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The Relationship between Corporate Social Responsibility and Employee Wages

A case of philanthropy or shareholder maximization?

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PREFACE AND ACKNOWLEDGEMENTS

This thesis presents the results of my research on the relationship between CSR and employee wages. It reflects months of hard work, inspiration, and most of all determination. I will not forget the long nights and weekends writing my thesis at the University Library. While working on this research against expectations this thesis has made me incredibly interested and passionate about CSR. What started with one sentence: CSR 'means something, but not always the same thing, to everybody' by Votaw (1972) resulted in what I am proud to say is my master thesis and at the same time the conclusion of my master Financial Economics.

However, I could not have done my research without the help of many people. For that reason I would firstly like to thank my thesis supervisor, Patrick Verwijmeren, professor of corporate finance at the Erasmus School of Economics at Erasmus University. I also want to express my gratitude to Bart Breemen for his helpful comments. Furthermore, I would like to thank my family and friends for their support and patience throughout this process. Special thanks go out to my parents and brother for always being there for me.

ABSTRACT

This research provides a new method to analyze the view on corporate social responsibility (CSR) by U.S. public companies between 2003 and 2011. Two views on CSR can be distinguished: shareholder maximization CSR and philanthropic CSR. The first view sees CSR as an instrument to create shareholder value and the second view claims that companies embrace CSR since they also care about their stakeholders and want to be a good corporate citizen. The idea is that the type of relationship between CSR and employee wages explains which view on CSR is supported. The regression analysis indicates a negative significant relationship between CSR and employee wages which suggests shareholder maximization CSR when including all sectors over the entire research period. In other words, companies with a higher level of CSR pay their employees less than companies with a lower level of CSR. They use CSR to reinforce their goal to create shareholder value and not because they care about their stakeholders. The negative relationship also holds when only concentrating on the financial sector separated from the other sectors. If the research period is split up in before and after the crisis the relationship remains negative before 2007 and the relationship is even stronger after 2007.

JEL classification: M14, J30, L21, D64, C30

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CHAPTER 1 INTRODUCTION

Over the last decades the field of corporate social responsibility (CSR) has grown exponentially. More than before numerous companies all over the world have defined and incorporated CSR in their businesses. According to Tsoutsoura (2004) more than 50 percent of the Fortune 1000 companies report on CSR on a regular basis. A survey by the Economist Intelligence Unit in 2008 showed that 47 percent of the firms that responded agreed that CSR is 'a necessary cost of doing business' and that it 'provides a distinctive position in the market' (Economist, January 17, 2008).

Nevertheless, there still is a debate about the legitimacy and value of CSR. There are various views on the role of companies in society. The discussion concerns whether wealth maximization should be the only objective of companies or whether they should care about other issues like CSR. Some argue that issues like human rights are the responsibility of the government and that companies are not suited to be involved in such problems. Others argue that companies can deliver a sizable contribution to these issues and therefore should participate in CSR (Harjoto, 2009).

In 1953 Bowen published 'Social Responsibility of Businessmen' in which he addressed the question 'what responsibilities to society can business people be reasonably expected to assume?' In the late 1960s CSR was a more common term and more was written on the topic of corporate responsibility towards society. During the 1970s and 1980s the debate on the social responsibility of companies grew even more. The first company to publish a CSR report was Ben and Jerry's in 1989 and the first major company to do so was Shell in 1998 (Jensen, 2002). These reports were the first of many to come.

One of the important questions with regard to CSR is, why do companies engage in CSR activities? The reasons behind CSR include economic reasons, reputational reasons, ethical reasons, philanthropic reasons, public pressure, loyalty, public goodwill etcetera. A large part of the literature on CSR investigates the motives of companies (Kotchen, 2012) questioning whether it is because they want to make money or because they actually care about society. In other words: do companies only care about shareholder maximization and use CSR to support this goal, in which case it is called shareholder maximization CSR. Or do companies care about their stakeholders and society, in which case the variety of CSR is called philanthropic CSR. This question summarizes the goal of this research which is finding out which view of CSR is the case for public companies in the United States.

Finding an answer to this question poses some challenges. Firstly, is how is CSR to be defined, secondly how can it be measured for analysis. Numerous definitions of CSR have been proposed over the years and often no clear definition is given which makes theoretical development and measurement difficult. Still this research tries to investigate CSR in a new way.

The dataset covers public US companies extracted from the Kinder, Lydenberg, and Domini (KLD) Database from 2003 until 2011. The purpose of this research is to provide a new framework on measuring the view on CSR through analysis of employee wages. The existing methods of measuring CSR explained in the literature review have their limitations. This new method has not been analyzed in academic literature yet. There are two views on CSR that can be distinguished in this paper which are philanthropic CSR and shareholder maximization CSR. These views will be explained in the literature review. The goal is to find out which view is the case for the companies analysed, by conducting empirical tests.

As a proxy for employee wages labour expenses extracted from North America Compustat are used. CSR data from KLD is used to calculate a CSR score for each company per year. Furthermore, to analyze the relationship between CSR and employee wages per employee control variables like firm size, profitability, productivity and leverage are included. Conducting a regression analysis with independent variables on employee wages will lead to either a positive or negative relationship. A positive relationship between CSR and employee wages shows philanthropic CSR and a negative relationship indicates shareholder maximization. The assumption is that the type of relationship between CSR and employee wages explains which view on CSR is supported.

After the conducting the regression analysis between 2003 and 2011 for U.S. public companies a significant negative relationship is found between CSR and employee wages per employee. This supports the view of shareholder maximization CSR which indicates that companies with a higher level of CSR pay their employees less compared to companies with a lower level of CSR. When the financial sector is excluded from the data this relationship is not significant possible due to the lower number of observations. However, the negative relationship does hold when only focusing on the financial sector. When the crisis is taken into account the relationship is negative before and after the crisis, also suggesting shareholder maximization CSR. However, for the financial sector and other sectors separately the results are not significant when splitting the research period up in before and after the crisis.

The remainder of this paper is organized as follows. The next section includes relevant literature on CSR. This is followed by a section explaining the choice of data continued with an analysis of the data. Next the method measuring the view on CSR by analysing the relationship between CSR and employee wages is discussed. The following section refers to the overall outcomes of the regression analysis. Finally, the main findings and limitations of this research are explained.

CHAPTER 2 LITERATURE REVIEW

This chapter describes literature of corporate social responsibility (CSR). There are two views on CSR that can be distinguished in this research, called shareholder maximization CSR and philanthropic CSR. The idea is that the type of relationship between CSR and employee wages explains which view on CSR is supported. In order to analyse this literature on the definition of CSR, reasons for CSR engagement and the views on CSR are explained. Finally, the relationship between CSR and financial performance and the relationship between CSR and employees are discussed.

2.1 Definitions of CSR

Over the last decades CSR has shown to be one of the most key and controversial trends in the corporate world. According to Tsoutsoura (2004) companies are asked to be accountable for CSR issues by more and more activists, analysts, community organizations, employees, labor unions, regulators and media. Despite the increasing amount of attention from academics and media finding a definition for CSR that is generally accepted is difficult (Turker, 2008). There have been numerous attempts to come up with a clear, robust and unbiased definition.

Starting with Friedman (1970) who defines CSR as follows 'Corporate social responsibility is to conduct the business in accordance with shareholders' desires, which generally will be to make as much money as possible while conforming to the basic rules of society, both those embodied in law and those embodied in ethical custom.' Bowen (1953) on the other hand views CSR as part of his broader vision of a better American society. In this society economic and social goals are strengthened by each other. His definition of CSR includes the obligations of businessmen 'to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society', and was one of the first formal definitions. It started a line of contradictory definitions in academic literature. McWilliams and Siegel (2001) describe CSR as 'actions that appear to further some social good beyond the interests of the firm and that which is required by law.´ McWilliams and Siegel emphasize that CSR means more than just following the law. For example by avoiding discrimination in the workplace one is not engaging in a social responsible manner but simply obeying the law. An article by Alexander Dahlsrud (2006) on CSR definitions provides an analysis of thirty-seven definitions. According to Dahlsrud the most frequent definition in academic literature is that of the Commission of European communities (2001) stating 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholder on a voluntary basis'. Taking into account the above, the CSR definition in the context of this research is deducted from the Commission of European communities.

2.2 Motives behind CSR

Academic literature on CSR also tries to develop a framework to understand the factors that lead companies to engage in CSR activities. Companies embark on CSR because they believe they will benefit from it, either directly or indirectly. Motives for CSR range from corporate reputation, brand differentiation, stakeholder pressure, and economic performance to genuine concern.

Some might argue that CSR is an essential strategy for ensuring the reputation of a company. More and more companies embrace CSR as a way to make money with their reputation, goodwill and/or intellectual capital instead of solely focusing on their products (Regester, 2005). In return companies are able to derive positive PR benefits. This is only possible if the public is convinced that the company has a positive impact on society. CSR can help a company reinforce its reputation by showing that it can simultaneously fulfill the needs of stakeholders and pursue its profit goals, also called synergistic value creation (Kurucz, 2008). According to Lantos (2001) in some cases more money is spent on advertising a CSR success than on the activity itself. The money for the advertising is seen as an investment which will lead to future returns (McWilliams and Siegel, 2001). These returns do not have to end up on the financial statements but also can serve as a benefit when the company has to deal with public criticism or other reputational risk. Ford Motors for example gave away a million booster seats for 4-8 year old children that ensure that adult seatbelts fit them better. In return they created goodwill among customers, regulators and government (Kiley, 2001) which can lead to more business and a better relationship with the government (Brenkert, 1996).

One of the main reasons for CSR used to be brand differentiation. However, since CSR has become more ordinary this has become a challenge. Therefore companies currently are not able to gain as much from brand differentiation using CSR as in the past. Still not every company is incorporating CSR into its business in the same way. Competitive advantage arguments hold that by engaging in CSR a company is able to build a strong relationship with its stakeholders (Keeble and Turner, 2003). In return they could manage lower levels of employee turnover, a higher talent pool and customer loyalty. A company can position itself in a certain way in the market and in its industry by investing in CSR activities. This way companies are able to be one step ahead of other companies and regulation (Grewal, 2012).

Another reason for investing in CSR is stakeholder pressure. In light of the current social and political climate the public is demanding companies to include CSR in their strategy. The stakeholders that pressure companies to invest in CSR range from employees, consumers, communities and the government to the environment (McWilliams and Siegel, 2001). With employee pressures is meant the public recognizing the importance of employee rights. Examples of such rights are non-discrimination in hiring, firing and promoting employees. Consumer pressure concerns producing products that are safe and informing consumer in a better way. It is well known that

customers are more inclined to select companies that are involved in CSR activities. Community and environmental pressure concerns pollution and protecting the local community. The pressure of the government refers to the continuous pressure of abiding the law. The pressure of consumers and communities ordinarily takes place in the form of a voice or social movements, like campaigns and demonstrations. Examples of these movements are anti-genetically engineered food and crops campaigns in the E.U, the anti-Nike activist demonstration in the US and the anti-Shell activist demonstration in Nigeria (Paine and Moidoveanu, 1999).

CSR can also help a company cut back on costs. Business imperatives like cutting costs and efficient work processes could be important drivers for CSR initiatives. Examples are saving energy, using less packaging or minimizing waste which can lead to reduction of operational costs, more efficiency and possible tax benefits (Jones and Comfort, 2005). An example of a company that is planning a reduction of energy is General Mills. They are on the way of a reducing 20% of their energy usage by 2015 according to their 2011 CSR report. The company has as yet saved 600,000 US dollars as measured by their energy monitoring meters on some of their equipment. A concern for a company can be that environmental measures do not necessarily result in cost savings.

