, increase profitability and improve financial performance (McMurrian & Matulich, 2011). According to Jones (1995), companies with a higher social performance tend to have better financial results by attracting socially responsible consumers (Bagnoli & Watts, 2003).

Based on the findings presented, we formulate our first hypothesis:

H1: *Ethical firms have a higher financial performance than unethical firms.*

2.3 Corporate Social Responsibility and Corporate Financial Performance

There is much literature suggesting that organizations should have social as well as financial responsibilities (Swanson, 1995). Corporate social responsibility theorists defend that management should include ethics into their strategic planning because it is the “right” thing to do (Key & Popkin, 1998). According to the World Business Council for Sustainable Development (BCSD), corporate social responsibility defines the continuous commitment to corporate ethical behavior, the continuous contribution to economic development and to the improvement of quality of life of all stakeholders, including employees and their families (Zhang & Gu, 2012).

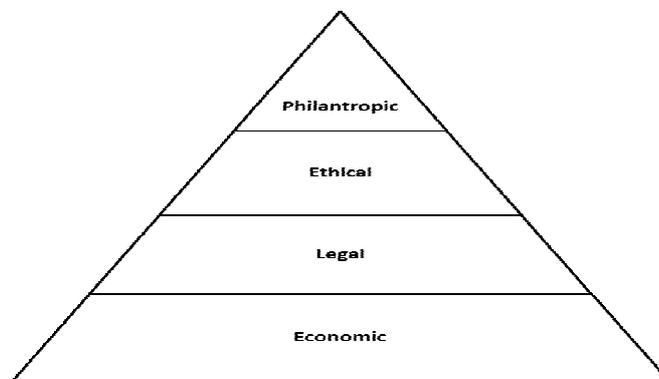


Figure 1. Carroll’s Social Responsibility Pyramid

Carroll (1991) conceptualized corporate social responsibility (CSR) as a pyramid, composed of four types of responsibility that must be considered simultaneously: economic, legal, ethical and philanthropic (Figure 1). Our dissertation approaches CSR as a whole, incorporating all types of responsibility. However, the main focus will be on the ethical and philanthropic levels, given the main component of our method. Companies are evaluated not on what they “must do”, given their economic and legal obligations, but on what they “should do”, on an ethical and philanthropic view, based on their CSR activity.

Hsu (2012) found that the perceptions of policyholders, concerning the CSR initiatives of life insurance companies, exert positive effects on customer satisfaction, corporate reputation and brand equity. Konar and Cohen (2001) found that firms with a strong concern on environmental performance have their market value increase

considerably. The environment is one of the issues that should be incorporated in a firm's social responsibility activities. The principal way of addressing these issues is through statements of corporate values and their application through codes of business ethics. These alone are not enough to make any difference – they have to become part of the way staff think and act. Having such a program has been shown not only to be morally right but also worthwhile (Webley, 2003).

Establishing and complying with social performance goals helps firms to improve both brand and corporate image (Bramer & Pavelin, 2006; Rowley & Berman, 2000), which are important elements of a firm's reputation. An improved reputation allows a firm to attract better employees (Turban & Greening, 1997), increase commitment, negotiate better terms with capital suppliers, and build customer loyalty (Fombrun & Shanley, 1990). All of these factors contribute to corporate financial performance improvements (Fombrun & Shanley, 1990; Roberts & Dowling, 2002).

However, in what concerns the extensive research on the effects of ethics on profitability, the opinions diverge. Vance (1975) showed that there is a negative relationship between CSR and corporate financial performance, concluding that social responsible firms are not good investments. Abbott and Monsen (1979) analyzed the annual reports of the Fortune 500 list, and after dividing the firms into high and low social responsible groups, and examining each group for profitability, they found that there was very little difference between them, in term of financial performance. Alexander and Buchholz (1978) also found that there was no relation between stock risk levels and the degree of social responsibility, suggesting that there is also no relation between CSR and CFP. Nevertheless, there are many authors who state that there is a positive relationship between CSR and CFP (Moskowitz, 1972; Bowman & Haire, 1975; Parket & Eilbert, 1975; Sturdivant & Ginter, 1977; Roberts & Dowling, 2002; Kurucz, Colbert & Wheeler, 2008; Ameer & Othman, 2012).

Decades ago, Moskowitz (1972), after studying a short list of 14 firms, claimed that firms who portrayed a social responsible behavior were good investments. Bowman and Haire (1975) used a different approach to study the relation of social responsibility and profitability, rating firms as high or low in social responsibility, by counting the number of lines devoted to that topic on their annual reports. The researchers compared the 14 firm

list used by Moskowitz as a list of high social responsible firms, and another list of 14 random chosen firms. The firms on Moskowitz's list had more lines dedicated to social responsibility. After using the line-counting method, they analyzed the firms performances based on a five year financial performance and concluded that the firms on the Moskowitz had better profitability ratio than those on the random list.

Parke and Eilbert (1975) sent a questionnaire to the Forbes 1971 Annual Directory, and received a reply from 96 firms. They assumed that the respondents were more actively engaged in social responsibility than those that didn't. When analyzing their financial performance with other firms of the Fortune 500 list, they stated that the firms assumed as more socially active are also the most profitable. Sturdivant and Ginter (1977), used a sample of 67 firms characterized by Moskowitz as examples of exceptional social performance, divided them in four industrial groups, and studied their financial performance, based on a 10-year earnings per share growth (EPS). Firms rated as highly or moderately social responsible featured the best performance.

One of the advantages identified by Kurucz et al. (2008), which a company may attain by engaging in social responsible activities, is reputation. Firms with a better reputation can also achieve lower contract costs compared to other firms, which will increase the return on assets (Roberts & Dowling, 2002), thus improving profitability. Ameer and Othman (2012) measured the corporate sustainability reports of one-hundred sustainable global companies and the following profitability measures: sales growth, return on assets, profit before taxation and cash flow from operating activities. The authors concluded that companies with higher sustainability performances also have higher financial performances.

The previous arguments featured by different scholars allow us to summarize the following hypothesis:

H2a: *Ethical firms have higher ROA than unethical firms.*

H2b: *Ethical firms have higher PM than unethical firms.*

3. Method

This study seeks to analyze the effects of ethical performance on a firm's financial performance. First, we will use the BPI Index to identify the most likely sector to be corrupted: Public Works Contracts and Construction. Second, we will extract from the Expresso magazine's *1000 Maiores Empresas*, a target population of the twenty largest Portuguese companies of this sector, between 2007 and 2011, and analyze their financial performance indicators. We chose this period of time because it is coincident with the outbreak of the sub-prime crisis, and it will allow us to assess the firms' performances during a period of deep crisis and of transformation in the industry (Figure 2).

