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DETERMINANTS OF CORPORATE SOCIAL RESPONSIBILITY FOR DUTCH LISTED FIRMS

MASTER STUDY – BUSINESS ADMINISTRATION

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Master Study - Determinants of corporate social responsibility for Dutch listed firms

ABSTRACT

This study investigates determinants of corporate social responsibility (CSR) for Dutch listed firms. It extends existing academic literature in two ways: (1) it obtains an increasing understanding of CSR because multiple theories related to CSR are investigated, and (2) it examined a broad range of determinants of which some have not previously been analyzed for Dutch firms. Determinants include size, financial performance, ownership concentration, ownership identity, outside board directors, and women board directors. Data on determinants is obtained from ORBIS database and annual reports. Data on CSR is obtained from the Transparency Benchmark (TB) provided by the Ministry of Economic Affairs. The relationship between determinants and CSR is empirically investigated using regression analyses. Empirical results confirm the importance of firm characteristics in shaping CSR and show that CSR depends on firm size, the level of ownership concentration, and ownership identity. Contrary to expectations, neither financial performance, outside board directors or women board directors is associated with CSR. Results of this study also show that determinants of CSR of Dutch listed firms are not different than determinants in other countries.

Keywords: Corporate social responsibility (CSR), Determinants, Corporate financial performance (CFP), Stakeholder theory, Institutional theory, Resource dependence theory, Resource based theory, Agency theory, Transparency Benchmark (TB).

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1. INTRODUCTION

Corporate social responsibility (CSR) has witnessed growth in importance over the last decades. Firms and academic researchers alike have displayed increased levels of enthusiasm for CSR. In particular, CSR may be an excellent instrument to enhance the legitimacy of the firm and to develop positive social responsibility images (Maignan & Ralston, 2002). Despite this enthusiasm, many firms and academic researchers also find that CSR faces significant challenges (Wang, Tong, Takeuchi & George, 2016). For example, the effectiveness of CSR is difficult to observe, especially when a short-run investment is justified. In addition, the complexity of organizing and managing CSR is strengthen, as many countries have started to warrant certain aspects of CSR. Furthermore, CSR encompasses multiple dimensions involving different stakeholder groups, thus conflicts of interest among stakeholder groups arise (Wang et al., 2016).

The goal of this study is to gain deeper understanding of Dutch CSR performance by providing an indication of determinants of CSR for Dutch firms. This section starts with an introduction to CSR. Thereafter, an elaboration on the research problem is given. Furthermore, the academic and practical relevance is discussed. At the end, the structure of this study is described.

1.1 CORPORATE SOCIAL RESPONSIBILITY

The idea of CSR gained currency in the 1960s and since then, attention on CSR has been growing (Wang et al., 2016). Carroll (1999) argued that the publication by Bowen (1953) of his landmark book *Social Responsibilities of the Businessmen* has marked the beginnings of the modern period of literature on CSR. In his book, Bowen (1953) refers to the social responsibilities of businessmen as the 'obligations of businessmen to pursue those polices, to make those decisions, or to follow those lines of actions which are desirable in terms of the objectives and values of the society' (p. 6). He focused on the decision making by individual managers. According to Murphy & Schlegelmilch (2013), this situation can be contrasted with CSR today. Today, CSR emphasizes larger corporate and institutional practices rather than the decision making of individual managers (Murphy & Schlegelmilch, 2013).

This study adhered to the definition of CSR provided by Aguinis & Glavas (2012). They gave a present-day definition of CSR as 'context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance' (Aguinis & Glavas, 2012, p. 933). In other words, CSR activities result from firms' role in society which is aiming to improve the impacts for their stakeholders. Examples of such activities are environmental protection, health and safety at work, relations with communities, suppliers and consumers, among others (Branco & Rodrigues, 2006). According to Wang et al. (2016), CSR activities are mechanisms to 'energize and motivate stakeholders, as well

as manage societal perceptions and expectations on the role and utility of businesses in societies and communities beyond the core function of producing and selling goods' (p. 534).

Since the introduction of CSR, researchers examined various aspects attached to it, including the impact of CSR on financial and non-financial outcomes (Murphy & Schlegelmilch, 2013; Wang et al., 2016). For instance, Margolis & Walsh (2003) and Orlitzky, Schmidt & Rynes (2003) examined the relationship between CSR and corporate financial performance. Others examined the relationship between CSR and shareholder value (e.g. Godfrey, Merrill & Hansen, 2009), corporate risk (e.g. Orlitzky & Benjamin, 2001), capital constraints (e.g. Cheng, Ioannou & Serafeim, 2014), stakeholder-firm relationships (e.g. Bhattacharya, Korschun & Sen, 2009), organizational attractiveness (e.g. Aguilera, Rupp, Williams & Ganapathi, 2007), organizational commitment (e.g. Ali, Rehman, Ali, Yousaf & Zia, 2010), and organizational identification (e.g. Kim, Lee, Lee & Kim, 2010). Additionally, researchers focused on processes of CSR in relation to decision-making and implementation (Murphy & Schlegelmilch, 2013; Wang et al., 2016). Process studies on CSR are mostly descriptive in nature. For instance, Lee (2011) discussed whether CSR should be treated as strategic or ethical and introduced a theoretical framework, which explained how firms choose their CSR strategy. Graafland, Van de Ven & Stoffele (2003) laid focus on firms in the Netherlands and analyzed strategies and instruments for organizing CSR. They concluded that most firms agreed that CSR is a moral obligation to society.

Others again focused on factors which determine firms' CSR performance. Determinants have been examined for different countries, including Brazil (Lourenco & Branco, 2013), China (Zeng, Xu, Yin & Tam, 2012), Germany (Gamerschlag, Müller & Verbeeten, 2011), India (Kansal, Joshi & Batra, 2014), Korea (Oh, Chang & Martynov, 2011), Netherlands (Punte, 2011; Derksen, 2013), Portugal (Branco & Rodrigues, 2008), Spain (Reverte, 2009), Taiwan (Chui & Wang, 2014), and United States (Artiach, Lee, Nelson & Walker, 2010; Holder-Webb, Cohen, Nath & Wood, 2009; De Villiers, Naiker & van Staden, 2011). For instance, Reverte (2009) examined firm and industry characteristics as potential determinants of CSR disclosure practices for Spanish listed firms. Results revealed firms with higher CSR practices belong to more environmentally sensitive industries, presenting a significant larger size and higher media exposure, as compared to firms with lower CSR practices. De Villiers et al. (2012) focused on board characteristics and investigated the relationship between board of directors and environmental performance for U.S. firms. The researchers found evidence of higher environmental performance in firms with higher board independence and larger boards.

1.2 PROBLEM DEFINITION

This study is focusing on analyzing whether a number of firm characteristics are potential determinants of CSR for Dutch listed firms. As aforementioned, CSR has significance growth in

importance which is also visible in the Netherlands. The Dutch government encourages firms in various ways to take up CSR (Government of the Netherlands, 2016). For instance, the Dutch government boosts the development of CSR activities through its own sustainable procurement policy. In addition, the Dutch government has established a national knowledge center and network organizations for CSR - CSR Netherlands[1]. Furthermore, the Dutch government has launched the Transparency Benchmark (TB)[2]. Each year, the government measures the content and quality of annual reports concerning CSR and provides scores in a TB Ladder. The firm with the highest score on the TB Ladder is awarded the Crystal prize. Analyzing the scores of the TB[3], it can be seen that there is a grow in the content and quality of CSR reporting by Dutch firms. Firms have increased incentives to undertake CSR activities and provide disclosures is one activity. However, there are still firms that have low scores from the TB. The purpose of this study is to gain a better understanding of Dutch firms' CSR performance by examining determinants. Therefore, the following research question is formulated: w*hat are the determinants of corporate social responsibility for Dutch listed firms?*

1.3 THEORETICAL AND PRACTICAL RELEVANCE

Although determinants of CSR have been subjected of research in many studies, few studies (e.g. Derksen, 2013; Punte, 2011) investigated determinants of CSR on firms in the Netherlands. For instance, Derksen (2013) in his study focused on Dutch firms and examined variables influencing and contributing to the quality of CSR reports. He focused on listed and non-listed firms for the years 2004-2009 and included five variables in the regression equation: (1) public pressure, (2) sector influence (multi-nationality), (3) debt financing, (4) information costs and (5) financial performance. Evidence revealed that sector influence, debt financing and information cost are positively related to the quality of CSR reports. Financial performance showed a negative relationship and public pressure no relationship. Punte (2011) explored the relationship between CSR and determinants on Dutch listed firms only. He focused on CSR measured for 2011 and included six variables in the regression equation: (1) ownership, (2) financial performance, (3) size, (4) innovation, (5) industry, and (6) debt ratio. Evidence concluded type of ownership and size of the firm influence the level of CSR.

This study intends to fill the research gap of investigating determinants of CSR on Dutch firms. This is theoretically relevant as several researchers (e.g. Jackson & Apostolakou, 2010; Matten & Moon, 2008) argued that CSR varies across countries and over time. In addition, it is

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[1] For more information please refer to: http://mvonederland.nl/

[2] For more information please refer to: http://transparantiebenchmark.nl/en

[3] For more information please refer to: See: http://www.transparantiebenchmark.nl/en/scores-2015

theoretically relevant because it examines multiple theories related to CSR. Researchers (e.g. Aguinis & Glaves, 2012; Aguilera et al., 2007) stressed the need to improve the understanding of underlying mechanism of CSR and point to the use of multiple theories (e.g. Frynas & Yamahaki, 2016; Mellahi, Frynas, Sun & Siegel, 2016). This study combines external (stakeholder, institutional and resource dependence) and internal (resource based and agency) theories and makes therefore a value-added contribution. Since the theories discuss different factors which influence and contribute to CSR, this study analyses a broad range of determinants of which some have not previously been analyzed for Dutch firms. The practical relevance is associated with firm performance, because CSR is increasingly important in successful further firm development and survival.

This study examines determinants of CSR, including size, financial performance, ownership concentration, ownership identity, outside board directors, and women board directors of which ownership concentration, outside board directors, and women board directors have not previously been examined for Dutch firms. Empirical results confirm the importance of firm characteristics in shaping CSR and show that CSR depends on firm size, ownership concentration, and ownership identity. Contrary to expectations, neither financial performance, outside board directors or women board directors is associated with CSR. Notwithstanding the particular characteristics of the Netherlands, results of this study suggest that determinants of CSR of Dutch listed firms are not different than those in other countries. Findings lend support for the study of Punte (2009), who also found that firm size and ownership identity influence CSR performance of Dutch listed firms.

1.4 STUDY STRUCTURE

This study is structured into seven chapters, which are further divided into sections. Chapter 2 reviews prior conceptual and empirical literature and discusses outcomes and theories of CSR. Chapter 3 presents the development of hypotheses and shows firm characteristics that may influence or contribute to CSR performance of Dutch firms. In chapter 4, the research methodology is described. Chapter 5 discusses the sample and the data sources and in chapter 6, the results are presented. In the last chapter conclusions are drawn on determinants.

2. LITERATURE REVIEW

This chapter presents existing academic literature concerning CSR. The goal of this chapter is to create a deeper understanding of firms' incentives to engage in CSR activities. The first section starts with the debate regarding the numerous definitions of CSR. Thereafter, the impact of CSR on financial and non-financial outcomes is discussed. Furthermore, different theories of CSR are described. Finally, country specific determinants of CSR are reviewed.

2.1 DEFINITION CSR

Since CSR is the central topic in this study, understanding the main idea behind it is essential. Defining CSR has been theme of many studies (e.g. Carroll, 1999; Dahlsrud, 2008; Matten & Moon, 2008; Sheehy, 2015). For instance, Dahlsrud (2008) analyzed how CSR is defined by examining 37 definitions. This number explicitly indicates the difficulties in defining the concept. Dahlsrud (2008) concluded: 'CSR definitions describing a phenomenon, but fail to present any guidance on how to manage the challenges within this phenomenon' (p. 6). He argued that CSR has many definitions as it is contest dependent. Accordingly, the challenge is to understand how CSR is socially constructed in a specific context. On similar lines, Matten & Moon (2008) argued that a lack of a common definition is to be expected because CSR is a contested and dynamic concept. In addition, they argued that CSR is an umbrella term for many related concepts. All in all, many definitions of CSR are provided in literature of which a few are discussed below.