Most investors believe that companies that engage in CSR are a safer investment and that CSR has a positive impact on the long-term market value. CSR can be seen as an effort to look at the company's long-term interests and ensuring sustainability. Investors believe that CSR signifies that companies are aware of social concerns. Concerns, like pollution, can form a threat to a company, making it unsafe in the eye of the investor. This does not necessarily mean they will work on the actual issue. It can also mean that a company will try to redeem itself in the view of the investor by supporting ideologies or by making strategic donations. By doing this it can meet the need of investors and therefore get access to capital (Keeble and Turner, 2003).

Business case arguments for CSR hold that companies can either directly or indirectly benefit financially (Grewal, 2012). Grewal distinguishes two views on the benefits of CSR. The narrow view on engaging in CSR includes direct benefits like cost savings; the broad view includes both direct and indirect benefits. The broad view allows benefiting from CSR opportunities like enhancing the competitive advantage and creating a win-win situation for the company and its stakeholders. Another benefit is that companies are able to gain from cost and risk reduction and reputation benefits. The broad view sheds light on the mediating factors between CSR and financial performance. According to Grewal the impact of CSR does not have to be positive and companies should realize the circumstances of CSR initiatives. They should engage in such activities that show a convergence between social and financial goals.

Grewal (2012) states that companies also have moral reasons to embrace CSR. By doing the right thing they show genuine concern for society. They actually care about human rights, the

employees, the community, the environment etcetera. This can be seen as corporate philanthropy and can also have benefits for the company. In return they can receive tax benefits, a better image, and a better relationship with their stakeholders. This does not necessarily mean that these are the underlying reasons for a company to engage in CSR. Unfortunately, it is hard to see whether companies pursue CSR because of genuine concern or for other more selfish reasons.

Above the main motives behind CSR were discussed. Other motives can be that CSR provides a more rounded image of the company or that it shows the public and the stakeholders how important non-financial matters are to the company. CSR may also be used to make sure the employees' and the company's objectives are aligned, to meet the best practice rules as stated in the company's reporting or to uphold its core values (Idowu and Papasolomou, 2007). Note that the motives mentioned can overlap or simultaneously exist for one company. Furthermore it is hard to see from the outside which motives apply and which do not.

2.3 Two views on CSR

The two views on CSR, in this research referred to as shareholder maximization CSR and philanthropic CSR will be explained. The first view sees CSR as an instrument to create shareholder value and the second view claims that companies embrace CSR for other reasons than shareholder value: they care about their stakeholders and want to be a good corporate citizen. The definition of philanthropy according to Godfrey (2005) can be deducted from the Financial Accounting Standards Board (1993) and states that philanthropy is 'an unconditional transfer of cash or other assets to an entity or a settlement or cancellation of its liabilities in a voluntary non-reciprocal transfer by another entity acting other than as an owner'. Examples of philanthropic CSR activities are making donations to build a private school or a sport arena, encouraging employees to volunteer in food banks, trying to reduce poverty by donating to third world countries. These activities are not necessarily beneficial to the company's financial position, are usually not directly linked to the core business and do not aim for immediate business gains (Porter and Kramer, 2002). On the other hand shareholder maximization CSR seeks for immediate business gains and the activities can be linked to the core business of the company. These views are in line with the stakeholder theory and the shareholder theory. According to Milton Friedman (1970) the one and only social responsibility of companies is to increase profits and charitable contributions should be made by individuals and not by the company. This is in line with the shareholder theory which claims that the main purpose of a company lies in generating profits and increasing shareholder wealth (Jensen, 2002). This supports the view on CSR which claims that firms should be socially responsible as long as CSR increases shareholder value. The stakeholder theory holds that a company should have an expanded role and responsibilities to other

stakeholders besides its shareholders (Jensen, 2002). Examples of stakeholders[1] are consumers, creditors, competitors, employees, investors, communities, regulators, suppliers, governments and the environment. This is in line with the other view that companies care about more than just increasing shareholder value and therefore supports philanthropic CSR.

2.4 Previous results with regard to CSR

Many attempts have been made to try and measure CSR activities of companies both in academics and business (Turker, 2008). Even though measuring CSR is found to be difficult, studies have taken place trying to find a relationship between CSR and company characteristics like financial performance. Also the relationship between CSR and one of the key stakeholders, the employees, has been examined several times. Numerous studies[2] on the relationship between CSR and financial performance have been published (Margolis and Walsh, 2001). Most of the research finds a positive relationship but several studies find no or even a negative relationship (Kotchen and Moon, 2012). These mixed results may be due to the fact different models are used. Cochran and Wood (1984) include industry-specific control groups and average age of corporate assets and find a positive link. McWilliams and Siegel (2000) include R&D and find a neutral relationship. Even though these relationships have been found the causality has not been proven (Kotchen and Moon, 2012). It is not clear whether CSR leads to a better financial performance or a better financial performance leads to more resources to engage in CSR activities.

Turban and Greening (2000) find that prospective job applicants are more likely to go after jobs with companies that are seen as socially responsible compared to companies that have a poor CSR reputation. This is related to the signalling theory and the social identity theory: CSR activities of a company signal to potential employees the kind of work environment they offer and these potential employees have a higher self- image when they work for such a company. Tsoutoura (2004) also claims that CSR leads to increased ability to attract and retain the best employees. In return these companies benefit from reduced employee turnover, recruitment and training costs. Furthermore, companies that maintain labor friendly policies and good working conditions benefit in terms of productivity and reduced errors (Moskowitz, 1972). Also, the way CSR is perceived determines the employee's attitude and behavior towards the company (Aguilera, Rupp et al, 2005). This affects the

[1] The definition of Freeman (1984) for stakeholders is stated as 'those groups or individuals who can affect or are affected by the achievement of the organization's objectives or are those actors with a direct or indirect interest in the company.'

[2] According to Margolis and Walsh in the period between 1971 and 2001 one hundred twenty-two published empirical studies took place on the relationship between CSR and financial performance.

job satisfaction, stress and emotion of employees as well as absenteeism, and employee commitment in a positive way (Colquitt 2001).

2.5 Conclusions and summaries

The definition for CSR used in this research is 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholder on a voluntary basis'. The underlying reasons for CSR range from corporate reputation, brand differentiation, stakeholder pressure, and economic performance to genuine concern. The focus of this research lies on the two views on CSR that were discussed, shareholder maximization CSR and philanthropic CSR. The assumption is that the type of relationship between CSR and employee wages explains which view on CSR is supported. A positive relationship shows philanthropic CSR and a negative relationship indicates shareholder maximization.

CHAPTER 3 DATA AND METHODOLOGY

This section provides a description of the data and the method that is used to find out whether there is a significant relationship between CSR and employee wages. The idea is that a negative relation between these variables suggests that shareholder maximization CSR is the case and a positive relation suggests philanthropic CSR.

3.1 Data

This research focuses on public companies in the United States included in the Kinder, Lydenberg, and Domini (KLD) Database[3]. The analysis covers the period from 2003 until 2011 since KLD includes around 3100 companies since 2003. Companies that are not rated for their CSR activities are excluded in this analysis since this research focuses on the effect that the type of view on CSR has on wages.

3.1.1 CSR score

To analyze the development of CSR over time CSR ratings obtained from the KLD Database are included. This specific database has been chosen because KLD Research & Analytics, Inc. is the leading authority on social research and is the measurement tool most widely used for CSR by investors and academics. This is also in line with Waddock and Graves (1997), Hillman and Keim (2001), Chatterji, Levine, and Toffel (2009), Barnett and Salomon (2012). It is important to note that the KLD dataset is subject to selection bias since the dataset mainly consists of the largest US public companies. KLD rates companies alongside seven main aspects of CSR: Community, Corporate Governance, Diversity, Employee Relations, Environment, Human Rights and Product Quality and Safety. These dimensions are measured by 80 indicators that are explained in table 13. Before 2002, KLD had a category named 'Other' which was renamed Corporate Governance in 2002. However, this category concerns compensation, ownership, accounting, and other issues. This category is not in line with the definition of CSR in this research and is therefore not included. The indicators are divided into strengths and concerns that are assigned a ´0´ if they are not applicable for a company and a ´1´ if they are. The total number of strengths is added up for every company on a yearly basis, the same is done for the concerns in line with Hillman and Keim (2001) and Baron et, al (2011). A strength adds to the CSR score and a concern subtracts from the score. The scores of the six aspects are added in order to create one CSR score per company for each year[4]. A higher score implies a

[3] The KLD database currently contains annual indicators of the environmental, social, and governance performance of around 3100 American companies. Table 11 contains more information on the composition of the KLD database.

[4] Table 15 shows the details on the calculation of the CSR score.

better level of CSR. KLD also rates controversial issues like Alcohol, Firearms, Gambling, Military, Nuclear Power, and Tobacco. KLD only reports in a negative way for these issues since they only include the concerns. In order to reduce the dimensionality these issues are not included in this research. Finally, the CSR scores are standardized to have a mean of zero and a standard deviation of one in order to simplify the interpretation of regression coefficients (Laksmana and Yang, 2009). Three remarks can be made about these CSR scores. Firstly, the KLD data includes mostly companies with a large market capitalization, which is a misrepresentation of the market (Chatterji, Levine, and Toffel, 2009). Secondly, companies want to be rated as high as possible because of the benefits a high CSR score entails. Therefore companies like to check off the checkboxes of CSR ratings in order to get a high rating. This implies that a highly rated company does not necessarily have the highest level of CSR but checks off the most criteria that KLD requires. Third and finally, another constraint of the CSR score is that it is based on KLD's own assessment of a company. This assessment consists of a survey and an in-house analysis but does not cover the direct feedback from stakeholders. Therefore self-selection bias exists in the data (Harjoto and Jo, 2009).

Figure 1 provides the average unstandardized CSR scores. The graph shows all scores are negative, meaning that the CSR concerns trump the CSR strengths. It also shows that since 2003 the CSR score has weakened over time with a low in 2010. This may be explained as a consequence of the financial crisis. When looking at the dimensions separately it turns out that the diversity aspect is accountable for the big downward movement starting in 2009 (figure 5). KLD explains diversity by rating topics like CEO sex, promotion, board of directors, work/life benefits, women & minority contracting, employment of the disabled, gay & lesbian policies, employment of underrepresented groups (from 2010), controversies, non-representation, board diversity and other topics[5]. The reason for diversity suddenly going down is mainly because of controversies, non-representation of certain groups in companies and a lack of board diversity. In figure 5 the CSR score development of the six dimensions is shown over time separately. The figure also indicates that the product, human rights, community and employee relations scores are quite stable over time. Finally, the environmental dimension shows an upward movement beginning in 2009 which is explained by improvements in topics like beneficial products and services, pollution prevention, recycling, clean energy, communications, property, plant, and equipment.

[5] These topics are deducted from KLD Research & Analytics, Inc.