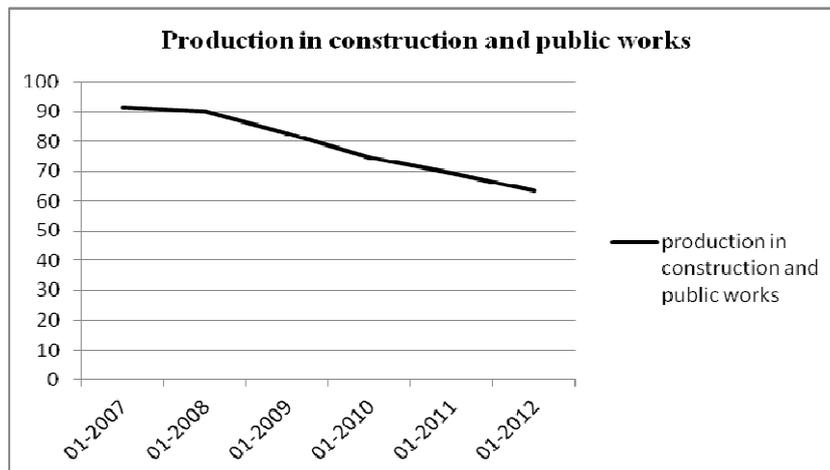


Figure 2. Index of production in civil construction and public works – 2007/2013

Source: INE – Instituto Nacional de Estatística

Third, based on the methodology used by Ameer and Othman (2012), we will use the information publicly disclosed on the corporate sustainability reports, or/and on published

information on the companies' official websites, focusing on the four (4) different measuring indexes: the Ethical Index (EI), the Community index (CI), the Diversity Index (DI) and the Environmental index (EI). Each index is measured based on a "likert" type scale, from 0 to 4, in which 0 corresponds to the absence of information, and 4 to detailed disclosed information. The scores achieved for each question add up to a total score for each index. The score obtained on each index will allow us to distinguish ethical from unethical firms. Fourth, we will assess the financial performance of firms belonging to each group (ethical/unethical), analyzing the following accounting financial indicators: return on assets (ROA) and profit margin (PM). These measures have been widely used in previous studies (Parket & Eilbirt, 1975; Heinz, 1976; Sullivan, 1994; Delery & Doty, 1996; Griffin & Mahon, 1997; Baron, 2001; Roberts & Dowling, 2002; Schreck, 2011). We will then test the correlation between ethical performance and financial performance, for the firms evaluated as "ethical" and unethical". Moderating variables such as size, export sales and CSR are also included in the research.

3.1 Data and sample

Our sample was withdrawn from the "Expresso's annual database, the one-thousand (1000) biggest Portuguese companies, between 2007 and 2011. This directory results from the strict application of a methodology based on the collection and analysis of data by Dun and Bradstreet who, in cooperation with the "Expresso", selected a group of financial and economic indicators and ratios, which allow us to evaluate the performance of each and one of these companies. The Expresso's ranking is ordered by sales volume and all companies listed are non-financial companies.

The annual directory features detailed information on the 20 biggest companies from each sector/industry. Each database features, for each company, from each sector, the following financial indicators and ratios: district, industry, sales volume, sales volume variation, productivity, financial autonomy, return on equity (ROE), return on assets (ROA) and profit margin (PM). We are also able to access the number of employees, which will inform us about the size of each company.

In sum, our sample consists of the 20 biggest Portuguese companies from the construction industry, identified by this database, between 2007 and 2011. Although we

analyze a sample of the 20 biggest companies in the construction industry over a 5-year period, 32 companies appear on our list. This happens because the list is not static over time, and each annual top list is comprised of different companies, which are the biggest companies for that year.

As explained previously, we decided to analyze this industry because it was assessed by the BPI as the most likely to be corrupted. Also, it is one of the most important industries in Portugal, as one of the biggest employers and contributors for the national GDP. We also decided to choose this timeframe, because it comprises the period before and after the 2008 sub-prime crisis. We have not included data for 2012, because at the time of this study, the database for the mentioned year was not yet available.

3.2 Independent Variables

When we think about the objective of any business, the most basic idea that will come to our mind is: to make a profit. However, to make a profit, any business must offer a service or product to others, which implies a necessary relationship with society. If the definition of ethics is based on social consideration for others, ethics is therefore related with business itself (Roussouw, 2002). In fact, there is no business without society, and society needs business to prosper (Joyner & Payne, 2002). Carrol's CSR pyramid (1991), portrays ethical responsibility as a desired level, defining the "right thing to do" in business. Therefore, a social responsible business must be ethical.

In this study, we will adopt the method used by Ameer and Othman (2012), to evaluate the level of CSR activity, and through this, determine which companies are "ethical" or "unethical". Using a qualitative measure through content analysis, the authors evaluated the CSR performance of firms by analyzing the four different indexes that companies show commitment to: community, environment, diversity and ethics. Next, we define each index in order to better understand the criterion used. These will be the independent variables used in this dissertation (see Annex II for the Items used).

3.2.2 Ethical Index (ETI)

The Ethical Index assumes there is a code of ethics and /or conduct inside the company, and comprises issues related to business conduct on: equal employment opportunities, anti-bribery laws, health, safety and environment, political contributions among others.

3.2.3 Community Index (CI)

The Community Index (CI) comprises several activities linked to the surrounding community, such as: charitable foundations, volunteer programs, scholarships, corporate giving programs and donations.

3.2.4 Diversity Index (DI)

The Diversity Index comprises many issues related to workforce diversity, such as: women and minority hiring, training for women advancement, gender equity n ages, and others.

3.2.5 Environmental Index (EI)

The Environmental Index comprises all issues referring to environmental performance, such as; compliance with laws and regulations, environmental remediation liabilities, use of renewable energy sources and voluntary recycling programs.

3.3 Dependent variables – Corporate Financial Performance

The measures used to assess a firm's financial performance can be classified into accounting and market value measures. In this study we will use two accounting measures: ROA and PM as financial indicators of profitability.