Bowen (1953) is thought by many to be the father of the CSR movement (Murphy & Schlegelmilch, 2013). He defined the social responsibilities in his time as '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 society' (p. 6). Davis (1973) moved the focus from individuals (businessman) to firms and defined CSR as 'the firm's consideration of, and responses to, issues beyond the narrow economic, technical and legal requirements of the firm' (p. 312). Accordingly, CSR starts where the law ends. Another definition which is frequently cited is the one Carroll (1991; 1999) developed. Carroll (1991; 1999) outlined four components of social responsibilities: (1) economic, (2) legal, (3) ethical, and (4) philanthropical. *Economic component* includes the responsibility to be profitable, competitive, productive and responsible to the needs of society, and *legal component* includes the responsibility to perform within the written laws. *Ethical component* includes the responsibility to perform towards unwritten values of society and *philanthropical component* includes the responsibility to be good corporate citizens. The four components are represented by Carroll as a pyramid; with the economic responsibility as the base - the foundation upon which all others rest - and then built upward through legal, ethical and philanthropic components. Carroll (1991) summarized true social responsibility as

meeting all four components; 'a CSR firm should strive to make a profit, obey the law, be ethical, and be a good corporate citizen' (p. 43).

On similar lines, Wood (1991) suggested that the basic idea of CSR is that 'business and society are interwoven rather than distinct entities; therefore, society has certain expectations for appropriate firm behavior and outcomes' (p. 695). Wood (1991) defined CSR by three principles: (1) principle of legitimacy, (2) principle of public responsibility, and (3) principle of managerial discretion. *Principle of legitimacy* clarifies the relationship between society and the firm; 'society grants legitimacy and power to firms and those who do not use power in a manner which society considers responsible will tend to lose it' (p. 698). *Principle of public responsibility* clarifies to whom the firm is responsible; 'firms are responsible for outcomes related to their primary and secondary areas of involvement with society' (p. 698). *Principle of managerial discretion* clarifies the voluntary social involvement of individual managers; 'managers are obliged to behave in morally accepted ways' (p. 698). Campbell (2006) narrowed down the broad term society to stakeholder and sees firms as acting in socially responsible ways if they not knowingly do anything that could harm their stakeholders. If they do harm their stakeholders, then they must immediately rectify it whenever it is discovered. This definition sets some minimum behavioral standards which firms should meet in order to be socially responsible.

Matten & Moon (2008) conceptualized CSR as a contestable and dynamic concept which is embedded in each social, political, economic and institutional context. The researchers distinguished implicit and explicit CSR. By explicit CSR they refer to 'corporate policies to assume responsibility for the interest of the society' (p. 409). Explicit CSR consist of voluntary, self-interest driven policies. By implicit CSR they refer to 'formal and informal institutions assigning corporations an agreed share of responsibility for society's interests and concerns' (p. 409). Implicit CSR consist of values, norms and rules that result in mostly mandatory requirements for firms. Another definition that is often cited is the one European Commission (2008) developed. The commission has previously defined CSR as a concept whereby firms integrate social, environmental and economic concerns in their business operations and in their interaction with their stakeholders on a voluntarily basis. European Commission (2011) now puts forward a new, simpler definition of CSR as 'the responsibility of enterprises for their impacts on society' (p. 6). Various researchers incorporated voluntariness as a requirement for an action to be considered as socially responsible (Dahlsrud, 2008). However, this means that activities resulting from a response to social pressures are not activities that are socially responsible. Nevertheless, Carroll (1991) stated that complying with economic and legal standards can also be considered CSR, however voluntary activities are higher levels of CSR.

To avoid confusion given the many definitions available, this study adhered to the definition provided by Aguinis & Glaves (2012): 'context-specific organizational actions and

policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance' (p. 933). At its core, CSR activities which are related to social, environmental and economic responsibilities result from firm roles in society, aiming to improve impacts for their stakeholders, whether from voluntary nature or as a response towards pressures.

2.2 IMPACT OF CSR ON FINANCIAL PERFORMANCE, RISK AND EMPLOYEES

Academic researchers linked CSR to financial outcomes as well as non-financial outcomes. First, this section laid focus on the impact of CSR on financial outcomes. Thereafter, the impact of CSR on non-financial outcomes is discussed, including corporate risk and employees.

2.2.1 FINANCIAL PERFORMANCE

The relationship between CSR and corporate financial performance (CFP) is examined by many researchers (e.g. Margolis & Walsh, 2003; Orlitzky et al., 2003; Waddock & Graves, 1997). However, research of the relationship has been inconclusive (see Table 1). Some researchers found a negative relationship between CSR and CFP (e.g. Brammer, Brooks & Pavelin, 2006; Makni, Francoeur & Bellavance, 2008). Wang & Bansal (2012) discussed the economics of CSR and argued that CSR activities can undermine economic returns by adding costs, distracting managers and creating agency problems. First, the more resources a firm deploys for CSR activities, the fewer resources it has available for its core activities. Second, CSR activities distract managers from their primary tasks and managers may be not competent at pursing CSR activities. Third, managers may also pursue their own interests through CSR activities (e.g. improve public image) at the cost of shareholder wealth (Wang & Bansal, 2012). All this have negative impacts on economic returns.

Others found that the relationship between CSR and CFP is more complex than a simple linear relationship (e.g. Hull & Rothenberg, 2008; Surroca, Tribo & Waddock, 2010; Waddock & Graves, 1997). For instance, Hull & Rothenberg (2008) demonstrated that the impact of CSR on financial performance measured by return on assets is strong only in low-innovation firms and in industries with little differentiation. In other words, if CSR activities are innovative and if CSR activities differentiate the firm from its competitors, then the CSR and CFP relationship is positive. In addition, Surroca et al. (2010) examined the relationship between CSR and CFP and showed that any increase in one type of performance (social or financial) is translated into an improvement in the other, if new intangibles are developed. They argued that social (financial) performance stimulates the development of intangibles, including innovation (R&D), human capital, reputation and culture, which lead in turn to improved financial (social) outcomes.

Table 1: Summary of findings CSR-CFP relationship

CSR – CFP RELATIONSHIP

Sign	Major finding	Study		Year	Sign	Major finding	Study		Year
+	CSR related to CFP / CFP related to CSR	Ameer Othman	&	2012	/	CSR – CFP relation influenced by stakeholder influence capacity	Barnett		2007
+	Meta-analysis CSR – CFP	Margolis Walsh	&	2003	/	CSR - CFP relation is U-shaped	Barnett Salomon	&	2012
+	Firm prior performance related to CSR	McGuire et al.		1988	/	CSR – CFP relation interacts with innovation and industry	Hull Rothenberg	&	2008
+	Meta-analysis CSR – CFP	Orlitzky et al.		2003	/	CSR - CFP relation mediated by intangibles	Surraco et al.		2010
+	Meta-analysis CSR – CFP	Peloza		2009	/	CSR - CFP relation interacts with level of consistency	Wang & Choi		2013
+	CFP related to CSR	Roberts		1992	-	CFP using stock returns negative related to CSR	Brammer et al.		2006
+	CSR related to CFP / CFP related to CSR	Waddock Graves	&	1997	-	CFP negative related to CSR	Makni et al.		2008

Notes. (+) Indicates positive and significant relationship was found, (-) Indicates negative and significant relationship was found, (/) Indicates complex relationship was found.

Barnett (2007) asserted that the firm's history influences the CSR – CFP relationship and that many other factors have to be considered. Accordingly, 'the precise payoff for a particular CSR act for a particular firm at a particular point in time is not particularly predictable' (Barnett, 2007, p. 33). He introduced the construct of stakeholder influence capacity (SIC). In short, the actions of firms and the responses by stakeholders in regard to CSR are path-dependent, which means that a given investment in CSR may cause different stakeholder reactions and yield different financial returns (Barnett, 2007). Similarly, Barnett & Salomon (2012) suggested that for some firms CSR has a positive influence on financial performance, but for others it does not. Results of their study showed that firms with poor social performance had a better level of financial performance than firms with moderate social performance, and firms with good social performance had the best level of financial performance. Findings support the construct of SIC, suggesting that firms should

view CSR as a long-term investment in creating the capacity to influence stakeholders; though CSR may not have a positive influence on financial performance now, it may have a positive influence later, once adequate capacity is built. If firms have little ability to build such capacity, then CSR may be a poor financial investment (Barnett & Salomon, 2012). Empirical results of the study of Wang & Choi (2013) lend support and showed that the establishment of good stakeholder relations is influenced not only by firms having high levels of CSR performance but also by firms' ability to deliver consistent CSR performance. Specifically, results showed that the level of consistency interacted positively with CFP.

Others again found a positive relationship between CSR and CFP (e.g. Ameer & Othman, 2012; McGuire, Sundgren & Schneeweis, 1988; Roberts, 1992; Waddock & Graves, 1997). Wang & Bansal (2012), in their discussion on the economics of CSR, argued that firm value may resides in the interaction between CSR and firm strategies. For example, if firms employ environmentally friendly technologies to reduce the costs of energy and waste recycling, firms may realize overall operating efficiency. In addition, Wang & Bansal (2012) discussed that CSR can develop strategic resources (Wang & Bansal, 2012). For instance, CSR may improve firm standings with important constituencies (e.g. bankers, investors) which may bring economic benefits (McGuire et al., 1988). Also, CSR may build stakeholder relationship and positive reputation (Wang & Bansal, 2012). All this have positive impacts on economic returns. Waddock & Graves (1997) evaluated the relationship between corporate social performance (CSP) and CFP when CSP was both a dependent and an independent variable. They found empirical evidence for a virtuous cycle of CSP, since CSP was significantly related to CFP, and CFP was significantly related to CSP. High levels of CFP result in investments in CSR activities and improved CSP. As per this viewpoint, CFP is a predictor of CSP. In addition, high levels of CSP result in improved relationship with stakeholders and better overall performance and thus CSP is also a predictor of CFP. Similarly, Ameer & Othman (2012) examined the relationship between CSR and CFP. Results of their study showed higher mean sales growth, return on assets, profit before taxation, and cash flows from operations in firms which place emphasis on CSR compared to the control firms. The results also provide evidence that there is a bi-directorial relationship between CSR and CFP.

The positive CSR - CFP relationship is also supported by meta-analyses. For instance, Peloza (2009) reviewed 128 articles that explored the CSR - CFP relationship and found that 59% of studies report a positive relationship, 27% report a mixed relationship, and 14% report a negative relationship. The results are similar to the findings of Margolis & Walsh (2003) and Orlitzky et al. (2003) in that they support a positive relationship between the two variables. Researchers of the meta-analyses argued that inconsistencies in the results of studies investigating the CSR – CFP relationship may be attributed to the use of questionable measurement of CSR, poor measurement of financial performance, lack of appropriate

methodology, and/or unsuitable sampling techniques (Margolis & Walsh, 2003; Orlitzky et al., 2003; Peloza, 2009).

2.2.2 RISK

The relationship between CSR and risk is examined by many researchers (e.g. Doh, Howton, Howton & Siegel, 2010; Jo & Na, 2012; Orlitzky & Benjamin, 2001). Table 2 summarizes the findings. Orlitzky & Benjamin (2001) conducted a meta-analysis of the relationship between CSR and risk. They defined risk as uncertainty about outcomes or events. Results showed that risk is negatively associated with CSR. According to their argumentation, socially responsible firms are able to increase interpersonal trust between and among internal and external stakeholders, build social capital and lower transaction costs. This results in better overall performance, reduction in uncertainty about financial returns and reduction in firm risk. Jo & Na (2012) also investigated the impact of CSR on risk. Findings evidenced the total risk measured by standard deviation of daily stock returns and the systematic risk measured by CAPM beta are significantly and negatively related to CSR. In addition, after investigating the long-term risk, the researchers still found risk measurements negatively related to CSR.