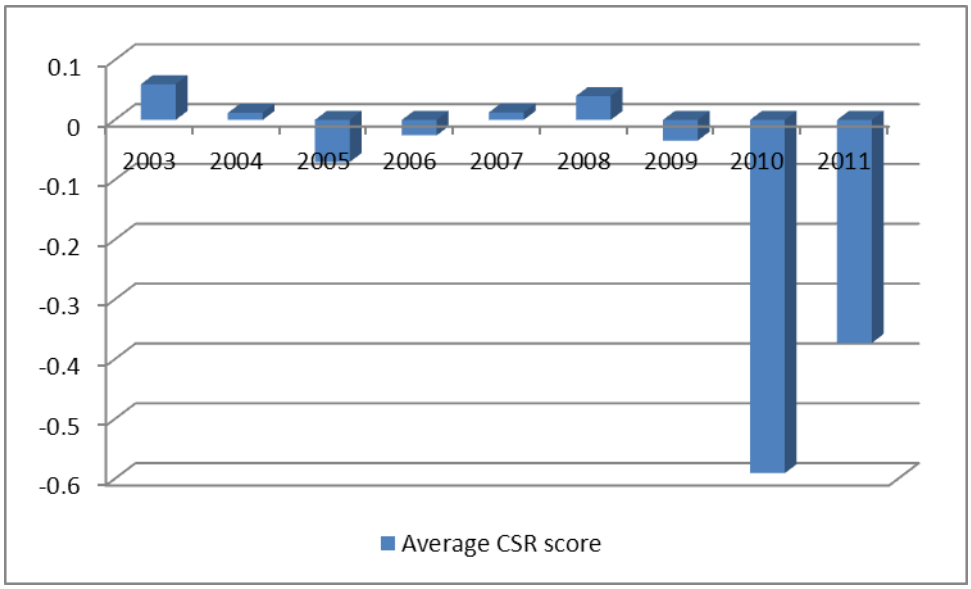

Figure 1 Average CSR score per year

Since the focus lies on employee wages, an index is constructed to measure the labour friendliness[6] of a company. This is done by also taking the KLD employee relations strengths and concerns into account next to the calculated CSR score. This index is named labour friendliness score (LFS) and is constructed in the same way as the CSR score (Faleye and Trahan, 2011). The labour friendliness score includes topics concerning strengths, like union relations, no-layoff policy, cash profit sharing, employee involvement, retirement benefits strength, health and safety strength, as well as concerns like union relations, health and safety workforce reductions, and retirement benefits.

A search in the KLD database produces 761 companies that meet the requirements of this research. From the 5345 companies extracted from the KLD database between 2003-2011 781 companies were left for which wages data was available in Compustat; from these, 761 companies were left for which CSR data was also present. According to Comin, Groshen and Rabin (2008) over 80% of companies do not report on wages in Compustat. This explains the number of companies that are left for this research. For the 761 companies selected, the relationship between CSR and wages will be analyzed which has not been previously done in literature. For this analysis certain control variables have been taken into account.

[6] Labour friendliness is defined by Falaye and Trahan (2011) as practices that involve the devotion of significant resources (financial and otherwise) to enhancing employee welfare and helping them balance their home and work lives.

3.1.2 Control variables

Since firm size, profitability, productivity, industry type and leverage have been suggested in previous articles to be factors that determine wages these variables will be included in the regression analysis. Size is important because in general larger companies tend to pay higher wages since they can afford more than smaller companies (Oi and Idson, 1999). Oi and Idson argue that this positive relation can be explained by the way larger companies are organized and for the selection of employees. A large company for example sets a higher performance standard in order to raise labor productivity and is able to use wages as a means to attract better employees. A higher performance standard has to be compensated by higher wages. Furthermore Udayasankar (2007) shows that the effect of firm size on the level of CSR participation is U-shaped. Small and large companies tend to have a higher level of CSR participation compared to mid-sized companies. This is related to different combinations of firm visibility, resource access and scale of operations which lead to different motivations for CSR participation. Firm size is measured by the natural logarithm of the total sales which is in line with Cronqvist (2009). Also, more profitable companies are more able to, and tend to pay higher wages than companies that are less profitable for the same reason as mentioned before. Hildreth and Oswald (1999) show that as predicted by the rent-sharing model of the labour market profitability has a positive influence on wages. Next to this, most research on CSR and profitability finds a positive relationship (Kotchen and Moon, 2012). To measure profitability the return on equity is taken into account. Cronqvist (2009) investigates the relationship between CEO control and employee wages and includes productivity in its model to see whether it has an impact on wages. The more productive the employees are the higher the compensation because of rent-sharing. Productivity is also included in this model by taking the natural logarithm of sales per employee. The type of industry a company operates in can also be of influence on the wages level. Industry type is determined by their four-digit Standard Industrial Classification (SIC) code and is represented in the model by dummy variables. An empirical study using cross-sectional data shows significant wage differences across industries (Ferreira, 2009). Similar employees in similar companies are paid more for some industries compared to other industries. Numerous studies have found a relationship between CSR and the industry type (Brancoand Rodrigues, 2008; Cowen Linda & Scott, 1987; Gray, 2002; Newson and Deegan, 2002; Parsa and Deng, 2008; Wanderley, Lucian, Farache, and de Sousa Filho, 2008). The results state that the level and type of CSR disclosure differ per industry. This can be because of stakeholder pressure (Patten, 1991) or regulation that is relevant for some industries (Dierkes and Preston, 1977) or the nature of companies (Cowen, Linda and Scott, 1987). Consumer oriented companies for example tend to show more concern to prove their CSR awareness to the

public. Leverage is also of importance and is determined by the debt ratio[7]. The higher the debt ratio, the greater risk will be associated with the company. Hanka (1998) has researched company-level data on employee wages in the United States. Hanka, in line with Cronqvist (2009), finds that companies that are levered more pay their employees less. This can be explained by the bargaining power CEOs gain in relation to their employees. Debt can be used during bargaining with employees and unions in order to keep down the wages (Perotti and Spier (1993) and Matsa (2006)). The higher risk of default and the higher amount of debt limits the ability to divert free cash flow towards employees (Jensen, 1986). Finally, the labour friendliness score (LFS) will be taken into account. According to Faleye and Trahan (2011) labour friendliness policies are associated with positive abnormal stock returns and outperformance in profitability and productivity. It will be tested whether this score has an impact on the relationship between CSR and employee wages.

The variables discussed will be taken into account to see whether they influence the labor expenses of companies. To find the company characteristics discussed Compustat North America is used[8]. From Compustat the following variables are extracted: market capitalization, SIC codes, number of employees, staff expense, net income, total sales, total assets, total equity and long term debt and current liabilities[9]. All financial data are expressed in U.S. dollars. Below the descriptive statistics for the variables are reported.

Table 1 Descriptive statistics

Variable	Mean	Median	St. dev.	Min	Max
CSR score	-0.11	0	2.00	-9	14
LFS	-0.0048	0	0.45	-2	2
Market capitalization (in millions)	5,510	762	17,700	8.29	238,000
Total assets (in millions)	29,900	2,720	149,000	27.21	2,270,000
Total debt (in millions)	10300	441	62,400	0	870,000
Total sales (in millions)	3,690	464	11,400	-1,700	150,000
Net income (in millions)	278	37.37	2,210	-72,000	21,100
Number of employees	13513.58	1570	42175,60	3	466000
Staff expense (in millions)	921	105	2,890	0.76	37,000
Wages per employee	94,490	63,813	229,042	1,773	12,274,692
Return on assets	0.021	0.012	0.098	-2.161	1.992
Sales per employee (in millions)	0.482	0.264	2,096	-39,786	81,147
Debt ratio	0.217	0.165	0.200	0	1.705

[7]The debt ratio is defined as the total debt divided by the total assets.

[8]Compustat North America consists of annual and quarterly report data of listed American and Canadian companies.

[9] The definitions and calculations of these variables can be found in table 17 and 18.

Note: These statistics are based on the 761 companies for the period of 2003-2011 which lead to 3826 observations. The statistics for CSR and LFS are based on data before standardization. And the statistics for market capitalization, assets, sales and staff expense are based on data before taking the natural logarithm of these variables. All the financial data is expressed in U.S. dollars.

This dataset focuses on a wide range of companies with a market capitalization ranging from approximately eight million to 238 billion dollars[10] and with employees ranging from three to almost half a million employees (table 1). Table 1 also shows that the range for the CSR score is large whereas for LFS it is very small. All companies have a labour friendliness score between -2 and 2 (whereas the lowest achievable score is -5 and the highest score is 7). In other words, companies show substantial differences on their CSR policies amongst each other while demonstrating relatively similar labour friendliness practices. Variables like assets, debt, sales and net income are calculated in a slightly different way for financial companies compared to other companies, as explained in table 18. For this reason amongst others the financial sector will also be tested separately from the other sectors in chapter 4. In the dataset there are also companies included that do not carry any debt, explaining the zero in table 1 for the minimum of debt. Example of such companies are Expeditors International of Washington Inc which is a logistics company, Paychex Inc which is specialized in payroll and human resources services and Panera Bread which is a chain of bakery-cafes. Also, both the minimum and maximum wages per employee stand out. The minimum wages per employee is paid out by China Automative Systems Inc which is one of the largest power steering components and systems supplier in China. The maximum wages per employee is paid by WFS Financial Inc which is one of the largest auto finance firm. A possible reason for such low wages is that it concerns a Chinese company and the maximum could be explained by the high pay and bonuses for the directors of this financial firm. Next, profitability which is measured by the return on assets show that income relative to the assets lies between -2 and 2. A broad diversity is shown in productivity (sales per employee) ranging from -39 million dollars to 81 million dollars. Finally, the average debt ratio indicates that 20% of companies are financed by debt on average. Overall, the variables show a wide range of companies concerning their size, liabilities, income, CSR score and employee wages.

The average market capitalization of all the companies that are included in this research can be seen in figure 2. The numbers in this graph are expressed in millions of dollars. Interesting to see is the downward movement in 2007 reaching its lowest point in 2008. The financial crisis is clearly visible. This makes sense since in times of financial distress companies are inclined to leave CSR activities first. After the decline a slow and steady rise in market capitalization can be seen.

[10] First State Bancorporation has a market capitalization of 8,291,600 US dollars and Bank of America Corporation 238,020,681,890 US dollars.

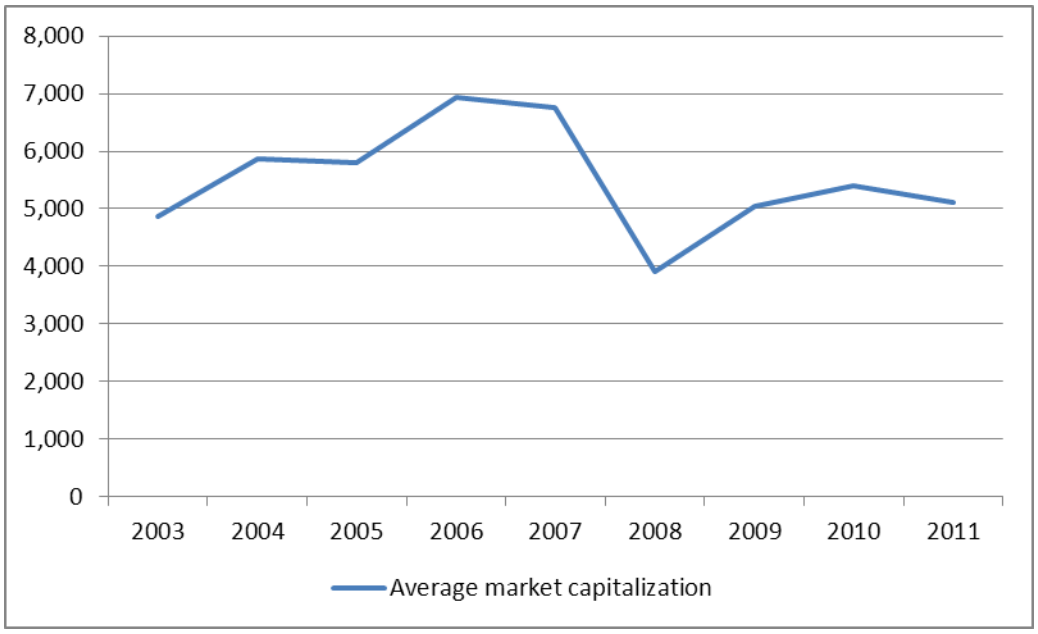

Figure 2 Development of the average market capitalization

As a proxy for employee wages staff expense is used. Staff expense is defined as total salaries and wages of officers and employees plus pension and employee benefits[11]. Figure 3 shows the average staff expense per year. The staff expense is expressed in millions of dollars. In 2003 the average was 672,641,489 dollars which reached an initial high in 2007 of 1,073,256,058 dollars.