3.3.1 Return on Assets (ROA)

The literature available concerning this measure is vast (Aupperle, Carroll & Hatfield, 1985; Belkaoui & Karpik, 1989; Waddock & Graves, 1997; McWilliams & Siegel, 2001). McGuire et al., (1988) found that there is a positive association between ROA and corporate social responsibility. Preston and O'Bannon (1997) have also concluded that ROA strengthens the relationship between corporate social and financial performance. It is a variable, expressed as a percentage, which measures the contributions of the assets of a company to the revenue generating process. This parameter is given by the ratio between net income and total assets. Because the average of this measure varies considerably depending on the economic sector, the ROA is mostly useful to compare the profitability of the companies belonging to the same industry.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} * 100$$

3.3.2 Profit Margin (PM)

PM reflects the “cost of producing each dollar of sales” (Parket & Eilbirt, 1975; Heinz, 1976; De Meuse, Vanderheiden & Bergmann, 1994; Effiok, Effiong & Usoro, 2012; Moneva & Ortas, 2010). This indicator is obtained through the relation between net income and sales revenue, which provides us with the profit/loss obtained for each unit sold, thus revealing the efficiency of the business.

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales Revenue}} * 100$$

3.4 Moderating Variables

A moderator variable is an independent or predictor variable (e.g., Z) that interacts with another independent or predictor variable (e.g., X) in predicting scores on and accounting for variance in a dependent or predicted variable (e.g., Y). In this dissertation we will test the moderation effects of the variables Size, Exports and CSR.

3.4.1 Size

Size has been recognized by some as a determinant of social and financial performance (Ullmann, 1985), although other authors state that size does not have any influence over the CSP-CFP relationship (Orlitzky, M., 2001). We measure this variable by the logarithm of the number of employees (Waddock & Graves, 1997; Ullmann, 1985) provided by the database. Zhou and Peng (2012) find that bribery damages firm growth, in the cases of small and medium-sized firms, but not in the case of large firms. Considering that CSR measures are expensive, and that bigger companies have more available financial means to carry them out, we suggest that bigger companies will perform better financially than smaller companies. SME firms will be distinguished from large companies, by using the definition in the Commission Recommendation 96/280/CE, of April 3rd, 1996, in which SME's are defined as organizations with less than 250 employees.

3.4.2 Exports

Boehe and Cruz (2010) view CSR as a contribution of product differentiation in export markets and that it may therefore, improve export performance. La Roche and Flanigan (2011) studied the effectiveness of anti-corruption laws in creating a more transparent business environment. They found that although the perception of corruption has decreased in the last decade, it is difficult to acknowledge whether firms that are engaged in international business have become more ethical.

3.4.3 Corporate Sustainability Reports (CSR)

Many are the authors that agree that corporate social performance can improve financial performance (Fombrun & Shanley, 1990; Rowley & Berman, 2000; Roberts & Dowling, 2002, Bramer & Pavelin, 2006). Ameer and Othman (2012) have verified that companies, who are more engaged in socially responsible activities, are much more open in terms of information disclosure than those who are less focused on social responsibilities. Therefore, socially responsible companies issue CSR reports and publicly disclose other information on corporate websites, such as codes of ethics and/or conduct (Gelb & Strawser 2001).

4. Results

In the results section, we proceed with two types of analyses. First, and aiming at a better characterization of our sample, we carry out a series of descriptive statistics. This descriptive section will help us identify our sample according to the score obtained from our qualitative analysis, separating them into two different groups: ethical and unethical companies. Secondly, we will compare the means of the chosen profitability measures (ROA and PM), for each group. Thirdly, we will perform a linear regression analysis on both of our dependent variables ROA and PM to test for correlation with our ethical performance variables (ETI, CI; DI, EI). Size, Export and CSR will be tested for moderation, in order to verify if they have any influence on the multiple regression results.

In order to analyze whether a company is ethical (high on CSR) or unethical (low on CSR), we use the Ameer and Othman's (2012) qualitative methodology. The authors first created a group of questions, which would portray the commitment of companies to sustainability on the following levels: community (CI), environment (EI), diversity (DI), and ethical standards (ETI). They adapted the questions/items from Fadul et al. (2004). There are 22 items for environment, 21 items for diversity, 12 items for community, and 13 items for ethical standards. Each item was evaluated with a score from 0 to 4 using the wording of the sustainability report based on the checklist on Annex II. Based on the final score, the authors decided which company was more or less sustainable, and then analyzed which feature a higher financial performance.

We adapted the method also used by Ameer and Othman (2012) by analyzing the corporate sustainability reports and the code of ethics or conduct of each company in our sample. Whenever a report or code was missing, information was gathered from the corporate website. Secondly, using a *Likert* type scale (Table 2), we also attributed a score

from 0 to 4, for each question answered, in which 0 means *no information on CSR activity is reported*, and 4 means that there is *a significant tangible positive contribution*, are reported on CSR activity. An example of a maximum score of 4 is “a company’s significant tangible positive contribution might be in the form of financial commitments to needy communities, the adoption of specific codes of conduct, new technologies and/or redesigned products to conserve energy, water, materials and/or land” (Ameer & Othman, 2012, p.66). A score of 3, is based on a company’s *positive tangible contribution* revealed in the form of statistics and data related to CSR activities, as for example, “key employee statistics such as: total number of employees, total employees - male (%), total employees – female (%), management positions held by males (%), management positions held by females (%), average age of employees (in years), employee turnover (in %), average tenure per employee (in years) and annual training hours by employee” (Ameer & Othman, 2012, p.66). A score of 2, is based on “a company’s *relatively small positive contribution* might be in the form of statements” (Ameer & Othman, 2012, p.66), in which companies, for example, state that all employees will be treated equal, despite their ethnicity, gender, sexual orientation or economic background. A score of 1 was given when a company did not report any *tangible contribution in the form of statistics and data*. 0 was given when no information on CSR was reported.

Table 2. Likert type scale - definitions for each score

Score	Definition
4	significant tangible positive contribution report
3	positive tangible contribution report
2	relatively small positive contribution
1	no tangible contribution in the form of statistic and data
0	no information on CSR activity is reported

Thirdly, based upon the score obtained for each item, we will calculate a total ethics index (TEI), which totals the sum of scores for each item. Considering that the maximum score for each question is 4, we calculate the product of the number of questions by 4, for each index (ETI = 13 x 4; CI = 12 x 4; DI = 21 x 4; EI = 22 x4) and then summarize in the following table (Table 3) the maximum score possible for each index, and for the total

CSR index:

Table 3. Maximum score for each index

Ethical index	52
Community Index	48
Diversity Index	84
Environmental Index	88
Total CSR Index	272

4.1 Descriptive Statistics

Analyzing our sample, we verify that during the five-year period, between 2007 and 2011, the list is not always composed of the same companies. During this timeframe, 32 different companies have managed to reach the list of the 20 biggest companies (Figure 3). In order to protect the identity of the companies in our sample, each name is replaced by a number (Annex 1).