Similarly, Becchetti, Ciciretti & Giovannelli (2013) investigated the relationship between CSR and risk, but they presented mixed conclusions. The researchers argued that CSR involves mitigation of the controversies and conflicts with stakeholders, which affect firm profitability and thereby increase the variability in financial returns and firm risk. In addition, CSR may become a domain of arbitrary behavior by managers who may overinvest in CSR to maximize personal goals (e.g. visibility and recognition), which affect firm profitability and thereby increase the unpredictability of earnings and firm risk. On the other hand, CSR includes adoption of more transparent disclosures which reduce information asymmetries and, with them, the variability in financial returns and firm risk. Godfrey et al. (2009) extent the CSR – risk relationship by theorizing that some types of CSR activities are more likely to create goodwill and offer insurance like protection than other types. In line with this reasoning, researchers concluded 'participation in institutional CSR activities – those aimed at firm's secondary stakeholders or society at large- provides an 'insurance-like' benefit, while participation in technical CSRs - those activities targeting a firm's trading partners – yield no such benefits' (Godfrey et al., 2009, p. 425).

In addition, Cheng et al. (2014) investigated the relationship between CSR and access to sources of capital. The researchers found firms with better CSR performance facing lower capital constraints. The negative relationship shows up via two mechanism: (1) CSR is associated with superior stakeholder management, and (2) socially responsible firms are more likely to publicly disclose their CSR activities and consequently become more transparent and accountable. As a result, capital providers perceive the future of firms with low CSR activities as riskier than the

future of high CSR firms (Cheng et al., 2014; McGuire et al., 1988). In addition, Dhaliwal, Li, Zhang & Yang (2011) examined the link between disclosure of CSR activities and cost of equity capital. Evidence concluded that firms with high cost of equity capital in the previous year tend to initiate disclosure of CSR activities in the current year and that initiating firms with superior CSR performance enjoy a reduction in the cost of equity capital. According to their argumentation, socially responsible firms are more likely to disclose their CSR activities and consequently become more transparent, thereby decreasing informational asymmetries between firm, investors and lenders, thus reducing perceived frim risk (Dhaliwal et al., 2011). Similarly, El-Ghoul, Guedhami, Kwok & Mishra (2011) attempted to understand if CSR affects cost of equity capital. Results of the study revealed firms with high CSR activities have lower cost of equity capital than firms with low CSR activities. In addition, firms with low CSR activities have a reduced investor base and higher perceived risk.

Table 2: Summary of findings CSR-Risk relationship

CSR – CORPORATE RISK RELATIONSHIP

Sign	Major finding	Study	Year	Sign	Major finding	Study	Year
+	CSR activities involve arbitrary behavior and mitigation of conflicts with stakeholders which increase variability of returns and risk	Bechetti et al.	2013	-	CSR activities reduce risk: lower cost of equity capital	El-Ghoul et al.	2011
/	Goodwill and insurance like protection depend on type of CSR activities	Godfrey et al.	2009	-	CSR activities reduce risk	McGuire et al.	1988
-	CSR activities increase information asymmetry, thereby reduce risk	Bechetti et al.	2013	-	Meta – analysis: CSR activities reduce risk: increase stakeholder relationships	Orlitzky & Benjamin	2001
-	CSR activities reduce risk: lower capital constraints	Cheng et al.	2014	-	CSR activities reduce (long-term) risk	Jo & Na	2012
-	CSR activities reduce risk: lower cost of equity capital	Dhaliwal et al.	2011	-			
-	CSR activities reduce risk: temper market reaction to another	Doh et al.	2010	-			

Notes. (+) Indicates positive and significant relationship was found, (-) Indicates negative and significant relationship was found, (/) Indicates complex relationship was found.

2.2.3 EMPLOYEES

The relationship between CSR and employees is examined by many researchers (e.g. Brammer, Millington & Rayton, 2007; Carmeli, Gilat & Waldman, 2007). Table 4 summarizes the findings. Researchers showed a positive relationship between CSR and organizational identification (e.g. Carmeli et al., 2007; Kim et al., 2010) and commitment (e.g. Ali et al., 2010; Brammer et al., 2007; McGuire et al., 1988; Peterson, 2004; Sims & Keon, 1997; Turker, 2009A). For instance, Carmeli et al. (2007) conferred that employees are more concerned about social responsibility than about the economic achievements of firms. Results of their study showed that compared to market and financial based performance, social responsibility exhibited a larger effect on employee-firm identification. Similarly, Brammer et al. (2007) revealed that employees appear to attach growing importance to the firm's CSR performance and that employee perceptions of the firm's socially responsible behaviors play an important role in shaping employee perceptions of the attractiveness of the firm (Greening & Turban, 2000).

Turker (2009A) investigated the relationship between CSR and organizational commitment. Results showed that CSR was a significant predictor of organizational commitment. On similar lines, Rupp, Ganapathi, Aguilera & Williams (2006) in their study revealed that when firms behave in socially responsible manners, employees have positive attitudes towards firms. Conversely, when firms behave socially irresponsible, employees are likely to have negative work attitudes. In addition, Sims & Keon (1997) concluded that firm ethics and values tend to be related to the level of satisfaction, absenteeism and productivity of employees. This suggests that in an ethical work environment, employees are more closely attached to the firm and thus tend to be more satisfied and less likely to leave. Bashir, Hassan & Cheema (2012) lend support. They identified internal impacts of CSR activities on employees. The study concluded that firms' involvement in CSR activities positively impacts employees' attitudes towards the organization (e.g. belonginess, satisfaction), resulting in an increase in productivity.

Rodrigo & Arenas (2008) examined reactions of employees according to CSR programs at the attitudinal level. Evidence concluded that CSR programs generated two types of attitudes in employees: (1) attitudes toward the organization, and (2) attitudes toward society. These two types of attitudes are broken down into four categories: (1) acceptance of the new role of the organization, (2) identification with the organization, (3) importance attached to the work performed, and (4) a sense of social justice. Turban & Greening (1996) showed that CSR, besides having an influence on current employees tend to influence organizational attractiveness to prospective employees as well. The researchers concluded that prospective employees are more likely to pursue jobs from socially responsible firms than from socially irresponsible firms. Results implied that CSR provides a competitive advantage in attracting prospective employees. On similar lines, Albinger & Freeman (2000) investigated the effects of CSR on perceived

attractiveness as an employer among different job-seeking groups. Evidence concluded that CSR is positively related to employer attractiveness only for job seekers with high levels of job choice. Findings revealed that firms with high levels of CSR performance yield competitive advantages in the marketplace.

Table 3: Summary of findings CSR-Employee relationship

CSR – EMPLOYEE RELATIONSHIP							
Sign	*Major finding*	*Study*	*Year*	*Sign*	*Major finding*	*Study*	*Year*
+	CSR activities increase attractiveness for job seekers	Albinger & Freeman	2000	+	CSR activities increase employee organizational commitment	Peterson	2004
+	CSR activities increase employee organizational commitment	Ali et al.	2010	+	CSR activities generate positive employee attitudes	Rodrigo & Arenas	2008
+	CSR activities increase employee organizational commitment, job satisfaction and productivity	Bashir et al.	2012	+	CSR activities positively impact employee attitudes and behaviors	Rupp et al.	2006
+	CSR activities increase employee organizational commitment	Brammer et al.	2007	+	Ethical work climate positively influence employee-organization fit	Sims & Keon	1997
+	CSR activities increase employee organizational identification and job performance	Carmeli et al.	2007	+	CSR activities increase employee organizational commitment	Turker	2009
+	CSR activities increase employee organizational identification and commitment	Kim et al.	2010	+	CSR activities increase firm attractiveness to current and prospective employees	Turban & Greening	1996; 2000

Notes. (+) Indicates positive and significant relationship was found, (-) Indicates negative and significant relationship was found, (/) Indicates complex relationship was found.

2.3 THEORIES OF CSR

Aguinis & Glaves (2012), among others (e.g. Frynas & Yamahaki, 2016; Mellahi et al., 2016) argued that a multi-theoretical framework is needed for a better understanding of CSR. Therefore, this study adopted the theoretical framework of Frynas & Yamahaki (2016) and Mellahi et al. (2016) and categorized theories of CSR in external (section 2.3.1) and internal (section 2.3.2) theories.

2.3.1 EXTERNAL THEORIES

External theories of CSR focus on the relationship between firms and society (Frynas & Yamahaki, 2016). External theories included in this study are stakeholder theory, institutional theory and resource dependence theory.

STAKEHOLDER THEORY

Stakeholder theory is oriented towards stakeholders or people who can affect or are affected by firm policies and practices (Roberts, 1992). According to Philips, Freeman & Wicks (2003), the central idea of stakeholder theory is that firms must pay attention to the interests and well-being of those who can assist or hinder the achievement of firms' objectives. Concerning the difficulty of identifying stakeholders, Mitchell, Agle & Wood (1997) outlined a framework to clarify stakeholder salience. According to their argumentation, stakeholders can be identified with regard to their levels of power, legitimacy and urgency. They refer to *power* as the ability to influence the actions of firms, *legitimac*y as the perceived appropriateness of claims, and *urgency* as the degree to which stakeholder claims call for immediate attention. Mitchell et al. (1997) pointed out that firm actions are predicted as a direct result of pressures from different stakeholders related to power dependence and legitimacy and urgency claims.

Donaldson & Preston (1995) indicated how stakeholder theory can be linked to CSR. The researchers described that stakeholder theory includes descriptive, instrumental and normative perspectives. They refer to *descriptive* as a perspective arguing about how firms consider stakeholder interests, *instrumenta*l as arguing about whether it is beneficial for firms to consider stakeholder interests and *normative* as arguing about why firms should consider stakeholder interests. With references to CSR, descriptive perspective proposes that firm behavior is predicted by values and influence of stakeholders and that firms engage in CSR activities that are of most importance to their stakeholders. Instrumental perspective argues that firm behavior is predicted by performance goals and that firms engage in CSR activities that directly improve economic performance. Normative perspective proposes that the interests of all stakeholders are important and that firms engage in CSR activities that appeal to the entire stakeholder group.

Ullmann (1985) also demonstrated a link between stakeholder theory and CSR. He investigated the relationship among social performance, social disclosure and economic performance and presented a three-dimensional framework to explain social performance of firms, including stakeholder power, strategic posture and economic performance. *Stakeholder power* explains that are more likely to respond to the social demands of stakeholders when stakeholders control resources critical to the firm. *Strategic posture* determines the nature of the responses concerning social demands. Firms having an active posture seek to influence their relationship with stakeholders, for example by initiating social programs. *Past and present*

economic performance determines the capability of firms to undertake social programs. This is relevant because in situations of low profitability and high leverage, economic demands will have priority over social demands (Ullmann, 1985). Similarly, Mishra & Suar (2010) highlighted stakeholder theory as an important theory of CSR. The researchers examined whether salience of stakeholder groups influence CSR towards the stakeholder groups. Evidence concluded that the higher the salience of a particular stakeholder group, the higher the CSR towards this group.

Many other researchers used stakeholder theory and examined the relationship between stakeholders and CSR, conceptual (e.g. Aguinis & Glaves, 2012; Lee, 2011) and empirical (e.g. Artiach et al., 2010; Brammer & Millington, 2004, 2006; Chiu & Wang, 2014; Darnall, Henriques & Sadorsky, 2010; Park & Ghauri, 2015; Perez-Batres, Doh, Miller & Pisani, 2012). For instance, Artiach et al. (2010) in their study used a stakeholder framework and investigated the incentives for U.S. firms to invest in sustainability principles. Results revealed that large firms are significantly related with higher levels of sustainability performance. The researchers suggest that larger firms are more visible and thereby draw attention of a wider range of stakeholders when compared with smaller firms. An active strategic posture on social and environmental issues is therefore more feasible (Artiach et al., 2010). Others (e.g. Brammer & Millington, 2006; Chiu & Wang, 2014; Darnall et al., 2010) also found a positive relationship between firm size and (dimensions of) CSR. For instance, Darnall et al. (2010) evaluated the effects of stakeholder pressure on proactive environmental activities and revealed that greater pressures from stakeholders are associated with increased likelihood that firms adopt proactive environmental activities. In addition, results showed that large firms adopt proactive environmental activities to a higher extent than small firms.