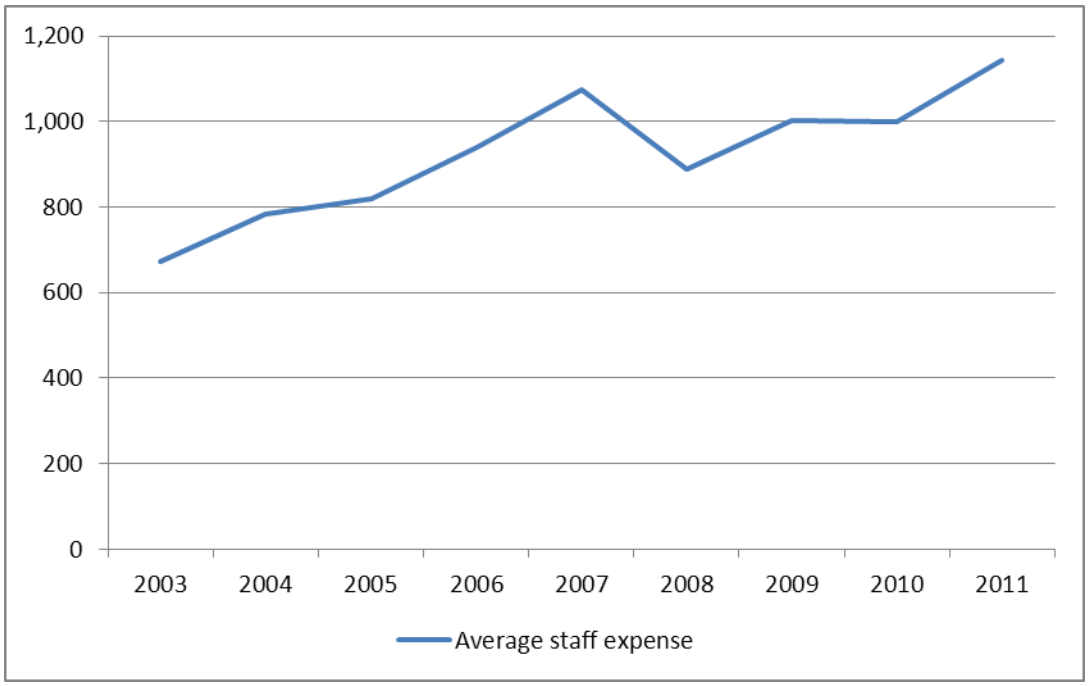

Figure 3 Development of the average staff expense

It can be noticed that more and more is spent on employees until 2007. This can also be due to the number of employees going up (figure 7). When considering the average wages per employee the rise in staff expense can also be explained by the wages per employee going up (figure 6). Again the

[11] The definition for staff expense is from Compustat North America.

crisis is visible by the sudden decrease in 2007. When looking at the wages per employees a similar decrease in 2007 is noticeable (figure 8). After 2008 a steady rise in averages for the staff expense, number of employees and average wages per employee is visible.

Next, the dataset is divided into the sectors in which companies operate based on their SIC codes[12] (figure 4). The sector typology is that of the United States' Office of Management and Budget and has been published in the 1987 edition of the Standard Industrial Classification Manual. The most common industry group in the sample is the Finance, Insurance and Real Estate sector which makes up for 70 percent of the total of companies (table 2). The reason for this percentage may be that the financial companies usually report on data like employee wages. This sector includes companies such as Morgan Stanley, Fannie Mae, Goldman Sachs and Lehman Brothers. Other common industries in the dataset are the services sector (8.80% including companies as Sotheby's) and transportation sector (8.54% including companies like FedEx Corporation and US Airways Group). The most common sectors that are registered with the Standard Industrial Classification Manual (table 14) are the financial sector (35.9%) followed by the manufacturing industry (24.4%) and the services industry (17.7%). The difference in most common industries between the sample and the Standard Industrial Classification Manual can be explained by the fact that certain types of companies report more on topics like CSR and employee wages and are therefore included in the dataset. Also, companies in the Finance, Insurance and Real Estate sector are subject to certain accounting rules and regulations. This may influence the data and therefore this notion will be taken into account in the regression analysis (Cronqvist, 2009).

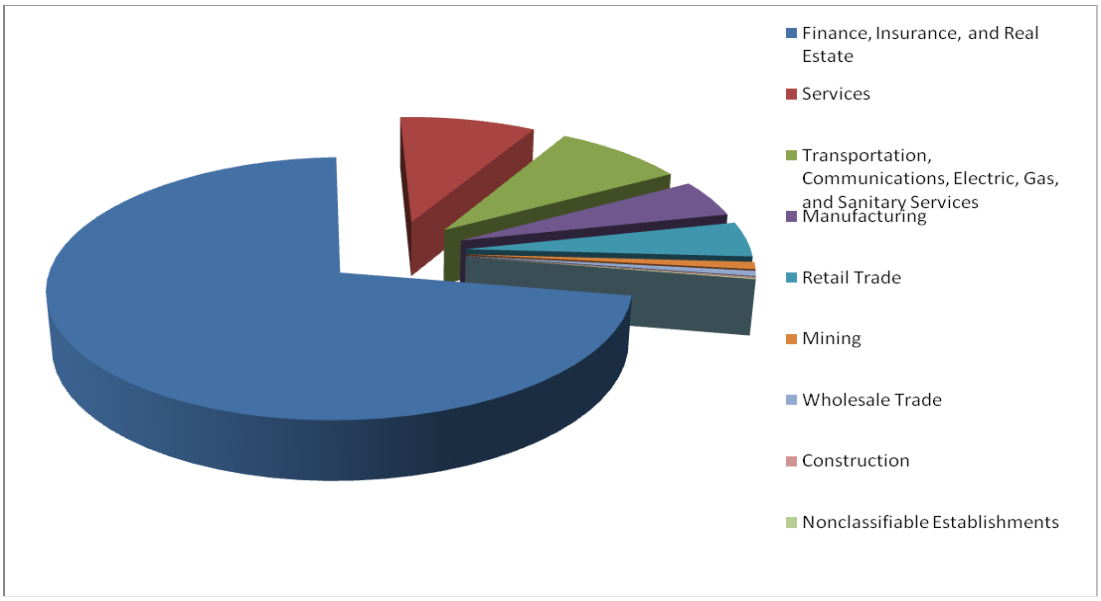

Figure 4 Industry types

[12] Table 14 elaborates on the SIC codes and the industry types.

Table 2 shows the distribution of companies across industries with the average CSR score. The average CSR score is the average CSR score taken per sector over the period of 2003-2011. Note that the average scores for Mining, Wholesale Trade, Construction, and Non- classifiable Establishments are less representative since there are only a few companies that provide a CSR score for that category. Leaving out the sectors that only have a few companies in the dataset the Manufacturing sector shows the highest score (0.47) followed by the Finance, Insurance and Real estate sector (0.07). On the other hand the Retail sector shows the lowest CSR average score (-0.90). The average scores of the sectors range from -2.92 to 1.11.

Table 2 Distribution of companies across industries

Industry types	N	% of total companies	Average CSR score
Finance, Insurance, and Real Estate	545	71.62	0.07
Services	67	8.80	-0.66
Transportation, Communications, Electric, Gas, and Sanitary	65	8.54	-0.57
Manufacturing	36	4.73	0.47
Retail Trade	34	4.47	-0.90
Mining	7	0.92	-2.92
Wholesale Trade	5	0.66	-1.35
Construction	1	0.13	1.11
Non-classifiable Establishments	1	0.13	-2.22
Agriculture, Forestry, and Fishing	0	0	N.A.
Public Administration	0	0	N.A.
Total	761	100%	

Note: The companies included are not necessarily present in each year of the dataset. There are a total of 3826 firm-year observations. Each year around 400 companies are included. Also the CSR scores are taken before standardization.

3.1.3 Correlation matrix

Table 3 provides the correlation matrix for the variables between 2003 and 2011. The matrix shows that CSR score and the Labour Friendliness Score (LFS) are significantly correlated at a one percent level. This can be explained by the fact that LFS is a component of the CSR score. The rest of the results show that there are no dependent variables that are strongly correlated. Therefore it can be concluded that there are no signs of multicollinearity. All the coefficients are statistically significant at a one percent level except for the relation between LFS and firm size (sales) and the relation between LFS and profitability (ROA).

Table 3 Correlation matrix

	CSR score	LFS	Sales	ROA	Sales/ employee	Debt/total assets
CSR score	1					
LFS	0.467***	1				
Sales	0.277***	0.031*	1			
ROA	-0.028***	-0.016	0.161***	1		
Sales/employee	0.149***	0.246***	0.117***	0.052***	1	
Debt/total assets	0.032***	-0.058***	0.212***	-0.142***	0.199***	1

*Note: The levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively. For sales and sales per employee the natural logarithm is taken. The CSR score and LFS are calculated as explained in data and methodology.*

Also, the chance of measurement errors is very low for two reasons. Firstly, companies can be prosecuted for misreporting since it is prohibited by law. And secondly, the data has been collected by Compustat in an extensive four-step process that leads to precise and robust data across companies and over time without reporting biases or data discrepancies.

3.2 Methodology

As a proxy for which view on CSR is supported the relationship between wages and CSR will be analyzed. The underlying assumption is that when wages show a reverse relation with CSR, shareholder maximization CSR is supported. This is because companies that conform to this view pay their employees less since they care less about their stakeholders, specifically their employees. In the situation that wages show positive association with CSR, philanthropic CSR applies. The idea is that the higher the CSR level the more employees are paid since these companies care about their stakeholders. By engaging in CSR the company is able to build a relationship with its stakeholders (Keeble and Turner, 2003). In this way companies are able to manage a lower level of employee turnover, attract a higher talent pool and reduce absenteeism (Tsoutoura, 2004). Also, by embracing CSR the attitude of employees towards the companies is affected in a positive way (Aguilera, Rupp et al, 2005). This method to measure the underlying reason behind CSR has not been used in literature before. With the data extracted from KLD and Compustat the CSR scores are regressed on the wages. As a proxy for employee wages the staff expenses are used. As the dependent variables the standardized CSR score is included as well as all the control variables. The univariate regression tests each dependent variable on the wages separately. Table 4 shows the results of this regression.

Next the multivariate regression will be conducted. The goal is to estimate the wages for companies with CSR scores. The following model is estimated:

Equation 1

$$\text{Log(Wages per employee)} = \alpha + \beta 1xt*\text{CSR score} + \beta 2xt*\text{Log(Sales)} + \beta 4xt*\text{ROA} + \beta 5xt*\text{Log(Sales per employee)} + \beta 6xt*\text{Leverage} + \gamma xt*\text{Industry dummies} + \theta xt*\text{Year dummies} + \varepsilon xt$$

where α stands for the intercept, x stands for companies, t for years and ε is the error term. This model controls for fixed differences across nine industries which is measured by eight dummies. The Non-classifiable Establishment is the reference category. To control for the differences between the years, the year dummies are included. The reference year for the year dummies is 2003. The impact of the CSR score is of particular interest in the analysis. Furthermore, the size of the companies is taken into account using the natural logarithm of the total sales, profitability is included by calculating the return on the sales, productivity is incorporated in the model by computing the natural logarithm of the sales per employee and leverage is measured by the debt ratio[13]. Since the companies in the Finance, Insurance and Real Estate sector are subject to certain accounting rules and regulations this sector is also tested separated from the rest. Based on figure 2 it is noticeable that the crisis has an sizable impact on the data. To account for the crisis the research period will also be divided into before and after 2007. In order to control for serial and cross-correlation the White (1980) robust standard errors adjusted for clustering of the observations at the firm level is used.