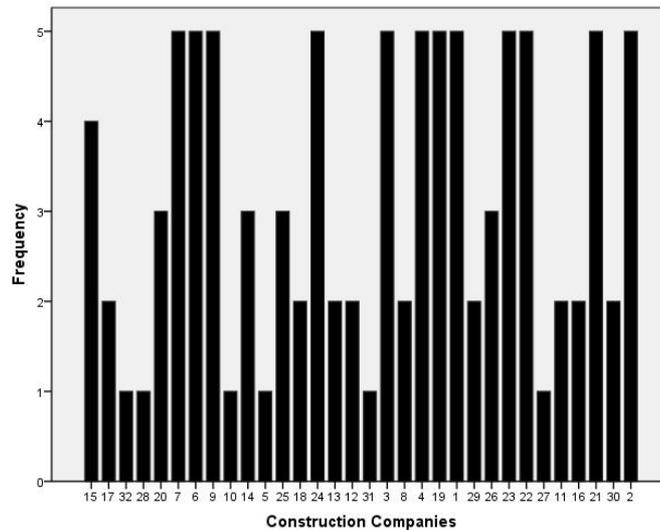


Figure 3. Frequency graph - nº of times companies appear on database - 2007/2011

Table 4 features the descriptive statistics analysis carried out on the 32 companies, individually. As we can verify, the mean of the total ethics index (TEI) achieved by our

sample (54.0937), is much lower than the maximum value (272) that can be achieved by a company.

Table 4. Index scores on ETI, CI, DI, EI; and TEI – 32 companies

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ETI	32	.00	40.00	5.5312	11.67292
CI	32	.00	39.00	11.5000	11.27658
DI	32	.00	38.00	11.4688	13.82374
EI	32	.00	61.00	25.5937	20.30709
TEI	32	.00	168.00	54.0937	51.03406
Valid N (listwise)	32				

In total, the area in which the companies achieved a higher mean value was the Environmental Index (EI), with 54, 0937. The lowest score was on the Ethical Index (ETI), where the mean obtained is 5.5, slightly above ten percent (10%) of the maximum score possible (52).

Table 5. Percentage of ethical and unethical companies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid unethical	19	59.4	59.4	59.4
ethical	13	40.6	40.6	100.0
Total	32	100.0	100.0	

Based on the mean value obtained for TEI (54.0937), we divided the sample into ethical and non-ethical firms. As viewed in Table 5, above fifty nine percent of companies (59.4%) of the companies scored below the mean value, while only around forty percent of companies (40.6%) managed to score above mean value.

Table 6. Ethics vs. Size

ethical companies			Frequency	Percent	Valid Percent	Cumulative Percent
unethical firms	Valid	SME	2	10.5	10.5	10.5
		Large Company	17	89.5	89.5	100.0
		Total	19	100.0	100.0	
ethical companies	Valid	SME	3	23.1	23.1	23.1
		Large Company	10	76.9	76.9	100.0
		Total	13	100.0	100.0	

In terms of size, in this study, we define small or medium enterprises (SME) as companies with less than 250 employees (European Commission, 2009). Our sample is mainly composed of large companies, with a total of 27 companies, and of 5 SME's. As shown in Table 6, the majority of large companies scored as unethical, whilst the SME's featured on our list show a more balanced output, with three out of five companies scoring as ethical.

Table 7. Ethics vs. Exports

Export			Frequency	Percent	Valid Percent	Cumulative Percent
no exporter	Valid	unethical firms	5	83.3	83.3	83.3
		ethical companies	1	16.7	16.7	100.0
		Total	6	100.0	100.0	
exporter	Valid	unethical firms	14	53.8	53.8	53.8
		ethical companies	12	46.2	46.2	100.0
		Total	26	100.0	100.0	

When it comes to internationalization, the majority of the companies on our list (26) are also exporters, and only a low percentage of them are not (6). However, only 16.7 % of companies who do not export are evaluated as ethical. Exporting companies seem to feature a more balanced result, in which 53.8% are rated as unethical and 46.2 are rated as ethical companies (Table 7).

4.2 Regression Analysis

In this section we will test our hypotheses H1, H2a and H2b, whether ROA and PM are higher in ethical firms than in unethical firms. To test these hypotheses, we used a regression model whereby the values of four indices CI, DI, EI, and ETI (independent variables), were regressed on ROA and PM (dependent variables) for the 20 biggest construction companies in Portugal, between a five-year timeframe (2007 to 2011, inclusively).

First, we start out by testing for normality for both our dependent variables, ROA and PM, and by observing the distribution curve on the histogram, the data does not have a normal distribution. Second, we look at the skewness and kurtosis values, and we verify that the values are far from 0, which also leads us to a non-normal distribution, although we must continue to analyze the information provided by the outputs. From the two well-known normality tests, the Kolmogorov-Smirnov and the Shapiro-Wilk, the latter is more appropriate for smaller sizes (<50 samples), but it can also be used with bigger samples. For this reason, we use the Shapiro-Wilk test as our numerical mean of testing normality.

Table 8. Normality tests on dependent variables ROA and PM

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.235	100	.000	.672	100	.000
PM	.259	100	.000	.737	100	.000

a. Lilliefors Significance Correction

From the output produced (Table 8), we can see that both dependent variables ROA and PM are not normally distributed. The p-value of the Shapiro-Wilk is lower than 0.05 which tells us that the data significantly deviate from a normal distribution.

Given the non-normal distribution of our data, we decide to further analyze our data and check for severe outliers in our dependent variables ROA and PM that may be rendering our data non-normal. We find and eliminate the influence of extreme negative outliers, transforming them into blank values. Five extremely negative outliers for ROA and five extremely negative outliers for PM were eliminated. However, after eliminating

the outliers the data continues to feature a non-normal distribution (Table 9). Thus, we decide to leave our data non-normal, and conduct the non-parametric tests which are designed for non-normal data.

Table 9. Normality tests on ROA and PM after removing outliers

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.231	95	.000	.560	95	.000
PM	.242	95	.000	.776	95	.000

a. Lilliefors Significance Correction

The Mann-Whitney test is a rank-based non-parametric test that can be used to determine if there are differences between two groups on a continuous or ordinal dependent variable. The Mann-Whitney test is often presented as the nonparametric alternative to the independent-samples t-test, which can be used when your data fail the assumptions of the independent-samples t-test. This could happen if: (a) you have non-normally distributed data; or (b) you have an ordinal dependent variable (i.e., the independent-samples t-test requires a continuous dependent variable). In the case of our present analysis, nonparametric tests were adopted due to the lack of normality in the dependent variables.