Besides firm size, the study of Artiach et al. (2010) also demonstrated a significant and positive relationship between financial performance and sustainability performance. The researchers suggest that when financial performance is high, firms face less pressing demands from financial stakeholders and have the financial capacity to invest in social and environmental activities (Artiach et al., 2010). Similarly, Brammer & Millington (2004), McGuire et al. (1988), and Roberts (1992) in their studies found a positive relationship between financial performance and (dimensions of) CSR. For instance, Brammer & Millington (2004) investigated determinants of corporate philanthropy and found financial performance to be significant and positive related to expenditure on charitable contributions. The researchers argued that low levels of financial performance constrain discretionary behavior as managers seek to satisfy the demands of creditors and shareholders. According to McGuire et al. (1988), high levels of financial performance allow firms to meet social stakeholder demands and respond to creditor and shareholder demands. When financial performance is low, economic demands have priority over social demands.

In addition, Brammer & Millington (2004) offered support for stakeholder theory and showed that firms in sensitive industries are subjected to greater stakeholder pressure and therefore associated with higher levels of (dimensions of CSR). The researchers showed that industry classifications are related to expenditure on charitable contributions. Findings evidenced that firms in sensitive industries (industries that produces industrial commodities, industries with social costs and consumer focus and pharmaceutical or defence industries), which reflects high stakeholder pressure, have significant higher levels of expenditure on charitable contributions. Similarly, Reverte (2009) revealed in his study that firms in sensitive industries (industries mining, oil and gas, chemicals, forestry and paper, steel and other metals, electricity, gas and water were defined as sensitive) were related to higher levels of CSR activities. According to his argumentation (1) firms in less sensitive industries are associated with fewer visible social and environmental issues, (2) are subjected to less stakeholder pressure regarding their social and environmental performance, and (3) therefore display a lesser degree of CSR activism as compared to firms in sensitive industries (Reverte, 2009).

All in all, firms face different intensities of stakeholder pressure as a function of stakeholder salience (particular levels of power, legitimacy and urgency) and engage in CSR to obtain and sustain support of (salient) stakeholders. Researchers offered support for stakeholder theory and showed that large firms and firms in sensitive industries are subjected to greater stakeholder pressure and therefore associated with higher levels of CSR. In addition, stakeholder theorists indicated financial performance influences the capability of firms to engage in CSR activities as in situations of low financial performance, economic demands will have priority over social demands.

INSTITUTIONAL THEORY

Institutional theory explains that firms are influenced by institutional settings in which they operate (Frynas & Yamahaki, 2016). According to Muthuri & Gilbert (2011), institutional settings take into account institutions, which influence and which are influenced by actors' interactions in a governance system. Campbell (2006) defined institutions as 'formal rules and taken-for-granted cultural frameworks, cognitive schema, and routinized processes of reproduction; and assumes that actors are motivated more by a logic of appropriateness whereby actions is constrained and enabled by cultural frames, schema and routines' (p. 926). According to Mellahi et al. (2016), the core assumption of institutional theory is that survival of firms depends on acquiring legitimacy from institutional actors. Thus, institutional logics, once they become dominant, may have an effect on firm policies and practices.

Campbell (2006) in his study indicated how institutional theory is linked to CSR. According to his argumentation, firms act socially responsible because society expects them to

operate socially responsible. He showed that firms are more likely to act socially responsible if they encounter strong state regulation, collective industrial self-regulation, independent organizations that monitor them, and a normative institutional environment that encourage CSR behavior (Campbell, 2006). In addition, Maignan & Ralston (2002) studied the effect of different institutional environments of firms in France, the Netherlands, U.K. and U.S. on CSR. The researchers concluded that firms from different countries hold different perspectives on how important it is to be socially responsible. Firms in France and the Netherlands were not as intent as firms in U.S. to show good social responsible images. The researchers linked this to the differentiated views of firm roles in society and showed that European firms presented CSR as enhancing success and survival and U.S. firms as expression of their own organizational culture.

Many other researchers examined the relationship between different institutions and CSR conceptual (e.g. Campbell, 2007; Gjolberg, 2009; Matten & Moon, 2008) and empirical (e.g. Doh & Guay, 2006; Jackson & Apostolakou, 2010; Marano & Kostova, 2015). For instance, Matten & Moon (2008) posed the question of why CSR is explicitly articulated in the U.S. but implicitly in Europe. They refer to explicit CSR as voluntary and implemented as a result of deliberate and strategic decisions made by firms. Implicit CSR, on the other hand, is not voluntary but rather as a reaction to a firm's institutional environment. The researchers explained that the coordinated institutional environment for European firms encourage collectivism, social obligation and implicit CSR, whereas the liberal U.S. institutional environment incentives individualism, discretionary agency and explicit CSR. Jackson & Apostolakou (2010) in their study lend support. They demonstrated the importance of institutional factors in shaping patterns of CSR and showed that firms from the liberal economies of the Anglo-Saxon counties score higher on dimensions of CSR than firms in the coordinated market economies in Europe.

All in all, firms operate within the defined institutions of their respective societies. Institutional differences create a context where particular CSR activities may lead one stakeholder group to confer legitimacy to the firm but meanwhile may lead another stakeholder group to withdraw its legitimacy (Mellahi et al., 2016). Institutional theory highlights the contested nature of CSR.

RESOURCE-DEPENDENCE THEORY

Resource-dependence theory (RDT) explains how external resources affect firm behavior (Mellahi et al., 2016). According to Pfeffer & Salancik (1978, p. 1), 'RDT is underpinned by the idea that firms can be characterized as open systems, dependent on contingencies in the external environment'. The survival and growth of firms hinge on accessing the required resources from external parties (Mellahi et al., 2016). It is argued that institutional pressures may have an effect on firm policies and practices (e.g. Campbell, 2007), but firms may enact different responses to

such institutional pressures according to the critical resources they wish to control (Pfeffer & Salancik, 1978). Thus, the need of critical external resources controlled by external parties can affect firm policies and practices.

Kor & Sundaramurthy (2009) indicated a link between RDT and CSR. They discussed the relationship between social performance and the resource-provision role of outside directors. Accordingly, outside directors are resource-rich directors which move in broader social networks and provide resources that impact firm strategies and legitimacy. In terms of social performance, resource-rich directors are more likely to be knowledgeable about social issues and are better placed to ensure that firms pursue positive social performance. Similarly, Pfeffer & Salancik (1978) argued that the selection of outside directors can be viewed as a strategy for dealing with the firm's relationship with the environment since outside directors enhance the reputation and credibility of a firm and help establish and maintain its legitimacy. Coffey & Wang (1998) empirically tested the expected positive relationship between the proportion of outside directors and corporate philanthropy (one dimension of CSR). They based their expectation upon four assumptions: (1) charitable donations are altruistic, (2) insiders are preoccupied with short-term economic outcomes, (3) philanthropic giving is consistent with long-term economic outcomes, and (4) board diversity increases decision-making effectiveness (Coffey & Wang, 1998). Notwithstanding, their study found no empirically support.

Johnson & Greening (1999) argued that outside directors are more attuned to long-term horizons as well as being more accepting of short-term losses for the benefit of long-term interests. Insiders are more attentive to short-term economic goals and therefore less likely to advocate investment in CSR that reduce short-term economic performance. Johnson & Greening (1999) examined the effect of outside directors on corporate social performance. Results revealed that the proportion of outside directors was positively and significantly related to social performance. Accordingly, outside directors help managers to respond appropriately to the external environment in participating in various stakeholder-oriented activities, which may also include socially responsible activities (Johnson & Greening, 1999). In addition, Jo & Harjoto (2011) empirically investigated the relationship between corporate governance and firm value through CSR. Among all corporate governance systems, the researchers found the percentage of outside directors have the most positive and significant influence on CSR engagement.

Webb (2004) investigated board structures of socially responsible firms and non-socially responsible firms and conclude that boards of socially responsible firs have fewer insiders (23%) and more outsiders (71%) compared to non-social responsible firms (31% and 61% respectively). Furthermore, Jizi, Salama, Dixon & Stratling (2014) examined the impact of board of directors on the quality of CSR disclosures. Results revealed that outside director representation was positively related to CSR disclosures. Besides, their study found that board size was positively

related to CSR disclosures. Similarly, De Villiers et al. (2011) in their study, investigating the relationship between environmental performance and board characteristics which capture boards' resource provision ability, showed that environmental performance is significantly higher in firms that have larger boards. According to their argumentation, large boards include more prestigious directors which bring more experience and greater knowledge on specific issues such as environmental performance and increase the ability to form links to the environment, thereby decreasing resource dependencies and uncertainties (De Villiers et al., 2011).

In addition, Wang & Coffey (1992) offered support for RDT and showed that women board directors are associated with (dimensions of) CSR. The researchers examined the relationship between women board directors and corporate philanthropy and expected that women board directors are positively related to philanthropy because women tend to be more sensitive to corporate social performance. In line with their expectations, findings evidenced that the proportion of women board directors was positively and significantly related with charitable contributions. Pfeffer & Salancik (2003) discussed that women directors are a major source of influence on boards because women are able to seek linkages with influential resources and have access to more information and communication channels and legitimacy. Williams (2003) in his study lend support. Results revealed that the proportion of women directors was positively and significantly related to corporate philanthropy. On similar lines, Bear, Rahman & Post (2010) and Post, Rahman & Rubow (2011) found that the proportion of women directors was positively related to KLD strength scores for CSR, which included corporate philanthropy. Furthermore, the empirical study of Boulouta (2013) revealed that the proportion of women directors had a negative and significant impact on the negative social practices of CSR. Accordingly, the higher the proportion of women directors, the lower the negative social practices of CSR. This is because negative social practices are worse and induce a stronger empathic caring response from women directors (Boulouta, 2013).

All in all, survival of firms depends on ensuring the flow of critical external resources (e.g. knowledge, personal ties, legitimacy) from external parties. RDT theorists argued that the need of critical external resources can result in particular CSR performance. Researchers offered support for RDT theory and showed that firms with high proportion of outside (inside) and women directors are associated with higher (lower) levels of CSR.

2.3.2 INTERNAL THEORIES

Internal theories of CSR focus on internal processes, where CSR is either conceptualized as strategic or the outcome of managerial decisions (Frynas & Yamahaki, 2016). Internal theories included in this study are resource-based theory (RBT) and agency theory.

RESOURCE-BASED THEORY

Similar to the aforementioned RDT, resource-based theory (RBT) contains the term *resource*. However, unlike the RDT which addresses the ability of firms to exploit critical external resources, RBT addresses the heterogeneity of firms with regard to their ability to exploit internal resources in the quest for competitive advantage (Frynas & Yamahaki, 2016). According to Mellahi et al. (2016), the core assumption of RBT is that performance differentials of firms are influenced by firm specific resources and capabilities and that these specific resources and capabilities can lead to competitive advantages. Based on RBT, Barney (1991) introduced a framework to understand the relationship between firm resources and sustained competitive advantage. He stated that a firm's competitive advantage is rooted in the application of valuable resources which are difficult to obtain and hard to imitate and/or substitute.

Surroca et al. (2010) indicated a link between RBT and CSR and pointed to the firm's endowment of intangible resources as main driver of the differences in firm social and financial performance. According to their argumentation, intangible resources are difficult to acquire or develop, to replicate and accumulate and to be imitated by competitors. They concluded that a virtuous cycle exists in that social (financial) performance stimulates the development of intangibles, including innovation, human capital, reputation and culture, which lead in turn to improved financial (social) performance. In addition, Padgett & Galan (2010) examined the effect of intangible resources on CSR. The researchers discussed that intangible resources and CSR possess characteristics that are consistent with the RBT (e.g. valuable, rare, inimitable, and non-substitutable), making them important resources that allow firms to achieve competitive advantages. They empirically investigated the relationship between investments in R&D and CSR and found that expenditure on R&D investments was positively and significantly related to CSR. Similarly, the study of McWilliams & Siegel (2000) revealed that R&D was positively and significantly related to CSR. They argued that R&D and CSR are both associated with product and process innovations. Accordingly, R&D is an investment that result in knowledge enhancement and product and process innovations, which may lead to CSR activities (McWilliams & Siegel, 2000). Thus, CSR appears to be interrelated with firm levels of innovativeness.