3.3 Conclusions and summaries

The dataset focuses on public U.S. companies that are extracted from the KLD database. This database also provided the information to calculate the CSR score. As a proxy for employee wages labor expenses extracted from North America Compustat are used. Furthermore to analyze the relationship between CSR and employee wages, control variables like firm size, profitability, productivity and leverage are included. In the next chapter the independent variables will be regressed on the natural logarithm of the employee wages.

[13] The debt ratio is calculated by dividing total debt over total assets.

CHAPTER 4 EMPIRICAL RESULTS

4.1 Univariate regression

After conducting a univariate regression for each variable including the industry dummies and year dummies all variables were found to be statistically significant except for sales (table 4). This means, according to the univariate regression, that there is no relationship found between the size of a company and employee wages which is not in line with Oi and Idson. Oi and Idson (1999) state that larger companies set higher performance standards and use wages as a means to attract better employees. The CSR score shows a negative significant relationship with employee wages while the LFS indicate a positive relationship with wages. This proves shareholder maximization CSR which argues that maximizing shareholder value is the most important goal, showing a company with a higher CSR level paying their employees less. There is evidence indicating that at a 5% significance level, log (wages) goes down by 0.014 when the CSR score increases with one unit (table 4). This means a wage decrease of 1,5% on average. The underlying reason behind this relationship may be that such companies care more about their shareholder value than about their other stakeholders and use CSR to reinforce their main goal and therefore pay their employees less. The positive relationship between LFS (Labour Friendliness Score) means that a one unit increase in LFS is associated with an increase in log (wages) of 0.021 which implies 2.1% higher wages at a 5% significance level. According Faleye and Trahan (2011) LFS is related to higher productivity, higher profitability and higher stock returns. This allows companies to reward their employees in terms of compensation, therefore explaining the positive relationship between LFS and employee wages.

Table 4 Univariate regression

	Coefficient	T-statistic
Independent variables		
CSR score	-0.014**	(-2.01)
LFS	0.021**	(2.53)
Sales	0.000	(0.38)
ROA	1.521***	(8.57)
Sales/employee	0.006***	(10.82)
Leverage	1.091***	(9.75)
Industry dummies		
Finance, Insurance, Real Estate	-1.424***	(-8.19)
Services	-1.161***	(-6.40)
Transportation,Communications, Electric, Gas, and Sanitary	-1.651***	(-9.13)
Manufacturing	-1.268***	(-6.75)
Retail	-1.553***	(-8.25)
Mining	-0.671**	(-2.50)
Wholesale	-1.082***	(-3.69)
Construction	-1.584***	(-4.20)

Year dummies		
2004	0.189**	(2.25)
2005	0.158*	(1.90)
2006	0.243***	(2.90)
2007	0.370***	(4.32)
2008	0.294***	(3.50)
2009	0.345***	(4.07)
2010	0.377***	(4.54)
2011	0.363***	(4.29)

*Note: The dependent variable in each regression is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

In table 4 the effects of other variables like ROA, sales per employee and leverage are reported. They show a positive significant relationship with the pay of employees at a 1% significance level. However the signs of the relationships are not all in line with what we would expect according to the literature. The variable contradicting the literature is leverage. Cronqvist (2009) amongst others show that leverage has a negative relationship with employee wages. The univariate regression on the other hand shows a positive relationship (table 1). The sign changes in the multivariate regression possibly due to relationships between the independent variables (table 2). Return on assets shows a strong positive relationship with wages as predicted by the rent-sharing model. A one unit increase in return of assets is related to 357.6% higher pay. This effect seems rather big. However, a ROA of '1' would mean that the net income of a company is equal to their total assets which is rare. Sales per employee on the other hand shows a positive relationship representing 0.6% higher wages per unit log (sales per employee). The idea is that the more productive employees are, the more they are paid, as the study by Cronqvist (2009). Next, the industry dummies show that employees in all sectors included in the regression employees are paid less than the reference sector, the non-classifiable category at either a 1% or 5% significance level. The transportation industry shows the biggest difference with the reference category. According to the univariate regression employees are paid 80.8% less than the non-classifiable category. The year dummies show that in 2004 until 2011 employee are paid more than in 2003, the reference category. For example, in 2010 the difference with 2003 is 0.377 in log (wages) at a 1% significance level which results in a higher pay of 45.8% on average. The results of the univariate regression show major effects of some variables on employee wages, especially the industry and year dummies. Running a multivariate regression would lead to a more valid and realistic analysis of the relationship between CSR and employee wages.

4.2 Multivariate regression

Next the multivariate regression is conducted with all independent variables and dummies included. In order to control for serial and cross-correlation the White (1980) robust standard errors adjusted for clustering of the observations is used for all regressions that are conducted. The results in table 5 show that the constant and the independent variables are significant at a 1% significance level except for some industry dummies and the year dummies.

Table 5 Multivariate regression (2003-2011)

	Coefficient	T-statistic
Intercept	0.490***	(3.42)
Independent variables		
CSR score	-0.047***	(-6.53)
LFS	0.025***	(5.03)
Sales	0.001***	(5.09)
ROA	0.568***	(4.64)
Sales/employee	0.006***	(10.87)
Leverage	-0.246***	(-4.16)
Industry dummies		
Finance, Insurance, Real Estate	1.012***	(9.80)
Services	-0.735***	(-6.60)
Transportation, Communications, Electric, Gas, and Sanitary	-0.903***	(-8.21)
Manufacturing	-0.697***	(-6.09)
Retail	-0.839***	(-7.11)
Mining	0.047	(0.29)
Wholesale	0.0004	(0.11)
Construction	-0.0006	(-0.13)
Year dummies		
2004	0.010	(0.24)
2005	-0.014	(-0.35)
2006	-0.014	(-0.35)
2007	0.018	(0.44)
2008	0.024	(0.60)
2009	0.041	(1.01)
2010	0.042	(1.05)
2011	0.047	(1.16)
Adjusted R^2	0.11	
N	3826	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry dummies is the non-classifiable establishment category. The reference year for the year dummies is 2003.The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Table 5 indicates a significant negative relationship between CSR and employee wages. A company with a higher level of CSR pays their employees less compared to a company with a lower level of CSR. This is in accordance with the univariate regression and suggests shareholder maximization CSR. The effect is economically meaningful as a one unit increase in CSR score results in a lower pay of 4.6% on average, all else equal. The multivariate analysis is more reliable since it includes control variables for the relationship. Also, the signs of the coefficients in table 5 are in line with academic literature unlike in the univariate regression. Table 5 reports evidence that a one unit increase in LFS leads to 2.6% higher wages. This effect is explained by LFS results in more productivity and profitability and therefore companies are able to pay their employees relatively more. Size shows a positive relationship with wages, as a one unit increase in size is associated with 0.1% higher pay. When ROA increases with one unit employees are paid 76.6% more. This effect seems large in economic terms however a ROA of '1' would mean that a company would have a net income equal to their total assets. As a proxy for productivity log (sales per employee) is used. This proxy demonstrates a positive relation with wages that leads to a 0.6% wage increase per unit which is in line with Cronqvist (2009). The estimated coefficient for leverage suggests a negative relationship. When the debt to total assets ratio increases with one employee wages decreases with 27.8%. This means the more levered companies are, the less they pay their employees. In other words, the riskier the company is the lower the wages. The industry dummies show that employees in some sectors are paid less and paid more in others[14]. For example, the economic size of the estimated effect for the financial sector is large. Employees in this sector enjoy 176.5% higher pay compared to the reference category. There is no significant difference in wages for the mining, wholesale and construction industry compared to the non-classifiable category. The insignificant coefficients for these sectors can be explained by the fact that they are underrepresented in the dataset. There are only a few companies included in this research that are active in these sectors. At the same time the year dummies are not significant. This implies that there are no significant differences in employee wages between the years. Overall, the results suggest that shareholder maximization CSR is the case which is consistent with the univariate regression. Furthermore LFS and leverage show the strongest relationship with employee wages. Finally, the explanatory power (R^2) of the analysis is 11% indicating the model is able to explain 11% of the variation in employee wages.,

4.2.1 Financial sector

Next, the focus is turned to the financial sector. Because companies from the Finance, Insurance and Real estate sector are subject to certain accounting rules and regulations, which might influence the

[14] Employees in the services, retail and transportation, communications, electric, gas, and sanitary sector are paid less while employees in the Mining sector are paid more. The other sectors show no significant results.

results, this sector[15] will be separated from the others. Also the variables for this sector are calculated in a different way than for the other sectors, as shown in table 18. Therefore one regression will be conducted for the financial sector and one for the other sectors collectively. This leads to the following results:

Table 6 Multivariate regression: Financial sector (2003-2011)

	Coefficient	T-statistic
Intercept	-0.972***	(-10.63)
CSR score	-0.046***	(-6.50)
LFS	0.024***	(5.02)
Sales	0.121**	(2.15)
ROA	0.531***	(5.49)
Sales/employee	0.007***	(13.11)
Leverage	-0.0001	(-1.09)
Year effect	No	
Adjusted R^2	0.12	
N	2684	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference year for the year dummies is 2003. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

The estimated coefficients are highly statistically significant except for leverage and the year dummies (table 6). Focusing on the financial sector, a negative significant relationship between CSR and wages is visible again. This is an indication of shareholder maximization CSR. In economic terms this means that employee wages decreases with 4.4% per one unit increase in CSR score. The multivariate regression for all sectors between 2003 and 2011 shows a similar effect on wages by CSR (table 5). Furthermore, the signs of the other independent variables are in line with what we would expect. The estimated coefficients for the financial sector imply that a one unit increase in the independent variables is associated with 2.4% higher wages caused by LFS, 12.8% higher pay due to size, 70.1% more pay as a result of ROA and 0.7% more wages driven by productivity. On the other hand, a one unit increase in leverage leads to a decrease of 0.02% in wages. Compared to the previous regression LFS, profitability and productivity show similar results. Contrast to table 5, leverage shows no significant effect when only focused on the financial sector. Summarized, according to the results in table 6 evidence of shareholder maximization CSR is found. Besides CSR score, LFS shows a strong relationship with employee wages. The effects of CSR, labour friendliness, profitability and productivity are similar to the multivariate regression including all sectors. The explanatory power of this regression is equal to 12% which is slightly higher than the R^2 in table 5.

[15] Finance, Insurance and Real Estate sector, hereinafter referred to as the financial sector.

When concentrating on the other sectors the regression barely shows significant results (table 19). The results in the table suggest that the independent variables (except for sales) cannot explain the relation between CSR and employee wages. This may be caused by the lower number of observations. As mentioned before 71% of the companies in this research are active in the financial sector and make up 2689 of the 3826 firm-year observations. Leaving this sector out therefore has major impact on the number of observations. Furthermore, the results indicate that there are significant differences between the sectors. However, no year effect is visible for the other sectors.

4.2.2 Financial crisis

Also, the crisis is taken out by performing tests before and after. The crisis is included in this research to see whether it has an impact on the results. Based on the data analysis starting from 2007 the CSR score, market capitalization and the staff expenses went down. Therefore the data is divided into before 2007 and after 2007 (table 7 and 8). The results show that before 2007 a significant negative relationship exists which points out shareholder maximization CSR. The effect is economically meaningful as companies pay their employees on average about 7.5% less per one unit increase in CSR score, all else equal. Relative to the previous effects of CSR on wages, this result shows a stronger relationship. Table 7 also provides estimates of the effect of other variables on wages.