Table 10. Mann-Whitney mean test results for ROA and PM

Ranks					
	ethical companies	unethical firms	N	Mean Rank	Sum of Ranks
ROA	unethical firms		60	47.95	2877.00
	ethical companies		35	48.09	1683.00
	Total		95		
PM	unethical firms		60	48.63	2918.00
	ethical companies		35	46.91	1642.00
	Total		95		

Table 10 indicates the results on our Mann-Whitney test. It is very useful because it indicates which group can be considered as having the highest profitability ratios, overall; namely, the group with the highest mean rank. In this case, both groups, ethical and unethical feature different values. While the ROA for ethical companies is higher (48.09), the PM is higher for unethical companies (48.63).

Table 11. Tests Statistics Mann-Whitney

	ROA	PM
Mann-Whitney U	1047.000	1012.000
Wilcoxon W	2877.000	1642.000
Z	-.023	-.293
Asymp. Sig. (2-tailed)	.982	.769

a. Grouping Variable: ethical companies

Table 11 shows us the actual significance value of the test. From this data, it can be concluded that ROA and PM in the unethical firms group was not statistically significantly higher than the ethical firms group (ROA U = 1047, p = .982; PM U = 1012, p = .769).

After testing for differences in ROA and PM for both ethical and unethical companies, it is important to evaluate the distinction between independent and dependent variables, and the extent to which dependent variables are explained or influenced by these independent variables. Multiple regression is an extension of simple linear regression. It is used when we want to predict the value of a variable based on the value of two or more other variables. The variable we want to predict is called the dependent variable. Our dependent variables are the financial indicators, ROA and PM. The variables we are using to predict the value of the dependent variable are called the independent variables (or sometimes, the predictor, explanatory or regressor variables). In this case, the independent variables are the ones that characterize our sample in terms of CSR: ETI, CI, DI and EI. Multiple regression also allows you to determine the overall fit (variance explained) of the model and the relative contribution of each of the predictors to the total variance explained.

Table 12. Multicollinearity test through VIF

Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	9.733	3.053		3.188	.002	3.671	15.794		
	Size	-.001	.001	-.172	-1.299	.197	-.003	.001	.574	1.742
	ETI	.179	.203	.115	.881	.381	-.224	.581	.595	1.680
	CI	.649	.420	.468	1.545	.126	-.185	1.483	.110	9.105
	DI	-.233	.312	-.198	-.745	.458	-.853	.388	.143	7.014
	EI	-.323	.183	-.387	-1.762	.081	-.687	.041	.209	4.792

a. Dependent Variable: ROA

The first results on the regression show that there is a very high correlation between two of our independent variables: CI and DI (0,876), when analyzing both dependent variables ROA and PM. Therefore, we decided to check for multicollinearity for each independent variable. Multicollinearity increases the standard errors of the coefficients. Increased standard errors in turn means that coefficients for some independent variables may be found not to be significantly different from 0, whereas without multicollinearity and with lower standard errors, these same coefficients might have been found to be significant and the researcher may not have come to null findings in the first place. Through the Variance Inflation Factor (VIF) test, we verify that for both variables the value is greater than 5, which means that there is collinearity between those variables (Figure 4). One of the options to solve this problem would be through eliminating one of the variables, or both. However, these variables are featured due to the theory of the model adapted in this study. They characterize our sample as ethical or unethical. Therefore, we have decided to use the variable which comprehends the total sum of values of each variable, which is identified as TEI:

$$\sum ETI + CI + DI + EI = TEI$$

It will not be possible for us to evaluate a firm's financial performance based on each independent variable individually, but in the end, this is not we are searching for. Our main goal is to evaluate CFP in ethical and unethical companies, and the TEI variable represents the CSR score for each company in our sample.

Again, we remove the extreme outliers, from each dependent variable. Only extreme negative outliers were removed. We start out with our dependent variable ROA. A multiple regression analysis was run to predict ROA from TEI. Size and Export were introduced as moderating variables individually, to test for mediation effects. A mediator variable explains the relationship between a predictor and an outcome. In the next section, we will test if either Size or Export exert a mediating effect between ROA and TEI.

The first table of interest is the *Model Summary* table. This table provides the R and R square value. The R value is 0.447, which represents the simple correlation. It does not indicate a high degree of correlation. The R square value indicates how much of the dependent variable, ROA, can be explained by the variables TEI, Size and Export. In this case, 20% can be explained (Table 13).

Table 13. ROA vs, Size, Export, TEI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.447 ^a	.200	.173	12.05331%

a. Predictors: (Constant), TEI, Size, Export

Table 14. *p-value* for ROA vs. TEI, Size and Exports

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3128.171	3	1042.724	6.913	.000 ^a
	Residual	12218.392	81	150.844		
	Total	15346.563	84			

a. Predictors: (Constant), TEI, Size, Export
b. Dependent Variable: ROA

As provided by the ANOVA test (Table 14), these variables statistically significantly predict ROA, $F(3, 81) = 6.913, p < .0005, R^2 = .200$. However, from the three variables used, only Size is statistically significant to the prediction, $p < .05$ (Table 15). Therefore, Size exerts a mediating effect on the relation between ROA and TEI.

Table 15. Correlation Coefficients for Size, Export, and TEI vs. ROA

		Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	43.234	8.225		5.256	.000	26.869	59.599
	Size	-15.622	4.583	-.375	-3.409	.001	-24.740	-6.504
	Export	-4.891	4.406	-.127	-1.110	.270	-13.658	3.876
	TEI	-.031	.031	-.107	-1.009	.316	-.092	.030

a. Dependent Variable: ROA

In what concerns the variable PM, the R-square value is approximate to 0, which means that PM is not explained by the variables Size, Export and TEI (Table 16). The p-value provided by the ANOVA test is significantly above 0.05, which means that PM is not significantly correlated with the variables TEI, Size or Export (Table 17).

Table 16. PM vs. Size, Export, TEI

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.174 ^a	.030	-.004	7.59987%

a. Predictors: (Constant), TEI, Size, Export

Table 17. *p-value* for ROA vs. TEI, Size, Exports and CSR

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	155.064	3	51.688	.895	.447 ^a
	Residual	4967.185	86	57.758		
	Total	5122.249	89			

a. Predictors: (Constant), TEI, Size, Export

b. Dependent Variable: PM

The Coefficients table shows that there is no independent variable statistically significant to the prediction, which means that PM cannot be explained by any of our regressor variables (Table 18).