Based on RBT, Waddock & Graves (1997) expected a link between corporate social performance (CSP) and corporate financial performance (CFP) because internal resources, financial and other, are necessary to invest in CSR activities and improve corporate social performance. Empirical findings revealed that CSP was positively and significantly related to CFP, and CFP was positively and significantly related to CSP. CFP is a predictor of CSP because resource rich firms are expected to invest easier in CSR activities and thus increase CSP. CSP is also a predictor of CFP because high levels of CSP result in improved relationship and better overall performance (Waddock & Graves, 1997). Similarly, Udayasankar (2008) discussed that 'firms

with resource limitations are more likely to apply available resources towards enhancing their competitive advantage through more traditional means of competition' (p. 169). On the other hand, resource rich firms face comparatively less constraints and therefore are more inclined to invest in CSR activities (Udayasankar, 2008). Furthermore, Russo & Fouts (1997) empirically tested the predictions of the RBT and found a positive and significant link between corporate environmental performance and CFP. The researchers hypothesized this link to be mediated by unique combinations of intangible (e.g. reputation, technology) and tangible (e.g. financial reserves) resources.

All in all, the RBT recognizes the importance of internal resources. RBT theorists argued that CSR is influenced by firm specific internal resources and capabilities. Researchers offered support for RBT and showed that firms with high levels of innovation and other internal resources (e.g. financial resources) are associated with higher levels of CSR.

AGENCY THEORY

Agency theory examines the relationship between principals and agents (Frynas & Yamahaki, 2016). According to Mellahi et al. (2016), the core assumption of agency theory is that agents have distinct incentives and objectives from their principals. Eisenhardt (1989) discussed that agency theory addresses the importance and incentives of self-interest in decision making. Accordingly, it is concerned with 'identifying situations in which principals and agents are likely to have conflicting goals and described mechanisms that limit the agent's self-serving behavior' (Eisenhardt, 1989, p. 59). Barnea & Rubin (2010) in their study examined the principal-agent relationship regarding CSR. The researchers focused on the relationship between ownership and CSR and asserted that different type of owners have different interests in CSR. Two types of ownership are analyzed: (1) inside ownership (managers and large shareholders who are connected with the firm), and (2) outside ownership (institutions and others who are not connected with the firm). Results revealed that inside ownership is negatively and significantly related to social performance. Barnea & Rubin (2010) assumed that higher social performance is associated with higher levels of CSR expenditure. Accordingly, if CSR expenditure is at a level in which it reduces firm value, insiders would bear more of the cost associated with CSR the higher their ownership level is (Barnea & Rubin, 2010).

Similarly, Aguilera et al. (2007) discussed that managers emphasize short-term profitability and pressures to show short-term returns make managers reserved in investing in CSR activities only when there is an immediate association with profits. Graves & Waddock (1994) examined the effect of institutional ownership on corporate social performance (CSP) and assumed that the effect should be positive because institutions are long-term investors and CSR enhance long-term performance. As expected, the researchers found that institutional ownership

was significantly and positively related to CSP. The study of Johnson & Greening (1999) lend support and revealed a positive and significant relationship between institutional ownership and CSP. According to their argumentation, institutional investors are more concerned with social performance because most institutional investors act as long-term investors and see long-term benefits of involvement in CSR activities. In addition, Cox, Brammer & Millington (2004), Harjoto & Jo (2011), and Mahoney & Roberts (2007) concluded in their studies that a positive and significant relationship between institutional ownership and CSR exists. Furthermore, Oh et al. (2011) examined the effect of institutional, managerial and foreign ownership on CSR for Korean firms. Empirical findings showed that ownership by institutions (e.g. pension funds, banks) and foreign investors with long-term orientation was positively and significantly related to CSR scores. Managerial ownership, however, showed a negative and significant relationship with CSR scores.

Dam & Scholtens (2012) demonstrated whether CSR policies of European multinationals can be related to different types of owners, including institutional investors, banks, firms, state, individuals and employees. Evidence revealed that ownership by individuals and employees is associated with low CSR performance. Ownership by institutional investors, banks and state is neutral with respect to CSR performance. In line with agency theory, the researchers asserted that different owners have different preferences regarding CSR because they have different roles in society. For instance, financial institutions are intermediaries who manage risk and money on behalf of others and have a long-term focus, while individuals and employee predominantly have a strategic agenda with a short-term focus (Dam & Scholtens, 2012). Dam & Scholtens (2013) in another study examined the effect of ownership concentration on CSR of European multinationals. Results revealed that ownership concentration was negatively related to CSR and in the case of more concentrated ownership, the negative relationship with CSR became stronger. The researchers assumed that CSR can be viewed as a private provision of a public good and argued that large shareholders pay a high price for social performance. In other words, the larger the shareholding in a firm, the less likely the shareholder is to prefer social activities, since the benefits do not outweigh the costs to the shareholder personally. If large shareholders improve CSR performance, other stakeholders benefit, possibly at the cost of large shareholders' financial gains (Dam & Scholtens, 2013).

According to Bartkus, Morris & Seifert (2002), ownership concentration is recognized as a mechanism that affect agency problems. The first argument they came up with is that large shareholders have more incentives to influence decision-making and monitor management because they are more affected by behavior of management. In this case, the agency problem decreases because interests between principals and agents are more aligned. The second argument they came up with is that large shareholders can act in their own best interest and exert their power to benefit themselves at the expense of minority shareholders, thereby increasing the

agency problem. Bartkus et al. (2002) in their study found strong evidence for that concentrated ownership is negatively related to corporate philanthropy (one dimension of CSR). In addition, Brammer & Millington (2005) arrived at a negative relationship between ownership concentration and corporate philanthropy. Similarly, Li & Zhang (2010) examined the relationship between ownership structure and CSR and concluded in their study a negative relationship between the controlling right of the largest shareholder and levels of CSR.

All in all, agents have distinct incentives and objectives from their principals. Researchers offered support for agency theory and showed that firms with high proportion of outside (inside) directors are associated with higher (lower) levels of CSR and that firms with highly concentrated ownership are associated with significant lower levels of CSR.

2.4 DETERMINANTS OF CSR IN COMPARATIVE PERSPECTIVE

Previous studies have empirically investigated determinants related to CSR. An overview of some studies is provided in Table 4. Studies are grouped according to their geographical origins. Table 4 shows that the relationship between firm size and CSR received attention in studies on all geographical origins. Results globally support that firm size (measured by total assets, total sales, number of employees, market capitalization, among other measures) is positively related to CSR (e.g. Artiach et al., 2010; Brammer & Millington, 2006; Brammer & Pavelin, 2004, 2006; Chiu & Wang, 2014; Cormier & Magnan, 1999, 2003; Crisostomo & Oliveira, 2015; Kansal et al., 2014; Li & Zhang, 2010; Prado-Lorenzo et al., 2009; Rao & Tilt, 2016; Zeng et al., 2012), assuming that large firms are more visible, cause wider impacts, and face greater stakeholder scrutiny. Therefore, large firms are more likely to have higher levels of CSR activism. Also, visibility received attention in studies on almost all geographical origins. Studies widely support a positive relationship between visibility (measured by media exposure) and CSR (e.g. Brammer & Millington, 2006; Brammer & Pavelin, 2004, 2006; Branco & Rodrigues, 2008; Chiu & Wang, 2014; Cormier & Magnan, 2003; Gamerschlag et al., 2011; Reverte, 2009).

In addition, industry as determinant received much attention globally. Results widely support that industry is positively related to CSR (e.g. Brammer & Millington, 2006; Brammer & Pavelin, 2004; Cormier & Magnan, 1999, 2003; De Villiers et al., 2011; Gamerschlag et al., 2011; Kansal et al., 2014; Rao & Tilt, 2016; Reverte, 2009; Zeng et al., 2012), assuming that firms in sensitive industries face more risks of being criticized in CSR and therefore more likely to display higher degrees of CSR activism. Furthermore, the relationship between levels of leverage, indebtedness or gearing and CSR is examined in studies on almost all geographical origins. However, findings are mixed, reporting a positive (e.g. Derksen, 2013; Prado-Lorenzo et al., 2009; Li & Zhang, 2010) or a negative (e.g. Artiach et al., 2010; Brammer & Pavelin, 2006; Branco & Rodrigues, 2008) relationship. Other determinants globally examined include growth

opportunities (e.g. Artiach et al., 2010; Punte, 2009), information costs (e.g. Cormier & Magnan, 1999; Derksen, 2013), operational diversity (Kabongo et al., 2013), international listing (e.g. Branco & Rodrigues, 2008; Hackston & Milne, 1996; Mahoney & Roberts, 2007), and reputation (e.g. Zeng et al., 2012).

Corporate financial performance (CFP) (measured by return on assets, return on equity, market returns, among other measures) as determinant of CSR has also received global attention, especially in studies on North American firms. According to Hahn & Kühnen (2013), this reflects the strong liberal notion of American capitalism. Studies on North American firms mostly support a positive (e.g. Cormier & Magnan, 1999, 2003; Roberts, 1992; Stanwick & Stanwick, 1998) influence of CFP on CSR. The number of studies which did not found a relationship (e.g. Brammer & Pavelin, 2006; Punte, 2009; Prado-Lorenzo et al., 2009; Reverte, 2009) or found a negative relationship (e.g. Derksen, 2013) between CSR and CFP is high on North-Western and Southern European firms. Besides, board size received global attention. Results are mostly coherent, showing that board size and CSR are positively related (e.g. Bartkus et al., 2002; De Villiers et al., 2011; Jizi et al., 2014). In addition, results globally support that proportion of outside board directors and CSR are positively related (e.g. De Villiers et al., 2011; Jizi et al., 2014; Post et al. 2011; Wang & Coffey, 1992; Webb, 2004). De Villiers et al. (2011), Kabongo et al. (2013), Post et al. (2011). Webb (2004) find the same for the relationship between women board director and CSR.

Furthermore, De Villiers et al. (2011) and Webb (2004) examined the relationship between CEO duality and CSR. Post et al. (2011) examined director age, culture background, and education as determinants which may influence CSR. With respect to studies on North Western European firms, none of them examined the influence of board characteristics on CSR. Another determinant of CSR that is examined is ownership concentration. Brammer & Pavelin (2006) studied firms in United Kingdom and found a negative relationship between ownership concentration and CSR. Bartkus et al. (2002), Crisostomo & Oliveira (2015) and Li & Zhang (2010) found the same in their studies on firms in United States, Brazil and China, respectively. Besides, the influence of different ownership types on levels of CSR is investigated, especially on firms in Asia. The study of Zeng et al. (2012) showed that state-owned firms in China are associated with higher CSR disclosures. They assumed that state-owned firms are subjected to more stringent reporting requirements. Similarly, the study of Mishra & Suar (2010) on firms in India revealed a positive relationship. When taking a look at studies on firms in Latin America, Australia, New Zealand, North-Western Europe and Southern Europe, almost none of them examined the influence of ownership types on CSR.