Table 7 Multivariate regression: All sectors before 2007

	Coefficient	T-statistic
Intercept	-0.525***	(-2.65)
Independent variables		
CSR score	-0.077***	(-5.17)
LFS	0.038***	(3.41)
Sales	0.0006***	(2.87)
ROA	0.310	(0.37)
Sales/employee	0.011***	(13.69)
Leverage	-0.001	(-0.01)
Industry dummies		
Finance, Insurance, Real Estate	0.840***	(5.79)
Services	-0.521***	(-3.37)
Transportation, Communications, Electric, Gas, and Sanitary	-0.568***	(-3.69)
Manufacturing	-0.457***	(-2.85)
Retail	-0.414***	(-2.52)
Mining	0.017	(0.08)
Wholesale	-0.003	(-0.40)
Construction	-0.0009	(-0.17)
Adjusted R^2	0.14	
N	1744	

Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry

*dummies is the non-classifiable establishment category. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

The estimated coefficients in table 7 imply that a one unit increase in the independent variables is associated with 3.8% higher wages caused by LFS, 0.06% higher pay due to size and 1.1% more wages driven by productivity at a 1% significance level. On the other hand profitability and leverage do not show any significant results. Compared to table 5 employee wages show a stronger relationship with LFS, size and productivity when only focused on the period before 2007. The explanatory power of this regression (14%) is higher than the multivariate regression taken over the period between 2003 and 2011. Table 7 implies that the independent variables are better able to predict the variation in wages although this regression is performed with fewer observations, relative to table 5 and 6. The reason for the stronger relationships and the higher explanatory power could be that by splitting up the research period a better model is created to estimate the effects on wages. The industry dummies show that employees in the financial sector are paid more compared to the reference category while the other sectors are paid less. This is in line with the multivariate regression conducted between 2003 and 2011. Again the same industries show insignificant coefficients which might be due to the underrepresentation of these sectors in the dataset.

When focusing on the period after 2007 for all sectors the relation between CSR and wages of employees is significantly stronger compared to the period before 2007. The economic size of the estimated coefficient is equal to 11.5% decrease in wages per one unit increase in CSR score. In other words, after the crisis companies pay their employees even less when their CSR level goes up. The underlying reason for this effect may be that companies care even more about their shareholder value than about their employees after 2007. Therefore increasing their CSR level to reinforce their shareholder value is at the expense of employee wages.

Table 8 Multivariate regression: All sectors after 2007

	Coefficient	T-statistic
Intercept	1.575***	(7.53)
Independent variables		
CSR score	-0.122***	(-5.87)
LFS	0.081***	(4.76)
Sales	0.001***	(3.07)
ROA	0.441***	(3.50)
Sales/employee	0.002***	(2.74)
Leverage	0.391***	(4.55)
Industry dummies		
Finance, Insurance, Real Estate	0.464***	(9.68)
Services	-1.222***	(-7.52)

Transportation, Communications, Electric, Gas, and Sanitary	-1.492***	(-9.33)
Manufacturing	-1.276***	(-7.70)
Retail	-1.489***	(-8.66)
Mining	-0.406*	(-1.73)
Wholesale	0.002	(0.42)
Construction	-0.004	(-0.52)
Adjusted R^2	0.12	
N	1679	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry dummies is the non-classifiable establishment category. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Furthermore the results in table 8 show that the constant and the other independent variables are significant at a 1% significance level except for some industry dummies. Leverage demonstrates a positive relation with wages which contradicts the literature. According to Hanka (1998) and Cronqvist (2009) companies with high debt ratios pay their employees less. The coefficient for size implies a similar effect relative to before the crisis. LFS and profitability show a stronger positive relationship with wages and productivity on the other hand reveals a weaker positive relation. Next, the coefficients for the industry dummies show the same signs as before the crisis but employees in all sectors receive even less pay than the non-classifiable category compared to before 2007. This effect may be due to the crisis. The explanatory power of this model is similar to the one of table 7.

In short, before and after the crisis evidence of shareholder maximization is found. However, after 2007 the effect is stronger than before 2007. Also, employees in the financial, services, transportation, manufacturing and retail sector are paid less after the crisis than they were paid before relative to the non-classifiable category.

Next, to account for the specific traits of the financial sector and the crisis, the financial sector is excluded but this time the data is also divided into before 2007 and after 2007 (table 9 and 10). Concerning the financial sector before 2007 and after 2007 a negative relationship applies. However, the coefficients for CSR in both periods are not statistically significant. When concentrating on the other sectors the results again do not show significant results for both time periods (before and after 2007). These results are reflected in tables 20 and 21.

Table 9 Multivariate regression: Financial sector before 2007

	Coefficient	T-statistic
Intercept	-0.830***	(-9.49)
Independent variables		
CSR score	-0.008	(-1.55)
LFS score	1.18E-05	(0.00)
Sales	9.60E-05	(0.75)
ROA	1.808**	(2.12)

Sales/employee	0.006***	(10.71)
Leverage	0.130**	(2.55)
Adjusted R^2	0.13	
N	1284	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Table 9 reports on the effects of the variables on wages before 2007 for the financial sector. It shows that the proxies for labour friendliness and size are not significant. The coefficient for profitability implies that a one unit increase leads to 509.6% higher wages. This effect is bigger than in any of the previous regressions and such an increase (509.6%) is very unlikely to happen. The proxy for productivity has a similar effect (0.6%) on wages as the regression focused on the financial sector over the entire research period (2003-2011). Finally, leverage shows a positive effect contrary to the literature.

Table 10 Multivariate regression: Financial sector after 2007

	Coefficient	T-statistic
Intercept	-1.028***	(-6.21)
Independent variables		
CSR score	-0.002	(-0.41)
LFS	-0.005	(-0.39)
Sales	-0.0003	(-1.53)
ROA	0.080	(0.69)
Sales/employee	0.008***	(8.52)
Leverage	0.131	(1.24)
Adjusted R^2	0.10	
N	1128	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Table 10 focuses on the financial sector after 2007. The coefficient for labour friendliness and size are negative but not statistically significant. The proxies for profitability and leverage are positive but also not significant. Again, productivity shows a similar effect compared to table 9 and the regression focusing on the financial sector from 2003 until 2011. This effect is economically meaningful as employees are paid 0.8% more per unit log (sales per employee). The more productive the employees are, the more companies are willing to pay their employees. The explanatory power of table 9 and 10 are 13% and 10%, respectively. Meaning that approximately 10% of the variation in employee wages is explained by the variables in the model. Overall, when focusing on the financial sector the results show that before and after 2007 employee wages are negatively correlated with

CSR. This effect is even stronger after 2007. However, these results are not statistically significant. The evidence in table 10 does not support the previous regressions results.

4.3 Conclusions and summaries

Summarized, this research indicates that a significant negative relationship exists between CSR and employee wages. This is the case for the regression focusing on all sectors between 2003 and 2011, when taken the crisis into account and when only concentrating on the financial sector. The economic effect lies between 4.4% and 11.5% wage decrease per one unit CSR increase on average. The negative relationship suggests that shareholder maximization CSR is the case for U.S. public companies. This means that the main goal of the company is maximizing shareholder value in. A company with a higher level of CSR pays their employee less compared to a company that has a lower level of CSR. The underlying reason may be that such companies care more about their shareholder value than about their other stakeholders like their employees. They use CSR to reinforce their main goal and therefore pay their employees less. The sign of the relationship does not change in the regressions. However, the results are not statistically significant in all the regressions. When only focused on the sectors other than the financial sector between 2003 and 2011 the relationship is not significant, possibly due to the lower number of observations. Also, when splitting the period up (before 2007 and after 2007) for the other sectors again the results are again not significant as well as when only focused on the financial sector before and after the crisis.

CHAPTER 5 CONCLUSION

Over the years corporate social responsibility has become more and more important. Yet the discussion remains whether shareholder maximization should be the only objective of companies or whether they should care about other issues like CSR. This research attempts to investigate this debate in a new way by analyzing the relationship between CSR and employee wages in the United States for public companies.

5.1 Research method

Firstly, CSR in academics, business and society is a vague term and can mean anything to anybody (Votaw, 1972). The definition for CSR in this analysis tries to solve this problem and corresponds with the most frequent definition in academic literature: that of the Commission of European communities (2001) according to Dahlsrud (2006). This definition states 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholder on a voluntary basis'. Secondly, measuring and reflecting CSR in an accurate and consistent way is difficult and the criteria used for rating CSR differ widely. The research uses data from the KLD database for the CSR ratings. The KLD database has been chosen because it contains the most comprehensive and widely-used data on CSR research. Companies are rated for six aspects: Community, Diversity, Employee Relations, Environment, Human Rights and Product Quality and Safety.

Based on previous literature the underlying reasons behind CSR are examined. These reasons include reputational reasons, brand differentiation, stakeholder pressure, cost savings, gaining access to capital, direct or indirect financial benefit or genuine concern for society. These motives can be divided over the two views in this research, shareholder maximization CSR and philanthropic CSR. The first view sees CSR as an instrument to create shareholder value. The second view claims that companies embrace CSR for other reasons than shareholder value: they care about their stakeholders and want to be good corporate citizens.

This research focuses on the two views discussed on CSR. The assumption is that the type of relationship between CSR and employee wages explains which view on CSR is supported. A negative relationship shows shareholder maximization CSR and a positive relationship indicates philanthropic CSR. The relationship between CSR and wages has not been analyzed in academic literature before and therefore contributes to the literature on CSR.

The dataset covers public US companies taken from the KLD database between 2003 and 2011. What stands out is than more than 70 percent of the companies are active in the financial sector. The CSR score is calculated by adding the total number of strengths for every company on a yearly basis and divided by the maximum possible number of strengths per category, the same is done for the concerns. A strength adds to the CSR score and a concern subtracts from the score. The scores of the six aspects are added in order to create one CSR score per company for each year. These scores are standardized in order to simplify the interpretation of regression coefficients. To analyze the relationship between CSR and wages certain control variables are taken into account. Variables like firm size, number of employees, profitability, industry type and leverage are extracted from Compustat. When analyzing the market capitalization and the CSR scores of the companies the crisis is clearly visible. Furthermore, the variables show a wide range of companies concerning their size, liabilities, income, CSR score and employee wages. However, the dataset mostly covers companies with a large market capitalization.

5.2 Empirical results

By using data from KLD and Compustat between 2003 and 2011 a significant negative relationship is found between CSR and employee wages for public companies in the United States. This supports the view of shareholder maximization CSR. This indicates that companies with a higher level of CSR pay their employees less than companies with a lower level of CSR. When the financial sector is excluded from the data this relationship is not statistically significant. However, the negative relationship does hold specifically when solely focusing on the financial sector. When the crisis is taken into account the relationship between CSR and wages is negative before and after the crisis. Suggesting shareholder maximization CSR before 2007 and an even stronger relationship after 2007. However, for the financial and other sectors separately the results are not significant when taken splitting up the research period.

5.3 Limitations and future research

This research has some limitations. The data used concerns only companies that are evaluated by KLD. This excludes other companies and thus is not a true representation of US listed companies. Moreover, limitations of the CSR score are that the dataset mainly consists of large market capitalization firms that can afford to engage in CSR more than smaller companies; not all companies may be sincere in their motives for CSR engagement; and the way the KLD assessment is conducted results in self-selection bias as seen in chapter 3.