Table 18. Correlation Coefficients for Size, Export, and TEI vs. PM

		Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	5.660	5.088		1.112	.269	-4.455	15.774
	Size	.010	2.835	.000	.003	.997	-5.626	5.646
	Export	-.811	2.700	-.037	-.300	.765	-6.179	4.557
	TEI	.029	.019	.180	1.591	.115	-.007	.066

a. Dependent Variable: PM

Once we concluded that the multiple regression analysis is not adequate to test the correlation between PM and the regressor variables, we decided to run a simple regression analysis for each independent variable separately, by also separating our variable TEI, back in to the four different variables initially calculated. We have decided to do so, because despite the no correlation between PM and TEI, the p-value given is very close to 0.10 (0.115), and we think that one of the variables that compose the TEI may be statistically significant. After running the simple regression analysis for each regressing variable, the only independent variable found statistically significant was ETI (Table 19).

Table 19. PM vs ETI

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	622.622	1	622.622	11.783	.001 ^a
	Residual	4861.148	92	52.839		
	Total	5483.769	93			

a. Predictors: (Constant), ETI
 b. Dependent Variable: PM

As provided by the ANOVA test, the variable ETI statistically significantly predicts PM, $F(1, 92) = 11.783, p < .0005, R^2 = 0.114$. However, as shown by a low R-square, only about 11% of our variable PM can be explained by ETI. The low p-value obtained by the variable TEI, previously in the multiple regression analysis may then be influenced by the variable ETI. However, ETI is only one of the indexes of our CSR performance, and is not sufficient to support our hypothesis 2b, in which we state that ethical companies have higher PM than unethical companies.

4.3 Moderation Effects by Size, Exports and CSR

As defined previously, a moderator variable is an independent or predictor variable that interacts with another independent or predictor variable in predicting scores on and accounting for variance in a dependent or predicted variable. In this section we will test if variables Size, Exports and CSR exert any moderating effect on the relationship between our ethical performance variable TEI and our financial performance variables, ROA and PM.

4.3.1 Size

First we will test if *Size* exerts a moderating effect on the relationship between our dependent variable ROA and our independent variable TEI (Table 20). Under Change Statistics, we see that R Square Change is 0.272 when the interaction variable Size is added (model 2) to the predictor and moderator variables. This change is significant, $F(1,91) = 9.645$, $p = 0.003$. The significant interaction tells us that our presumed moderator Size (*iTEISIZE*) does indeed moderate the effects of the predictor (TEI) on the outcome variable (ROA).

Table 20. R Square change when *iTEISIZE* is added to the model – VD: ROA

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.442 ^a	.195	.177	12.02396%	.195	11.139	2	92	.000
2	.522 ^b	.272	.248	11.49597%	.077	9.645	1	91	.003

a. Predictors: (Constant), TEI, Size
 b. Predictors: (Constant), TEI, Size, *iTEISIZE*

We now test if *Size* exerts a moderating effect on the relationship between our dependent variable PM and our independent variable TEI (Table 21). Under Change Statistics, we see that R Square Change is 0.036 when the interaction variable Size is added (model 2) to the predictor and moderator variables. This change is not significant, $F(1,90) = 1.732$, $p = 0.192$. The non-significant interaction tells us that our presumed

moderator Size (iTEISIZE) does not moderate the effects of the predictor (TEI) on the outcome variable (PM).

Table 21. R Square change when iTEISIZE is added to the model – VD: PM

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.134 ^a	.018	-.004	7.69309%	.018	.828	2	91	.440
2	.191 ^b	.036	.004	7.66235%	.019	1.732	1	90	.192

a. Predictors: (Constant), TEI, Size
 b. Predictors: (Constant), TEI, Size, iTEISize

4.3.2 Exports

Just as previously performed with Size, we test if *Exports* exerts a moderating effect on the relationship between our dependent variable ROA and our independent variable TEI (Table 22). Under Change Statistics, we see that R Square Change is 0.124 when the interaction variable Exports is added (model 2) to the predictor and moderator variables. This change is significant, $F(1,91) = 6.633$, $p = 0.012$. The significant interaction tells us that our presumed moderator Exports (MODEXPORT) does indeed moderate the effects of the predictor (TEI) on the outcome variable (ROA).

Table 22. R Square change when iTEIExport is added to the model – VD: ROA

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.246 ^a	.061	.040	12.98818%	.061	2.970	2	92	.056
2	.353 ^b	.124	.096	12.60794%	.064	6.633	1	91	.012

a. Predictors: (Constant), TEI, Export
 b. Predictors: (Constant), TEI, Export, iTEIExport

We now test if *Exports* exerts a moderating effect on the relationship between our dependent variable PM and our independent variable TEI (Table 23).

Table 23. R Square change when iTEIExport is added to the model – VD: PM

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.128 ^a	.016	-.005	7.69869%	.016	.761	2	91	.470
2	.128 ^b	.016	-.016	7.74134%	.000	.000	1	90	.993

a. Predictors: (Constant), TEI, Export
 b. Predictors: (Constant), TEI, Export, iTEIExport

Under Change Statistics, we see that R Square Change is 0.016 when the interaction variable Exports is added (model 2) to the predictor and moderator variables. This change is not significant, $F(1,90) = 0,000$ $p = 0.993$. The non-significant interaction tells us that our presumed moderator Exports (MODEXPORT) does not moderate the effects of the predictor (TEI) on the outcome variable (PM).

4.3.3 CSR – Corporate Sustainability Report

We will now test the moderating effect of the variable CSR on the relationship between our dependent variable ROA and our independent variable TEI (Table 24). Under Change Statistics, we see that R Square Change is 0.057 when the interaction variable CSR is added (model 2) to the predictor and moderator variables. This change is significant, $F(1,79) = 3.344$, $p = 0.071$. The significant interaction tells us that our presumed moderator CSR (iTEICSR) does indeed moderate the effects of the predictor (TEI) on the outcome variable (ROA).

Table 24. R Square change when iTEICSR is added to the model – VD: ROA

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.129 ^a	.017	-.008	14.02715%	.017	.674	2	80	.513
2	.238 ^b	.057	.021	13.82607%	.040	3.344	1	79	.071

a. Predictors: (Constant), TEI, CSR
 b. Predictors: (Constant), TEI, CSR, iTEICSR

We now test if CSR exerts a moderating effect on the relationship between our dependent variable PM and our independent variable TEI (Table 25).