Table 4: Overview of studies examining determinants

Study	Year	Country	Determinants analyzed
North America: Canada (CA), United States (US)			
Artiach et al.	2010	US	Free cash flow (0), Growth opportunities (+), Leverage (0), ROE (+), Size (+)
Bartkus et al.	2002	US	Board size (+), Institutional ownership (-), Ownership concentration (-)
Cormier & Magnan	1999	CA	Financial performance (+), Information costs (+), Industry (+), Size (+)
De Villiers et al.	2009	US	Active CEO (+), Board diversity (gender) (+), Board size (+), Board independence (outside director) (+), CEO duality (-), Legal expert (+), Industry (+)
Jizi et al.	2014	US	Board size (+), Board independence (outside director) (+), CEO duality (+)
Kabongo et al.	2013	US	Board diversity (gender) (+), Operational diversity (+)
Makni et al.	2008	CA	Financial performance (-)
Mahoney & Roberts	2007	CA	Financial performance (0), Institutional ownership (+), International activities (+), Product quality (+)
Post et al.	2011	US	Board independence (outside director) (+), Board diversity (gender) (+), Cultural background (+), Director age (0), Education (0)
Roberts	1992	US	Active citizenship/philanthropy (+), Financial performance (+), Industry (+), Systemic Risk (0)
Stanwick & Stanwick	1998	US	Size (-), Financial performance (+), Environmental performance (0)
Wang & Coffey	1992	US	Board independence (outside director) (+), Board diversity (gender) (0), Insider ownership (+), Ownership concentration (0)
Webb	2004	US	Board independence (outside director) (+), Board diversity (gender) (+), CEO duality (-)
Latin America: Brazil (BR), Mexico (ME)			
Crisostomo & Oliveira	2015	BR	Growth opportunities (+), Ownership concentration (-), Size (+)
Lourenco & Branco	2013	BR	Financial performance (+), International listing (+), Ownership concentration (-), Size (+)
Muller & Kolk	2009	ME	Foreign ownership (0), Management commitment to ethics (+), Trade pressures (+)
Australia (AU) and New Zealand (NZ)			
Galbreath	2011	AU	Board diversity (gender) (0)
Hackston & Milne	1996	NZ	Financial performance (0), International listing (+), Industry (+), Size (+)
Rao & Tilt	2016	AU	Board diversity (gender, tenure and multiple directorship) (+), Board independence (outside director) (0), Board size (0), Financial performance (0), CEO duality (+), Industry (+), Size (+)
North- Western Europe: France (FR), Germany (DE), the Netherlands (NL), United Kingdom (GB)			
Brammer & Millington	2006	GB	Industry (+), Size (+), Visibility (+)
Brammer & Pavelin	2004	GB	Industry (+), Media exposure (+), Size (+), Social performance (+)
Brammer & Pavelin	2006	GB	Financial performance (0), Leverage (-), Media exposure (0), Ownership dispersion (+), Size (+)
Cormier & Magnan	2003	FR	Information costs (+), Industry (+), Proprietary costs (+), Size (+), Visibility (+)
Cox et al.	2004	GB	Institutional ownership (+)
Derksen	2013	NL	Financial performance (-), Information costs (+), Leverage (+), Public pressure (0), Industry (+)

Gamerschlag et al.	2011	DE	Financial performance (+), Industry (+), Relationship with US stakeholders (+), Size (+), Shareholder structure (+), Visibility (+)
Punte	2009	NL	Financial performance (0), Innovation (0), Ownership type (+), Size (+)
Southern Europe: Portugal (PT), Spain (ES)			
Branco & Rodrigues	2008	PT	International experience (0), Leverage (-, 0), Media exposure (+), Size (+), Visibility (+, 0)
Prado-Lorenzo et al.	2009	ES	Financial performance (0), Leverage (+), Size (+), Strategic posture (+)
Reverte	2009	ES	Financial performance (0), Industry (+), Leverage (0), Media exposure (+), Size (+)
Asia: China (CN), India (IN), Korea (KR), Malaysia (MY), Taiwan (TW)			
Oh et al.	2011	KR	Board independence (outside director) (0), Foreign ownership (+), Institutional ownership (+), Managerial ownership (-)
Chang et al.	2015	KR	Board independence (outside director) (+), Education (+,0, -)
Chiu & Wang	2014	TW	Financial performance (+), Size (+), Stakeholder power (+), Strategic posture (+), Visibility (+)
Kansal et al.	2014	IN	Age (0), Financial performance (+), Industry (+), Leverage (0), Reputation (+), Size (+)
Li & Zhang	2010	CN	Employee power (+), Financial performance (+), Growth opportunity Leverage (+), Ownership dispersion (+), Size (+)
Mishra & Suar	2010	IN	Financial performance (+), Ownership (private vs. government owned) (+)
Zeng et al.	2012	CN	Industry (+), Ownership (private vs. government owned) (+), Reputation (+), Size (+)

Notes. (+) Indicates positive and significant correlation was found, (-) Indicates negative and significant correlation was found, (0) Indicates no correlation was found. Adapted from Hahn & Kühnen (2013).

2.5 CONCLUSION

This chapter presented academic literature concerning CSR. It can be concluded that CSR is diverse, complex and contested in nature. CSR activities originate from firm roles in society and take into account stakeholder expectations and economic, social and environmental responsibilities. Academic literature showed that CSR has an impact on financial as well as non-financial outcomes, including shareholder value, corporate risk, capital constraints, stakeholder relationship, corporate attractiveness for job seekers, organizational identification and commitment, among others. CSR can be understood by multiple theories. Accordingly, firms go in for CSR to adapt to stakeholder demands (stakeholder theory), adhere to institutional norms and pressures to elevate their legitimacy (institutional theory), secure critical resources from salient stakeholders (resource dependence theory), develop valuable resources to pursue opportunities (resource based theory), and/or to satisfy managers' private needs (agency theory). Finally, this chapter presented an overview of determinants per geographical origin.

3. HYPOTHESIS DEVELOPMENT

This chapter presents the development of hypotheses. Since the concern of this paper is with firm variations in CSR activities, the hypotheses are related to firm characteristics.

3.1 SIZE

The first hypothesis is related to firm size as Marano & Kostova (2015), among others (e.g. Darnall et al., 2010; Udayasankar, 2008), argued that large firms are more likely to engage in CSR activities because large firms cause wider impacts and face greater public scrutiny over their behaviors. Based on Agency theory, Artiach et al. (2010) argued that large firms are more visible and draw the attention of a wider range of external stakeholders. On similar lines, Darnall et al. (2010) discussed that large firms are more visible, bringing greater pressures from stakeholders to adhere to an appropriate level of social and environmental performance. Accordingly, large firms are associated with increased likelihood to adopt CSR activities. In contrast, small firms face lesser pressures from stakeholders, are lesser knowledgeable about CSR issues and are concerned with matters more central to their survival (Etzion, 2007). Based on resource based theory, Brammer & Millington (2006) argued that large firms have more capacity to provide resources to undertake CSR activities, whereas smaller firms with constrained resources cannot afford such behavior.

Previous empirical studies widely support the positive relationship between firm size and the level of CSR (e.g. Artiach et al., 2010; Brammer & Millington, 2006; Brammer & Pavelin, 2004, 2006; Chiu & Wang, 2014; Cormier & Magnan, 2003; Darnall et al., 2010; Johnson & Greening, 1999; Kansal et al., 2014; Roa & Tilt, 2016; Udayasankar, 2008; Zeng et al., 2012). This study thus expects in agreement to previous studies that it is more likely for large Dutch firms to have higher levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 1: large firms undertake more CSR activities.

3.2 FINANCIAL PERFORMANCE

The second hypothesis is related to financial performance, as Artiach et al. (2010), McGuire et al. (1988), Roberts (1992), among others argued that financial performance influence the level of CSR. In accordance to McGuire et al. (1988), CSR activities are 'especially sensitive to the existence of slack resources' and that 'less profitable firms may be less willing to undertake socially responsible actions' (p. 857). In line with this, Roberts (1992) asserted that 'economic performance directly affects the financial capability to institute social responsibility programs' and thus 'the better the economic performance of a company, the greater its social responsibility activity' (p. 599). Based on stakeholder theory, Brammer & Millington (2004) and Ullmann (1985) argued that low levels of financial performance relegates social stakeholder demands to a lower priority as managers seek to satisfy the demands of creditors and shareholders. High levels of

financial performance allow the firm to meet social stakeholder demands through investment in CSR activities and respond to creditor and shareholder demands (Artiach et al., 2010; McGuire et al., 1988). Based on resource based theory, Waddock & Graves (1997) asserted that firms with more internal resources are in a better position to finance investments in CSR activities. In a firm with less internal resources, management will focus on activities that have more direct effect on earnings (Surroca et al., 2010; Waddock & Graves, 1997). In accordance to Udayasankar (2010, p. 169), 'firms with resource limitations are more likely to apply available resources towards enhancing their competitive advantage through more traditional means of competition'.

A number of previous empirical studies found support for the positive relationship between financial performance and CSR (e.g. Ameer & Othman, 2012; Chiu & Wang, 2014; Cormier & Magnan, 1999; Lourenco & Branco, 2013; Mishra & Suar, 2010; Waddock & Graves, 1997; Roberts, 1992; Stanwick & Stanwick, 1998). For instance, the study of Ameer & Othman (2012) showed that firms which high levels of CSR performance have higher financial performance measured by return on assets, profit before taxations and cash flow from operations. In addition, Waddock & Graves (1997) found empirical evidence for that the level of CSR depend on financial performance and that the sign of the relationship is positive. This study thus proposed in agreement to previous studies that it is more likely for Dutch firms with higher financial performance to have higher levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 2: firms with high financial performance undertake more CSR activities.

3.3 OWNERSHIP CONCENTRATION

The third hypothesis is related to ownership concentration, as Bartkus et al. (2002), Dam & Scholtens (2013), among others argued that concentrated ownership influence CSR of firms. The ownership structure in the Netherlands is characterized by concentrated ownership (Kabir, Cantrijn & Jeunink, 1997). According to Bartkus et al. (2002), concentrated ownership facilitates the agency problem between large and small shareholders because large shareholders can act in their own interest and exert their power to benefit themselves at the expense of minority shareholders. Dam & Scholtens (2013) argued that large shareholders pay a high price for CSR performance and therefore, the larger the shareholding in firms the less likely the shareholder prefers investments in CSR activities since the benefits do not outweigh the costs. Similarly, Barnea & Rubin (2010) asserted that shareholder would bear more of the cost associated with CSR the higher the level of their ownership is.

A number of previous empirical studies found support for the negative relationship between ownership concentration and CSR (e.g. Barnea & Rubin, 2010; Bartkus et al., 2002; Brammer & Pavelin, 2006; Crisostomo & Oliveira, 2015; Dam & Scholtens, 2013; Li & Zhang,

2010). For instance, the study of Dam & Scholtens (2013) showed a significant and negative association between ownership concentration and CSR and in the case of more concentrated ownership, the negative relationship with CSR became stronger. This study thus proposed in agreement to previous studies that it is more likely for Dutch firms with concentrated ownership to have lower levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 3: firms with high concentrated ownership undertake less CSR activities.

3.4 OWNERSHIP IDENTITY

The fourth hypothesis is related to ownership identity, as Dam & Scholtens (2012) and Oh et al. (2010), among others argued that different owners have divergent orientations and preferences regarding CSR. This study is focusing on two types of ownership, including managerial ownership and institutional ownership.

3.4.1 MANAGERIAL OWNERSHIP

Oh et al. (2010) discussed that managers as owners have greater freedom to pursue their own best interests. Since CSR affects firm performance in the long-run (e.g. Makni et al., 2010), managerial owners are more likely to invest in short-term strategies that increase firm earnings (Oh et al., 2010). Similarly, Barnea & Rubin (2010) asserted that deviation from long-term value maximization declines as managerial ownership rises. In addition, Aguilera et al. (2007) argued that managers emphasize short-term firm performance and have opportunistic, political and strategic motives that conflict with CSR. Therefore, managerial owners are reserved in investing in CSR activities.

A number of previous empirical studies found support for the negative relationship between managerial ownership and CSR (e.g. Barnea & Rubin, 2010; Dam & Scholtens, 2012; Li & Zhang, 2010; Oh et al., 2011; Punte, 2009). For instance, Barnea & Rubin (2010) employed a dataset of 3000 US corporations as either socially responsible or socially irresponsible and found that insider ownership (managers and large shareholders) is negatively related to social scores. With respect to the Dutch context, the study of Punte (2009) revealed the level of managerial ownership as a significant determinant of CSR. This study thus proposed in agreement to previous studies that it is more likely for Dutch firms with high managerial ownership to have lower levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 4: firms with high managerial ownership undertake less CSR activities.

3.4.2 INSTITUTIONAL OWNERSHIP

The Netherlands is characterized by a market-based economy, in which according to Aguilera & Jackson (2003), the primary monitoring role is left to institutional investors. Boerkamp (2016) examined the relationship between institutional ownership and firm performance of Dutch listed

firms and conclude that institutional ownership has a positive impact on firm performance. Considering that institutional ownership matters for firm performance of Dutch firms, it is feasible to consider that it may also influence CSR performance. Graves & Waddock (1994) discussed that the effect of institutional ownership on CSR should be positive because CSR activities enhance long-term performance. In addition, Johnson & Greening (1999) argued that institutional owners act as long-term investors and see long-term benefits of CSR activities. Another argument is based on that institutional investors consider CSR to be a factor in their investment decisions (McGuire et al., 1988). Oh et al. (2010) assumed a positive relationship between institutional owners and CSR because institutional owners want to maintain their own (social reputation) and therefore invest in firms with high CSR performance. Others argued that institutional owners are risk-averse and invest in firms with high CSR performance if they believe it lowers the risk of the investment (Mahoney & Roberts, 2007; Jo & Na, 2012).