There is also place for further research in terms of extending and deepening the study. For example other control variables could be included which would further complete the model. Examples of

control variables are CEO control, managerial equity stake and R&D investments (Cronqvist, 2009 and Pagano, 2005). Also the dataset could cover a larger period of time in order to increase the number of observations. Another possibility is to focus on each sector separately instead of only on the financial sector versus the other sectors. This might give more information on the other sectors. Furthermore, in this research social and economic goals are somewhat separated. However, in the long term the social and economic goals do not have to be conflicting anymore, but could be integrally connected. Sometimes corporate expenditures only benefit the company and social expenditures benefit society. But sometimes they benefit both the company and social goals. This is where corporate philanthropy en shareholders' interests converge (Porter and Kramer, 2002).

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APPENDIX

Table 11 KLD companies included in database

Index	1991-2000	2001	2002	2003-Present
S&P 500 Index	X	X	X	X
Domini 400 Social Index	X	X	X	X
Russell 1000 Index		X	X	X
Large Cap Social Index			X	X
Russell 2000 Index				X
Broad Market Social Index				X
Approximate Total Number of Companies Covered	650	1100	1100	3100

Source: KLD Research & Analytics, Inc. KLD'S ratings definitions

Table 12 Sample number of companies

Year	Number of companies
2003	452
2004	425
2005	440
2006	427
2007	396
2008	425
2009	406
2010	442
2011	413
Total firm-year observations	3826
Total unique company observations	761

Table 13 List of strengths and concerns per dimension in the KLD database

Category	Strengths	Concerns
Community	Charitable Giving, Innovative Giving, Non-US Charitable Giving, Support for Housing, Support of Education, Indigenous Peoples Relations, Volunteer Programs, Other Strength	Investment Controversies, Negative Economic Impact, Tax Disputes, Other Concern
Diversity	CEO sex, Promotion, Board of Directors,	Controversies, Non-Representation,

	Work/Life Benefits, Women & Minority Contracting, Employment of the Disabled, Gay & Lesbian Policies, Employment of Underrepresented Groups (from 2010), Other Strength	Board Diversity, Other Concern
Employee relations	Union Relations, No-Layoff Policy, Cash Profit Sharing, Employee Involvement, Retirement Benefits Strength, Health and Safety Strength, Other Strength	Union Relations, Health and Safety Concern, Workforce Reductions, Retirement Benefits Concern, Supply Chain Controversies, Other Concern
Environment	Beneficial Products and Services, Pollution Prevention, Recycling, Clean Energy, Communications, Property, Plant, and Equipment, Other Strength	Hazardous Waste, Regulatory Problems, Ozone Depleting Chemicals, Substantial Emissions, Agricultural Chemicals, Climate Change, Negative Impact of Products and Services, Land Use & Biodiversity, Non Carbon Releases, Other Concern
Human rights	Positive Record in South Africa, Indigenous Peoples Relations Strength, Labor Rights Strength, Other Strength	South Africa, Northern Ireland, Burma Concern, Mexico, Labor Rights Concern, Indigenous Peoples Relations, Other Concern
Product Quality and Safety	Quality, R&D/Innovation, Benefits to Economically Disadvantaged, Access to Capital, Other Strength	Product Safety, Market/Contracting Concern, Antitrust, Other Concern

Source: KLD Research & Analytics, Inc. KLD'S ratings definitions

Table 14 SIC code general distribution

Industry type	**SIC codes**	**Registrants**	**KLD sample**
Agriculture, Forestry, and Fishing	01xx-09xx	261 (0.4%)	10 (0.2%)
Mining	10xx-14xx	3,887 (5.6%)	198 (4.5%)
Construction	15xx-17xx	590 (0.9%)	44 (1%)
Manufacturing	20xx-39xx	17,009 (24.4%)	1642 (37.2%)
Transportation, Communications, Electric, Gas, and Sanitary Services	4xxx	5,017 (7.2%)	392 (8.9%)
Wholesale Trade	50xx-51xx	1,883 (2.7%)	108 (2.5 %)
Retail Trade	52xx-59xx	2,814 (4.0%)	261(5.9%)
Finance, Insurance, and Real Estate	60xx-67xx	25,020 (35.9%)	1018 (23.0%)
Services	70xx-89xx	12,329 (17.7%)	734 (16.6%)
Public Administration	91xx-97xx	5 (0.0%)	0 (0.0%)
Nonclassifiable Establishments	99xx	817 (1.2%)	10 (0.2%)

Total		69,632 (100%)	

Note: Each company is assigned a 4-digit SIC code that indentifies the line of business best representative of the company as a whole. Source: Standard Industrial Classification Manual, 1987.

Table 15 Calculation CSR score

Calculation of CSR score per company per year	
Community	Sum of all community strengths for firm (x) at year (t) minus the sum of all community concerns for firm (x) at year (t)
Diversity	Sum of all diversity strengths for firm (x) at year (t) minus the sum of all diversity concerns for firm (x) at year (t)
Environment	Sum of all environment strengths for firm (x) at year (t) minus the sum of all environment concerns for firm (x) at year (t)
Employee relations	Sum of all employee relations strengths for firm (x) at year (t) minus the sum of all employee relations concerns for firm (x) at year (t)
Human rights	Sum of all human rights strengths for firm (x) at year (t) minus the sum of all human rights concerns for firm (x) at year (t)
Product	Sum of all product strengths for firm (x) at year (t) minus the sum of all product concerns for firm (x) at year (t)
CSR score	= Community + Diversity + Environment + Employee relations + Human rights + Product

Table 16 The Labour Friendliness score (composed of the employee relations strengths and concerns)

Employee relations strengths	**Definition**
Union Relations	The company has taken exceptional steps to treat its unionized workforce fairly. KLD renamed this strength from Strong Union Relations.
No-Layoff Policy	The company has maintained a consistent no-layoff policy. KLD has not assigned strengths for this issue since 1994.
Cash Profit Sharing	The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.
Employee Involvement	The company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision-making.
Retirement Benefits Strength	The company has a notably strong retirement benefits program. KLD renamed this strength from Strong Retirement Benefits.
Health and Safety Strength	The company has strong health and safety programs.
Other Strength	The company has strong employee relations initiatives not covered by other KLD ratings.
Employee relations concerns	**Definition**
Union Relations	The company has a history of notably poor union relations. KLD renamed this concern from Poor Union Relations.
Health and Safety Concern	The company recently has either paid substantial fines or civil penalties for willful

	violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies.
Workforce Reductions	The company has made significant reductions in its workforce in recent years.
Retirement Benefits Concern	The company has either a substantially underfunded defined benefit pension plan, or an inadequate retirement benefits program. In 2004, KLD renamed this concern from Pension/Benefits Concern.
Other Concern	The company is involved in an employee relations controversy that is not covered by other KLD ratings.

Source: KLD Research & Analytics, Inc. KLD'S ratings definitions

Equation 2 Formula standardized CSR and labor friendliness scores:

$$z = \frac{x - \mu}{\sigma}$$

where
z = z score (standardized value)
x = value before standardization
μ = mean
σ = standard deviation