Table 25. R Square change when iTEICSR is added to the model – VD: PM

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.147 ^a	.022	-.003	7.77816%	.022	.885	2	80	.417
2	.194 ^b	.038	.001	7.76263%	.016	1.320	1	79	.254

a. Predictors: (Constant), TEI, CSR

b. Predictors: (Constant), TEI, CSR, iTEICSR

Under Change Statistics, we see that R Square Change is 0.038 when the interaction variable CSR is added (model 2) to the predictor and moderator variables. This change is not significant, $F(1,79) = 1.320$ $p = 0.254$. The non-significant interaction tells us that our presumed moderator CSR (MODCSR) does not moderate the effects of the predictor (TEI) on the outcome variable (PM).

5. Discussion

Starting out with our classification for ethical and unethical companies, our findings confirm that corporate social responsibility is strongly linked to environmental performance, by the companies in our sample underlining their strong concern about the environment compared to other issues, which is probably related to legal requirements in force that oblige companies to adapt and take measures, in order to reduce their environmental impact. The lowest mean score obtained was for the ethics index (EI). For this index, the results contrast substantially with those obtained for the other three indices, an outcome which was mainly because most companies did not disclose their policies on issues such as fair dealings, and contribution to political parties. Information was limited in their reports. In most of the cases, there were no codes of ethics and/or conduct publicly available.

When we separate ethical companies from unethical companies, based on the mean value obtained for all entries, the majority of the companies in our sample scored as unethical. Given the low mean obtained, which represents around thirty percent of the total possible score achievable, we can easily conclude that, in addition to having a high percentage of unethical companies, some of these have obtained very low classifications, equal or very close to 0, for one or more of the indexes analyzed.

In terms of internationalization, the majority of the companies in our sample are exporters, and only a low percentage of them are not. These companies have also been forced to seek for new markets as a result of the real estate and construction crisis in Portugal. However, a large percentage of companies who are exporting scored as being ethical. These results help support the theory that companies who have engaged in

internationalization start to see social responsibility as a product differentiator that will help improve their export performance (Boehe & Cruz, 2010).

By analyzing our Mann Whitney mean test on our dependent variables ROA and PM; we verify that, while ROA for ethical companies was higher than for unethical companies, PM was higher for unethical companies than for ethical companies. From the data presented, it can be concluded that ROA and PM, in the unethical firms group were not statistically significantly higher than the ROA and PM in the ethical firms group, Therefore, we can conclude that there is no statistical evidence to support our H1, in which we stated that ethical firms are more profitable than unethical firms.

According to our regression results, there seems to be no doubt that corporate social performance positively influences our financial performance indicator return on assets, which strengthens some of the findings stated in our literature review (McGuire et al, 1988; Preston & O'Bannon, 1997), and also provides supports for our hypothesis H2a, in which we state that ethical companies have higher ROA than unethical companies.. However, our model fails to confirm that corporate social performance influences the financial indicator profit margin. This may have to do with the financial crisis. The high credit risk attributed to Portugal by international rating agencies, along with credit shortage may have increased companies financial costs, thus reducing profit margins (Husted & de Jesus Salazar, 2006). Therefore, we encountered no statistical significant data to support our hypothesis H2b, in which we state that ethical companies have higher PM than unethical companies. This can also be explained by investments in higher safety and environmental standards (Sones, Grantham & Vieira, 2009), given the increasing demands in terms of environmental legislation over the last years. Our statistical analysis suggests that company show a great concern for environmental issues, and might be investing at this level, thus lowering profit margins. Once no relation was found between ethical performance and profit margin, no moderating or mediating effect was exerted by Size, Exports or CSR on this financial indicator.

Our moderation tests show us that size moderates the relationship between ethical performance and return on assets. This finding suggests that larger companies have a larger financial capacity to carry our CSR measures (Zhou and Peng, 2012), and by improving their ethical performance, they will also improve their financial performance (Fombrun &

Shanley, 1990; Roberts & Dowling, 2002). Exports also exert a moderating effect on the relationship between ethical performance and return on assets, This can also suggest that ethical exporting companies are more aware of the positive effects of corporate socially responsible behavior on the company's image, and also as a product differentiator. The moderation test on CSR suggests that ethical companies are also concerned in publicly disclosing their CSR activity because they are well aware of the positive outcomes that will occur on their financial performance (Parket & Eilbert, 1975).

6. Conclusion

In this dissertation we focused on the study of the effects of ethics on an organization's financial performance. We started out by testing the hypothesis that companies with ethical concerns have better financial performance than those companies which are not concerned with ethical practices. Ethical behavior is evaluated according to corporate social responsibility and we explain why they cannot be dissociated. In this dissertation, first we examined the sustainability reports of the twenty biggest civil construction and public works companies in Portugal. When these were not available, we examined corporate websites, codes of ethics and conduct. Afterwards, we used the four indices developed by Ameer and Othman (2012) which reflect global companies' commitment to their ethical, environmental, community, and diversity responsibilities. Our findings show that the Portuguese civil construction and public works industry is more aware of environmental issues than ethical issues, such as codes of ethics or conduct. However, the scores obtained are very low, for every CSR index analyzed in this study. Also, our findings show that firms which have business in other countries seem to be more concerned with ethical issues.

Despite limitation of sample size, overall, our statistical results confirm that there is a bi-directional relationship between a firm's financial performance and corporate social responsibility. Our findings prove that, investing in ethical and social responsibility measures is not only in the best interest of stakeholders, but also in the best interest of shareholders, who search for a return on their investment.

The main contribution for academia is to strengthen the previous organizational and management literature on the effects of ethical behavior on an organization's financial performance. Also, for management, our study demonstrates the importance of corporate

social performance, and the importance of promoting ethical behavior inside and outside of their companies.

6.1 Limitations and Recommendations for Future Research

There are several limitations to this study. We only focus on one country, Portugal, and it is only relating to one industry: civil construction and public works. We suggest that further research be conducted on more industries, in order to be able to evaluate and compare the effects of ethics on different sectors. We also suggest the research be extended to other countries in order to perform a cross cultural study on the effects of ethics in different cultural frameworks. Other variables should also be considered to evaluate ethical performance, in order to allow us to expand our conclusions. Very few companies have CSR reports or organizational codes of ethics and/or conduct. It would be interesting to analyze how smaller companies perform in terms of ethics. Another interesting future research would be to compare ethical behavior between “start-up” companies and companies with a longer existence, in order to evaluate if unethical behavior is something we inherit from older colleagues.