A number of previous empirical studies found support for the positive relationship between institutional ownership and CSR (e.g. Cox et al., 2004; Graves & Waddock, 1994; Harjoto & Jo, 2011; Johnson & Greening, 1999; Mahoney & Roberts, 2007; Oh et al., 2011; Punte, 2009). For instance, Oh et al. (2011) showed that ownership by institutions with long-term orientations are positively and significantly related to CSR. Similarly, Harjoto & Jo (2011) concluded that high levels of CSR is positively related with institutional ownership. With respect to the Dutch context, Punte (2009) in his study showed that the level of institutional ownership was a significant determinant of CSR activities. This study thus proposed in agreement to previous studies that it is more likely for Dutch firms with high institutional ownership to have higher levels of CSR activities. Therefore, following hypothesis is formulated:

Hypothesis 5: firms with high institutional ownership undertake more CSR activities.

3.5 OUTSIDE BOARD DIRECTORS

The sixth hypothesis is related to outside board directors as De Villiers et al. (2011), Johnson & Greening (1999), Webb (2004), among others argued that CSR performance vary with the proportion of outside directors. Agency and resource dependence theorists examined board functions, contributing to how it affects CSR. For instance, agency theory discussed the ability of outside board directors to monitor managers to ensure that they act in interests of shareholders. In accordance to De Villiers et al. (2011), outside board directors lead to lead to greater exercising and monitoring potentials. Johnson & Greening (1999) discussed that outside board directors are more attuned to long-term horizons and therefore more accepting of short-term losses for the benefit of long-term interests. Inside directors are focused on short-term horizons and therefore less likely to advocate investment in CSR. Resource dependence theory discussed the ability of the board to access critical external resources, which can result in particular CSR performance. In

accordance to De Villiers et al. (2011), outside board directors lead to a greater independence on the external environment because outside directors move in broader networks and have strong stakeholder orientation. Pfeffer & Salancik (1978) discussed that the selection of outside directors on boards can be viewed as a strategy for dealing with the firm's relationship with the external environment since outside directors enhance reputation, credibility and legitimacy. In terms of CSR performance, outside board directors are more likely to be knowledgeable about CSR issues and are better placed to ensure firms pursue positive CSR performance (Kor & Sundaramurthy, 2009).

A number of previous empirical studies found support for the positive relationship between the proportion of outside board directors and CSR (e.g. Chang et al., 2015; De Villiers et al., 2011; Jizi et al., 2014; Jo & Harjoto, 2011; Johnson & Greening, 1999; Kor & Sundaramurthy, 2009; Post et al., 2011; Wang & Coffey, 1992; Web, 2004). For instance, the study of Johnson & Greening (1999) showed a positive relationship between the proportion of outside directors and CSR, suggesting that outsiders have both profit and non-profit goals. Webb (2004) found that boards of socially responsible firms have more outside directors compared to non-social responsible firms. This study thus proposed in agreement to previous studies that it is more likely for Dutch firms with higher proportions of outside board directors to have higher levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 6: firms with high outside board directors undertake more CSR activities.

3.6 WOMEN BOARD DIRECTORS

The last hypothesis is related to women board directors, as Bear et al. (2010), Pfeffer & Salancik (2003), Post et al. (2011), Williams (2003), among others argued that CSR performance vary with the proportion of women directors on boards. In accordance to Pfeffer & Salancik (2003), women directors are able to seek linkages with influential resources and have access to more information and communication channels and legitimacy when compared to male directors. In addition, women directors have diverse careers, are less business-oriented and are more likely to represent special interest groups (Wang & Coffey, 1992). Representation of women board directors have consequences for CSR performance as women think more favorably of ethical matters, and tend to be more sensitive to social performance than men (Kabongo et al., 2013; Wang & Coffey, 1992).

A number of previous empirical studies found support for the positive relationship between women board directors and CSR (e.g. Bear et al., 2010; Boulouta, 2013; Kabongo et al., 2013; Post et al., 2011; Webb, 2004; Williams, 2003). For instance, Kabongo et al. (2013) found corporate philanthropy higher with women on the board and Bear et al. (2010) found number of women on the board has a positive relationship with the KLD strength scores for CSR, which includes corporate philanthropic. This study thus proposed in agreement to previous studies that

it is more likely for Dutch firms with higher proportions of women board directors to have higher levels of CSR activities. Therefore, the following hypothesis is formulated:

Hypothesis 7: firms with high women board directors undertake more CSR activities.

3.7 SUMMARY HYPOTHESES

Table 5 provides a summary of the hypotheses that are discussed in the previous sections.

Table 5: Summary hypotheses

Theory	Determinant	Hypothesis	Expected sign
Stakeholder and Resource Based	Size	H1	Positive
Stakeholder and Resource Based	Financial performance	H2	Positive
Agency	Ownership concentration	H3	Negative
Agency	Managerial ownership	H4	Positive
Agency	Institutional ownership	H5	Negative
Resource dependence and Agency	Outside board directors	H6	Positive
Resource dependence and Agency	Women board directors	H7	Positive

4. RESEARCH DESIGN

This chapter presents the research design to validate the determinants of CSR. The first section starts with an explanation of the methodology. Thereafter, the measurement of dependent and independent variables is explained. In addition, an explanation of the control variables is given. Finally, robustness checks are discussed.

4.1 METHODOLOGY

Academic literature showed that researchers investigated various aspects attached to CSR, including determinants. Most of them used regression analysis (e.g. De Villiers et al., 2012; Marano & Kostova, 2016; Reverte, 2009; Zeng et al., 2012). The objective of regression analysis is to predict a single dependent variable from the knowledge of one or more independent variables. If the problem involves only one independent variable, the technique is called simple regression. If it involves two or more independent variables, the technique is called multiple regression (Hair et al., 2010). This section explains three types of multiple regression, including *probit, logit and ordinary least square (OLS)* followed by the type this study focusing on. The type of multiple regression depends on the distribution of the dependent variables.

In CSR-related studies where the dependent variable is dichotomous, probit or/and logit regression analysis is used (e.g. Artiach et al., 2010; Gamerschlag et al., 2012). *Probit regression* is a regression model that estimates the probability of the dependent variable to be 1, that is, the probability that some event happens (Hair et al., 2010). Artiach et al. (2010) studied the incentives for U.S. firms to invest in sustainability principles and developed a number of hypotheses that relate corporate sustainability performance (CSP) to firm-specific characteristics, including financial performance, leverage, growth opportunities, and size. The researchers tested the hypotheses by estimating the probit model on the sample of leading CSP (assigned 1) and conventional firms (assigned 0). Similarly, Gamerschlag et al. (2012) investigated determinants of CSR disclosures on German firms, including financial performance, industry, relationship with US stakeholders and size. The researchers used probit regression analysis to estimate the probability that the dependent variable will have a value of 1 (that is the firm provides a CSR report) contingent upon the various independent variables.

Logistic regression is a regression model that predict the outcome of a categorical dependent variable. Categorical variable is a variable that has a usually fixed number of possible values or categories (Hair et al., 2010). Roberts (1992) laid focus on determinants that influence U.S. firms' disclosures of CSR activities, including financial performance, industry and systematic risk. He estimated the empirical model using logistic regression. The dependent variable in the model is categorical with the values: 0 (poor corporate social disclosures), 1 (good corporate social disclosures), and 2 (excellent corporate social disclosures). In addition, Zeng et al. (2012)

examined determinants of voluntary disclosure of environmental information on Chinese listed firms, including industry, ownership type, reputation and size. The researchers performed two types of regression analysis to examine the hypotheses of what factors drive the extent of environmental disclosures. First, they performed logistic regression to analyze the decision whether to disclose environmental information. They constructed a categorical variable with two values: 1 (environmental information is disclosed), and 0 (no environmental information is disclosed). Second, for the extend of disclosure, they performed OLS regression.

OLS regression is another type of multiple regression that is performed in research related to determinants of CSR. The assumptions underlying OLS regression are opposed when the dependent variable is dichotomous. Consequently, OLS is applied in studies where the dependent variable is recorded on an interval or ratio scale (e.g. Branco & Rodrigues, 2008; Chiu & Wang, 2014; Marano & Kostova, 2016; Oh et al., 2011; Reverte, 2009). For example, Reverte (2009) performed OLS regression analysis for Spanish firms to analyze the relationship between the CSR scores and determinants, including media exposure, international listing, industry environmental sensitivity, size, ownership concentration, profitability and leverage. In addition, Chiu & Wang (2014) performed OLS regression to analyze the relationship between corporate social disclosure index scores and the influencing factors, including financial performance, size, stakeholder power, strategic posture and visibility. Similarly, Marano & Kostova (2016) in their study used OLS regression to analyze the impact of 6 independent variables on numerical CSR scores.

METHODOLOGY APPLIED IN THIS STUDY

This study, investigating the relationship between CSR and various determinants, constructed the regression model in accordance to the prior work of Zeng et al. (2012). Two types of multiple regression analyses are performed to test the hypotheses. First, logistic regression is performed to examine if characteristics of firms have an influence on whether or not to have a CSR score from the Transparancy Benchmark (TB). The dependent variable is dichotomous, which is equal to 1 for firms with TB scores and 0 for firms without TB scores. Second, OLS regression is performed. Here only those firms that received a TB score are included. OLS regression is appropriate because of the ratio scale of the dependent variable. The empirical study of Zeng et al. (2012) have relied on a similar approach. The researchers performed logistic regression to examine the decision of whether to disclose environmental information and performed OLS regression to examine the factors that drive the extent of environmental disclosures. In this study, the following specification is used:

$$CSRSCORE_it = \beta_0 + \beta_1 SIZE_i t_{-1} + \beta_2 FP_i t_{-1} + \beta_3 OWNCON_i t_{-1} + \beta_4 OWNIDEN_i t_{-1} +$$
$$\beta_5 OUTSIDEBOARD_i t_{-1} + \beta_6 WOMENBOARD_i t_{-1} + \beta_7 AGE_i t_{-1} + \beta_8 LEV_i t_{-1} + \beta_9 RD_i t_{-1} +$$
$$\beta_{10} BOARDSIZE_i t_{-1} + \beta_{11} INDSEN_i t_{-1} + \beta_{12} YEARDUM_i t_{-1} + \varepsilon_i t_{-1}$$

(1)

Where, the subscript $_i$ denotes firm and t denotes year[4]. For logistic regression, the dependent variable *CSRSCORE* is measured as a dichotomous variable which is equal to 1 for firms with TB scores and 0 for firms without TB scores. For OLS regression, the dependent variable CSRSCORE is re-defined in a ratio variable based on the ratio scores from the TB. The independent variable $SIZE_i t_{-1}$ is firm size measured as the natural logarithm of total assets. $FP_i t_{-1}$ is financial performance measured by the accounting-based variable return on assets (ROA) calculated as ratio of net income to total assets, and market-based variable total shareholder return (TSR) calculated as percentage of share price appreciation and dividends. $OWNCON_i t_{-1}$ is ownership concentration measured as the percentage of equity ownership by the largest shareholder, and $OWNIDEN_i t_{-1}$ is ownership identity measured as the percentage of institutional ownership and managerial ownership in total ownership. The variable $OUTSIDEBOARD_i t_{-1}$ is outside board directors measured as the percentage of outside directors in the total number of board members, and $WOMENBOARD_i t_{-1}$ is women board directors measured as the percentage of women board directors in the total number of board directors. The control variables include $AGE_i t_{-1}$ is firm age measured as years of incorporation, $LEV_i t_{-1}$ is leverage measured as ratio of total debt to total assets, $RD_i t_{-1}$ is research and development (R&D) measured as ratio of total R&D expenditure to total assets, $BOARDSIZE_i t_{-1}$ measured as the total number of board members, $INDSEN_i t_{-1}$ is industry sensitivity measured as a dichotomous variable where 1 denotes sensitive industry and 0 not sensitive, and YEARDUM$_i t_{-1}$ is a dummy variable controlling for year-effects.