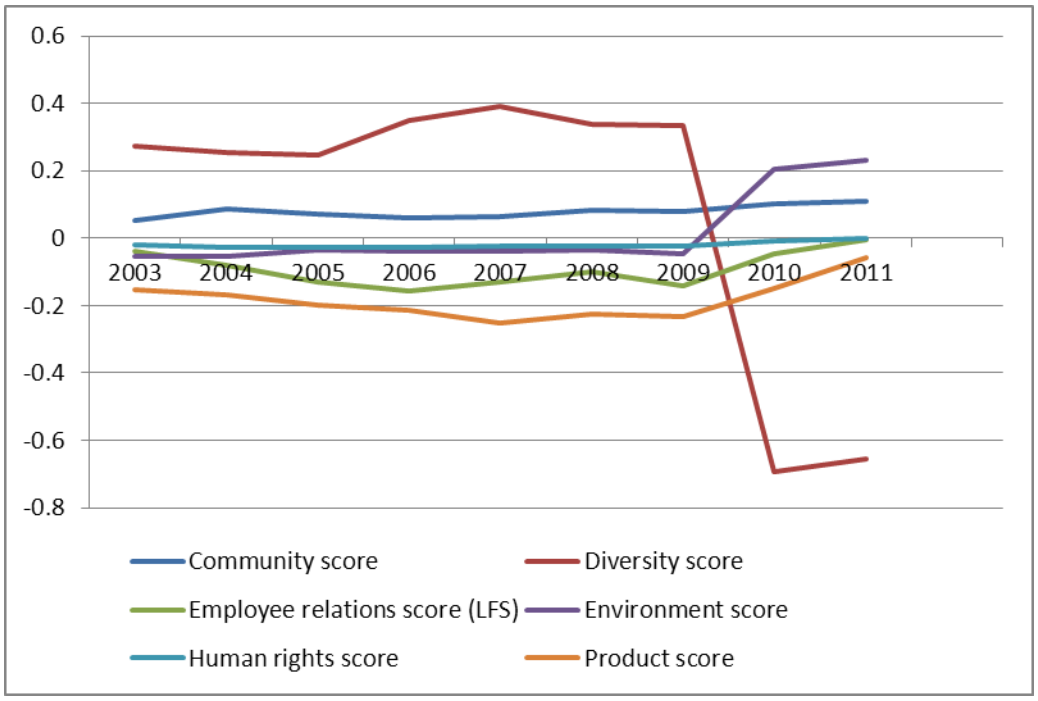

Figure 5 Dimensions scores

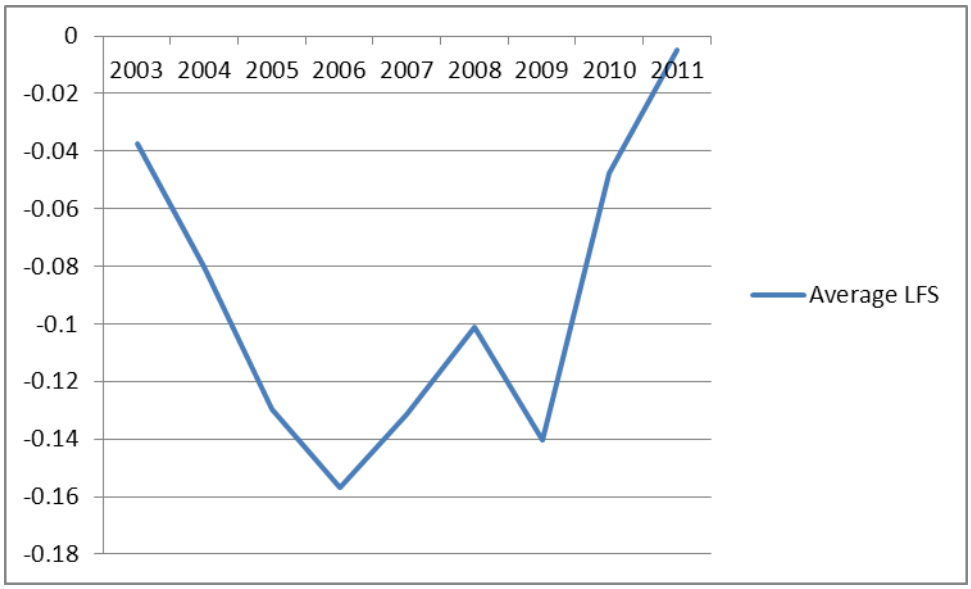

Figure 6 Average Labour Friendliness Score

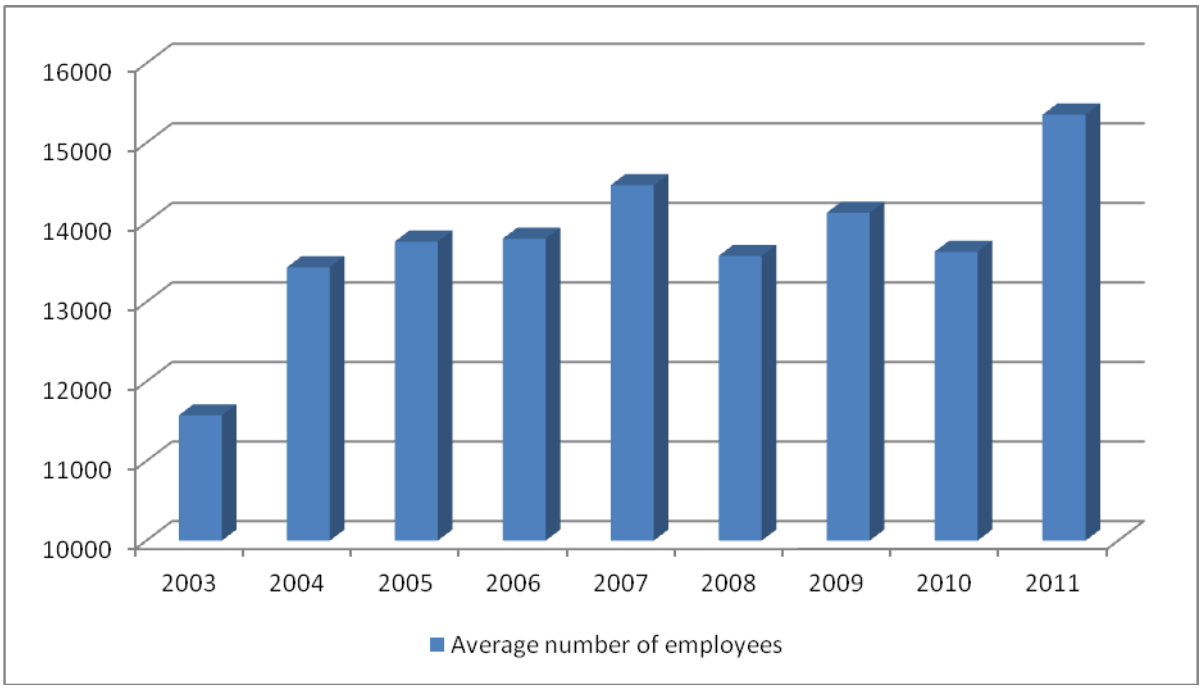

Figure 7 Average number of employees

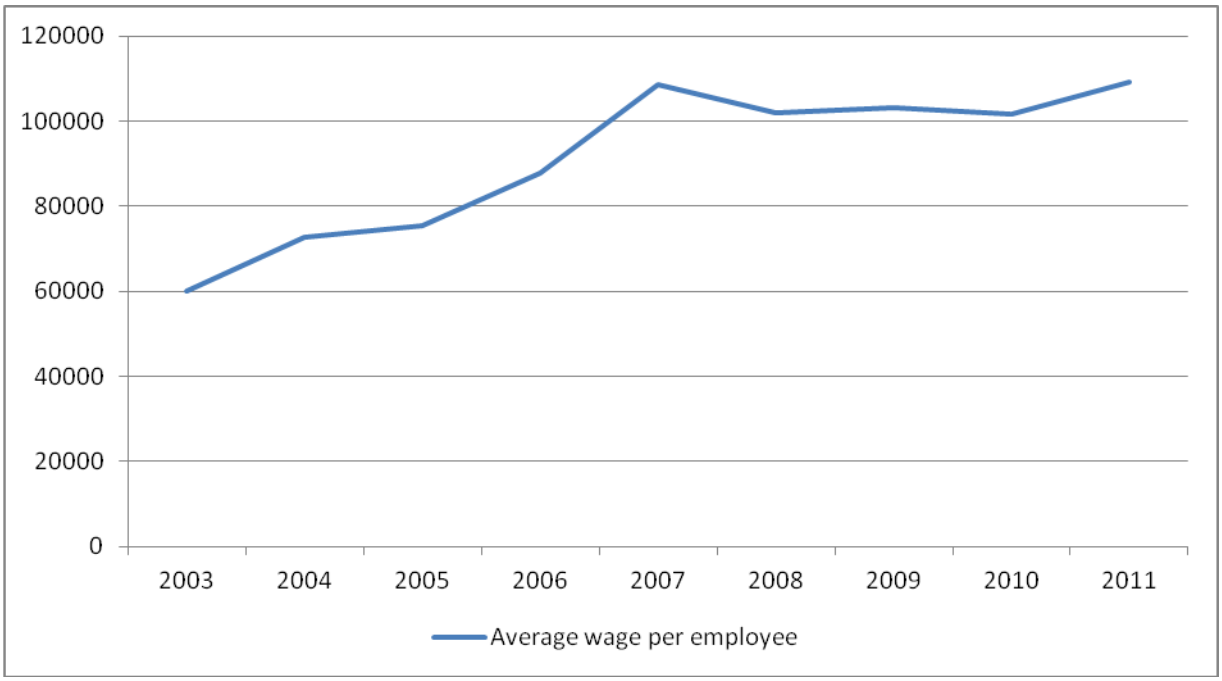

Figure 8 Average wages per employee

Table 17 Variable definitions

Variable	Definition
Assets	This item represents the total assets/liabilities of a company at a point in time. If the company does not report a useable amount, this data item will be left blank.
Debt in Current Liabilities	This item represents the total amount of short-term notes and the current portion of long-term debt (debt due in one year). This item is the sum of: Long-Term Debt Due in One Year (DD1) and Notes Payable (Short-Term Borrowings). This item includes: Bank acceptances and overdrafts, Loans payable to the officers of the company, Loans payable to stockholders, Loans payable to parents, and consolidated and unconsolidated subsidiaries, Notes payable to banks and others, Installments on a loan, Sinking fund payments, Brokerage companies' drafts payable
Labor and Related expense	This item represents all direct remunerations to employees. This item includes profit sharing, when included in staff expense by the company. This item excludes commissions, when a breakout is available.
Employees	This item represents the actual number of people employed by the company and its consolidated subsidiaries.
Long term debt	The item represents debt obligations due more than one year from the company's balance sheet date. This item includes: Purchase obligations and payments to officers, when listed as long-term liabilities, Notes payable, due within one year and to be refunded by long-term debt when carried as a non-current liability Long-term lease obligations (capitalized lease obligations), Industrial revenue bonds, Advances to finance construction, Loans on insurance policies, Indebtedness to affiliates, Bonds, mortgages, and similar debt, All obligations that require interest payments, Publishing companies' royalty contracts payable, Timber contracts for forestry and paper, Extractive industries' advances for exploration and development, Production payments and advances for exploration and development. This item excludes: Subsidiary preferred stock, included in Minority Interest, The current portion of long-term debt, included in Current Liabilities, Accounts payable due after one year, Deferred compensation. Long-term debt should be reported net of

	premium or discount.
Net income	This item represents the fiscal period income or loss reported by a company after subtracting expenses and losses from all revenues and gains.
Sales	This item represents gross sales (the amount of actual billings to customers for regular sales completed during the period) reduced by cash discounts, trade discounts, and returned sales and allowances for which credit is given to customers, for each operating segment.

Source: Compustat North America

Table 18 Variable calculations

Variable	Abbreviation	Calculation Utility	Calculation Bank
Assets – Total	AT	Assets – Total/Liabilities and Stockholders' Equity – Total	Total Assets (Gross)
Debt total	DLTT+DLC	Long-Term Debt – Total + Debt – Long-Term Due Within One Year *plus* Debt – Short- Term – Total	Average Long-Term Debt + Average Debt Current Liabilities
Labor and Related Expense	XLR	Labor and Related Expense – Total	Salaries and Wages of Officers and Employees *plus* Pension and Employee Benefits
Net Income	NIQ	Subsidiary Preferred Dividends *plus* Net Income Before Extraordinary Items and Discontinued Operations and After Noncontrolling Interest (Income Account) *plus* Extraordinary Items and Discontinued Operations	Net Income *plus* Total Extraordinary Items Net of Taxes
Sales (Net)	SALE	Operating Revenues – Total (Income Statement)	Total Current Operating Revenue *plus* Net Pretax Profit or Loss on Securities Sold or Redeemed *minus* Non-Recurring Income

Source: Standard & Poor's Compustat Xpressfeed, Understanding the Data by Standard & Poor's

Table 19 Multivariate regression: Other sectors 2003-2011

	Coefficient	T-statistic
Intercept	1.462***	(5.34)
Independent variables		
CSR score	-0.003	(-0.37)
LFS score	0.001	(0.15)
Sales	-0.001***	(-3.36)
ROA	0.307	(0.75)
Sales/employee	0.001	(1.21)
Leverage	0.080	(-4.76)
Industry dummies		

Services	-0.746***	(-4.76)
Transportation, Communications, Electric, Gas, and Sanitary	-0.872***	(-5.66)
Manufacturing	-0.664***	(-4.12)
Retail	-0.950***	(-5.57)
Mining	0.247	(1.12)
Wholesale	-0.883***	(-3.68)
Construction	-0.951***	(-3.18)
Year dummies		
2004	-0.105	(-0.99)
2005	-0.107	(-1.01)
2006	-0.127	(-1.20)
2007	-0.085	(-0.80)
2008	-0.089	(-0.85)
2009	-0.049	(-0.47)
2010	-0.042	(-0.41)
2011	-0.025	(-0.24)
Adjusted R^2	0.09	
N	1131	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry dummies is the non-classifiable establishment category. The reference year for the year dummies is 2003. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Table 20 Multivariate regression: Other sectors before 2007

	Coefficient	T-statistic
Intercept	-0.194	(-0.47)
Independent variables		
CSR score	0.010	(0.45)
LFS	-0.001	(-0.12)
Sales	-0.002***	(-2.88)
ROA	0.410	(0.29)
Sales/employee	0.010***	(5.10)
Leverage	-0.251	(-0.96)
Industry dummies		
Services	-0.161	(-0.67)
Transportation, Communications, Electric, Gas, and Sanitary	-0.245	(-1.02)
Manufacturing	-0.052	(-0.20)
Retail	-0.084	(-0.32)
Mining	0.378	(1.11)
Wholesale	-1.092***	(-2.70)
Construction	-0.630	(-1.41)
Adjusted R^2	0.09	
N	460	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry dummies is the non-classifiable establishment category. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*

Table 21 Multivariate regression: Other sectors after 2007

	Coefficient	T-statistic
Intercept	2.896***	(8.69)
Independent variables		
CSR score	0.0001	(0.02)
LFS	-0.005	(-0.45)
Sales	-0.0006	(-1.29)
ROA	-0.065	(-0.17)
Sales/employee	-0.006***	(-4.03)
Leverage	0.197	(1.36)
Industry dummies		
Services	-1.441***	(-7.29)
Transportation, Communications, Electric, Gas, and Sanitary	-1.594***	(-8.31)
Manufacturing	-1.383***	(-7.01)
Retail	-1.848***	(-8.63)
Mining	-0.292	(-1.07)
Wholesale	-1.197***	(-4.09)
Construction	-1.481***	(-3.88)
Adjusted R^2	0.08	
N	551	

*Note: The dependent variable is log (Wages per employee). The CSR score and LFS are standardized. For the total sales and sales per employee the natural logarithm is taken. The reference category for the industry dummies is the non-classifiable establishment category. The White's (1980) robust standard errors adjusted for clustering of the observations is computed. The t-statistics are stated between parentheses and the levels of significance are indicated by ***, **, and * for 1%, 5%, and 10%, respectively.*