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8. Annexes

Annex I. Sample Identification

1	AFAVIAS
2	ALVES RIBEIRO
3	AUTO ESTRADAS XXI
4	BENTO PEDROSO
5	BRISA AUTO ESTRADAS
6	CASAIS
7	CME
8	CONDURIL
9	CONSTRUCTORA SAN JOSE
10	CONSTRUTORA ABRANTINA
11	CONSTRUTORA DO TAMEGA
12	CONTACTO
13	DOMINGOS DA SILVA TEIXEIRA
14	EDIFER
15	ENSUL MECI
16	FDO CONSTRUÇÕES
17	FERROVIAL AGROMAN
18	LENA
19	LUSOS CUT
20	MONTEADRIANO
21	MOTA ENGIL
22	MSF-EMPREENHEIROS
23	OPWAY
24	OPWAY ENGENHARIA
25	SOARES DA COSTA
26	SOMAGUE ENGENHARIA
27	SOPOL
28	TECNOVIA
29	TECREUN
30	TEIXEIRA DUARTE
31	VIATEL
32	ZAGOPE

Annex II. Items for evaluating Ethical Indexes (ETI, CI, DI, EI)/TEI

Community Index (CI)

- 1 Does the company have a charitable foundation and if so, how much was given during the most recent fiscal year?
- 2 Does the company have exceptional or particularly innovative charitable-giving programs?
- 3 Is the company an industry leader with respect to its performance in Community activism?
- 4 Does the company have exceptional volunteer programs?
- 5 Is there evidence of new initiatives implemented by or awards given to the company with respect to its performance in this category?
- 6 What community programs does the company have in place?
- 7 Does the company have employee volunteer programs?
- 8 Do the company's volunteer programs involve a large portion of the company's current and former workforce?
- 9 Does the company participate in public/private partnerships related to education, job training, or urban revitalization and if so, what is the nature of the company's commitment to them?
- 10 Does the company have partnerships with local schools or community-based groups?
- 11 Does the company have a corporate giving program and if so, how much was given during the most recent fiscal year?
- 12 Is the company committed to donating a given percentage of its pretax profits to charitable organizations and if so, what percentage is the target goal?

Diversity Index (DI)

- 1 Has the company demonstrated a commitment to workforce diversity?

- 2 Does the company actively hire and promote minority and women?
- 3 Has the company demonstrated its commitment to diversity through strong representation of women, minorities, and the disabled on boards of directors, in top management, and/or among the company's highest paid employees?
- 4 Has the company demonstrated its commitment to diversity through its training and advancement programs (e.g., support networks, management reviews, mentoring)?
- 5 Has the company demonstrated its commitment to diversity through participation in women and minority vendor and banking programs?
- 6 Has the company demonstrated its commitment to diversity through implementation of innovative work/life programs (e.g., flextime, job sharing, child care, elder care)?
- 7 Does the company have programs to train woman for advancement?
- 8 Does the company conduct diversity training for its employees?
- 9 Does the company have a history of violations in the area of abusive labor conditions?
- 10 Does the company have a poor Equal Employment Opportunity Commission (EEOC) record?
- 11 Does the company's record in this area show a systematic or repeated disregard for the need to foster an open and diverse work environment?
- 12 Does the company have affirmative action programs pertaining to recruitment and promotion?
- 13 Does the company, at a minimum, have in place specifically stated policies against discrimination in hiring and promotion based upon sexual orientation?
- 14 Does the company have a set of standards for its overseas operations and non-U.S. contractors and suppliers?
- 15 Does the company have a board or staff task force or committee set up to address diversity-related issues?
- 16 Does the company clearly exclude women from positions in operating top management?

17 Does the company have women and minorities serving in positions with substantial profit and loss responsibilities?

18 Does the company have gender equity in wages?

19 How does the company portray woman in advertising and marketing materials?

20 What is the nature and extent of any civil discrimination lawsuits brought against the company?

21 Does the company have an understanding of the need for minority constituencies to have more of a voice in business?

Environment Index (EI)

1 Is the company in compliance with environmental laws and regulations?

2 What civil lawsuits, particularly those covering overseas issues, has the company been subject to, with respect to its environmental performance in the past 3 years?

3 What assets have the company accrues for pollution remediation?

4 Does the company have environmental remediation liabilities?

5 Does the company have current substantial liabilities for the remediation of asbestos?

6 Is the company dedicated to the conservation of energy and natural resources, with emphasis on the impact of operations on the local community?

7 Is the company proactive in its environmental efforts?

8 Has the company demonstrated a commitment to change, with respect to its environmental performance?

9 Has the company developed new products and/or processes that will reduce or minimize environmental impact?

10 Has the company adopted new technologies and/or redesigned products to conserve the use of energy, water, materials, and/or land?

11 Is the company involved with the new development or use of clean energy, sustainable renewable energy, or natural foods?

12 Is the company perceived as an industry leader, with respect to its performance in this category?

13 What is the effectiveness of the company's environmental policies; specifically, are the company's established programs and/or goals actually improving its environmental performance?

14 Has the company taken positive steps toward preserving our environment?

15 Does the company have environmental policies in effect with measurable goals, companywide responsibility, and quantitative accountability?

16 Does the company have voluntary programs in place, including recycling?

17 Does the company have specific environmental policies and if so, what are they?

18 What are the company's major policies to prevent air and water pollution?

19 Does the company have an environmental report, including quantitative data on emissions/pollution?

What are the company's levels of emission? What are the company's levels of environment data, e.g., TRI, spills, etc.?

20 What are the company's recycling efforts?

21 Are all company operations (including those abroad) in compliance with environmental statutes?

22 What is the nature and amount of EPA violations and fines paid?

Ethical Index (ETI)

1 Does the co. have a written Code of Business Conduct used as a guide to help employees live up to the company's ethical standards?

2 Does the code go beyond the legal minimums?

3 Does the code include corporate policies dealing with business conduct specifically related to Equal Employment Opportunity?

- 4 Does the code include corporate policies dealing with business conduct specifically related to conflicts of interest?
- 5 Does the code include corporate policies dealing with business conduct specifically related to commercial bribery?
- 6 Does the code include corporate policies dealing with business conduct specifically related to international business relationships?
- 7 Does the code include corporate policies dealing with business conduct specifically related to use and public disclosure of inside info, and the use of confidential and proprietary information?
- 8 Does the code include corporate policies dealing with business conduct specifically related to export compliance and international economic sanctions?
- 9 Does the code include corporate policies dealing with business conduct specifically related to political contributions?
- 10 Does the code include corporate policies dealing with business conduct specifically related to antitrust and competition laws?
- 11 Does the code include corporate policies dealing with business conduct specifically related to health, safety, and environment?
- 12 Does the code include corporate policies dealing with business conduct specifically related to harassment?
- 13 Has the company, its executives, managers, and employees consistently operated within the framework provided by the Code of Business Conduct in the past 3 years?