4.2 MEASUREMENT OF CORPORATE SOCIAL RESPONSIBILITY

From the perspective of measuring the relationship between CSR and various determinants, unquestionably CSR is the dependent variable in this study. Measurement of CSR is varied, reflecting the diverse and complex nature of CSR itself. In fact, Peloza (2009) reviewed 128 articles exploring the CSR - CFP relationship and found 39 unique measures of CSR used. Following the study of Peloza (2009), among others (e.g. Orlitzky & Benjamin, 2001; Turker, 2009B), CSR can be measured in three broad ways. This section laid focus on these three ways followed by the method this study is focusing on.

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[4] In constructing the model, a time lag between CSR score and determinants is implemented because CSR score of year t is related to last year (t-1) firms' CSR disclosures. In the empirical tests, period t represents year 2015, 2012 and 2010 and t-1 represents year 2014, 2011 and 2009. To control for reverse-causality, this study tests if the effect hold without the lagged variables. This is in line with the study of Marano & Kostova (2015).

The first way is the expert evaluation of firm policies into a reputation index (Orlitzky & Benjamin, 2001; Peloza, 2009). Various independent agencies rate firms on one or more dimensions of CSR performance and allow them a score. For example, the Morgan Stanley Capital International (MSCI), formerly Kinder, Lydenberg and Domini (KLD) database is used by several researchers (e.g. De Villiers et al., 2011; Dhaliwal et al., 2011; Goss & Roberts, 2011; Hull & Rothenberg, 2008; Jo & Na, 2012; Marano & Kostova, 2015; Padgett & Galan, 2010; Waddock & Graves, 1997). MSCI evaluates CSR performance of firms by criticizing firms on thirteen dimensions of CSR, using surveys, financial statement information, reports from mainstream media, government documents and peer-reviewed legal journals (Goss & Roberts, 2011). The dimensions register strengths (activities that create positive externalities) and concerns (activities that create negative externalities) (Goss & Roberts, 2011; Marano & Kostova, 2016). Waddock & Graves (1997) in their study obtained data from MSCI database and constructed a CSR index of each strength and concern category. Marano & Kostova (2015) followed the convention established by Waddock & Graves (1997) and measured CSR practices as a summative index of MSCI strengths and concerns categories. Similarly, Goss & Roberts (2011) measured CSR as the total of MSCI strengths mines concerns.

The Fortune Index is another example of expert evaluation (Peloza, 2009). For instance, McGuire et al. (1988) used the reputational index scores obtained from Fortune Magazine annual survey. The survey covers firms in 20-25 industries and is performed by outside directors, corporate analysts and over 8000 executives, rating the ten largest firms in their industry. Ratings are based on long term investment value, financial soundness, quality of management, quality of product and services, among others (McGuire et al., 1988). Other researchers used the Dow Jones Sustainability Index (DJSI) World (e.g. Artiach et al., 2010; Chih et al., 2010). The DJSI World consist of the top 10% of firms in the Dow Jones Global Indexes in terms of their sustainability practices. Firms represented in the index have their sustainability performance assessed through a weighting system based on economic (risk and crisis management, code of conduct, compliance, corruption, bribery and corporate governance), environmental (environmental performance and reporting) and social metrics (human capital development, talent attraction and retention, labor practice indicators, corporate citizenship and social reporting), as well as industry-specific criteria (Chih et al., 2010).

According to Cochran & Wood (1984), reputation indices are advantageous because the measurement 'tends to be internally consistent because one evaluator is applying the same criteria to each firm' (p. 43). In addition, reputation indices summarize the perception of CSR of various firms and are based upon the current social standards (Cochran & Wood, 1984). The method, however, has disadvantages as well. According to Cochran & Wood (1984), the scores awarded are subjective and therefore may vary from one evaluator to another, leading to

unreliability. McGuire et al. (1988) discussed that the measurement highly depends on the skills and qualifications of the evaluators. In addition, reputation indices are often formed over small sample size and thus difficult to compare (Cochran & Wood, 1984).

As a second way, researchers assessed CSR from specific actions such as pollution control and corporate philanthropy (Peloza, 2009). The Council on Economic Priorities (CEP) is an example of a single-issue indicator and is used by several researchers (e.g. Gelb & Strawser, 2001; Griffin & Mahon, 1997). CEP evaluates firms on concrete observable CSR activities, such as investment in South Africa, involvement in community projects, pollution control performance and philanthropic activities (Turker, 2009). For example, Gelb & Strawser (2001) in their study measured CSR as the total of the scores assigned by the CEP in each of the following areas: (1) firm policies regarding the advancement of women and minorities in the workplace, (2) philanthropic activities, and (3) involvement in community projects. Griffin & Mahon (1997) asserted that the treatment of toxic wastes by firms can be used as a measure for CSR. They measured CSR as the total score assigned by the CEP in the change in waste production. According to McGuire et al. (1988), the single-issue measurement of CSR is advantageous because scores are derived from the real actions of firms. However, the measurement has limited ability to delineate the entire concept of CSR as it is unidimensional. In addition, Turker (2009B) argued that the measurement is formed over small sample size because evaluations are only reported for firms in a limited number of countries.

The third way to measure CSR is with content analysis. Various researchers measured CSR by analyzing sources of content against particular CSR themes in order to draw inferences about underlying CSR performance (e.g. Branco & Rodrigues, 2008; Chiu & Wang, 2014; Holder-Webb et al., 2009). Multiple sources of content can be used as unit of analysis, including annual reports, websites, CSR reports, governance documents and press releases, among others (Holder- Webb et al., 2009). According to Branco & Rodrigues (2008), detecting the presence of information is the simplest form of content analysis. This simple form of content analysis measures quantitative items, such as number of pages, sentences and words that quantify the level of disclosures (Branco & Rodrigues, 2008). For instance, Punte (2009) measured CSR based on content analysis by calculating the total number of keywords found in the annual reports. However, in accordance to Branco & Rodrigues (2008), counting keywords is limited since it does not allow the measurement of the extent and quality of information. Holder-Webb et al. (2009) discussed that measuring the extent of disclosures indicate the importance of information to the firm. In order to measure the extent of CSR disclosures, Holder-Webb et al. (2009) identified the CSR issues first and then analyzed the extent of disclosure of each issue using a scoring methodology. The researchers determined how intensively the information covered an issue, using a 7-point Likert scale (ranging from 0 if no mention of issue, to 6 if document completely dedicated to discussion of

issue). This coding scheme included both coding for existence and the extent of information (Holder-Webb et al., 2009).

According to Cochran & Wood (1984), content analysis is advantageous in that once the issues to measure are chosen (subjective procedure), the process is reasonably objective. In addition, large sample sizes are possible because content analysis is relative ease in a systematic fashion (Cochran & Wood, 1984). As with all methods, content analysis has also drawbacks. Cochran & Wood (1984) argued that the choice of issues to measure is subjective and affect what the content of information is. According to McGuire et al. (1988), the reliability of the content is questionable as information given can be different from actual firm actions. Cochran & Wood (1984) asserted that 'at best, one certainly could postulate that firms that are ware of these issues are those that will discuss them as well as act on them' (p. 44).

MEASEREMENT OF CSR APPLIED IN THIS STUDY

This study is focusing on the expert evaluation as measurement of CSR using independent scores provided by the Ministry of Economic Affairs and referred to as Transparency Benchmark (TB) (TB, 2015A). The TB is an annual research on the content and quality of publicly available reports regarding CSR of Dutch firms. The Ministry provides scores in a TB ladder and the firm with the highest score on the TB ladder is awarded the Crystal prize. The Crystal is the price for the firm that was most distinctive in its CSR reporting. Since 2004, the TB is conducted by and under the responsibility of the Ministry. The goal of the Ministry is, based on the TB, to motivate firms to be transparent about their policy and results in the area of CSR, which accordingly facilitates stakeholder dialogue, increase the focus on CSR policies and ultimately improve firm performance in this area (TB, 2015A). The Ministry determines the approach, criteria and other aspects of the benchmark and is supported by an independent Panel of experts. The execution is outsourced to EY (former Ernst & Young) (TB, 2015B).

The assessment process is as follows. Firms included in the TB are ask to fill in an online self-assessment. Based on the questionnaire (50 questions) within the self-assessment, participating firms are able to assess themselves on their CSR performance. The self-assessment will, after a check of the executor, be used to determine the TB score. In case firms decide not to fill in the self-assessment, the information is assessed by the executor of the TB. The assessment criteria are divided into two categories: content related (100 points) and quality related (100 points). The content category consists of three groups, including structure and business model, policies and results and management approach. The quality category consists of five groups, including relevance, clarity, reliability, responsiveness and coherence. For each group, certain

criteria are set on which the report can score points (starting from 0)[5]. Firms can comment on scores after the TB scores have been set. The Ministry is supported by the independent Panel of experts when processing the comments. The quality of the twenty highest scoring reports is then further evaluated by the independent Panel of experts who can make adjustments to the scores. Afterwards, the three highest reports are submitted to the jury which selects the Crystal winner. Thus, the final score of a firm is the result of the firm's self-assessment, the executor's analysis of the questionnaire completed by the firm, the assessment of the top 20 performed by the Panel of experts, the choice of the Crystal winner proposed by the jury and the official adoption of the final scores by the Ministry[6] (TB, 2015B).

TB scores are published since 2004. The intention of the Ministry is to identify trends regarding CSR by comparing TB scores between years as well as between firms (TB, 2015A). However, the Ministry changed the assessment criteria over the years and therefore scores cannot be easily linked to all previous years. For instance, it revised the assessment criteria in 2007 in order to be more in line with social standards of the Global Reporting Initiative (GRI)[7]. In 2010, a larger revision of the assessment criteria was introduced as the Ministry sought further connections with the GRI standards and standards covered in ISO 26000[8]. In the years after 2010, the criteria have not really changed. Therefore, this study laid focus on scores from 2010 to 2015. In Appendix B, the TB scores from 2010 to 2015 are presented. When analyzing the scores, this study discovers that scores do not show significant differences between each year. Therefore, the focus is laid on TB scores from the years 2015, 2012 and 2010. This study applies the TB scores in two ways. First, it constructs a dichotomous variable – CSRSCORE, which is equal to 1 for firms with TB scores and 0 for firms without TB score. A firm can have no score if: (1) the report was not publicly available for free, (2) the report was not published in a timely manner, and (3) the organization is a subsidiary but did not refer to a report from the parent group (TB, 2015A). Thereafter, this study restricts the attention to firms with TB scores (CSRSCORE= 1). The variable CSRSCORE is re-defined and each of the covered firms is assigned a numerical score from the TB ranging from 5 – 199. Hereafter the TB score is referred to as CSR score.

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[5] For more information on the content and quality criteria, please refer to: https://www.transparantiebenchmark.nl/sites/transparantiebenchmark.nl/files/afbeeldingen/criteriatbeng.pdf

[6] For more information on the assessment process, please refer to: https://www.transparantiebenchmark.nl/en/about-transparantiebenchmark/assessment-process

[7] GRI is an international independent organization that helps firms understand and communicate the impact of business on sustainability issues. GRI provide standards on sustainability reporting and disclosures (GRI, 2015). For more information please refer to: https://www.globalreporting.org/information/about-gri/Pages/default.aspx

[8] ISO 26000 provides guidance on how businesses can operate in a socially responsible way. For more information please refer to: http://www.iso.org/iso/home/standards/iso26000.htm

The study of Derksen (2013) relied also on the TB scores as a measurement for CSR. However, he focused on the quality scores and ignored the content scores. In addition, Reverte (2009) relied on a similar measurement approach but for Spanish firms. He measured CSR based on scores obtained from the Observatory on Corporate Social Responsibility (OCSR)[9], which is comparable to the TB in that the OCSR provides yearly scores based on CSR reporting of Spanish firms. The TB is also comparable with other reputation indices and databases such as the DJSI World and MSCI database because they all provide benchmarks for sustainability. In addition, they all use a variety of comparable sources to capture information about firms, like annual data sources, annual questionnaires, external data sources, external surveys and ratings. However, unlike the TB which analyses the content and quality of *CSR reporting*, the DJSI World and MSCI database are based on an analysis of *CSR performance*. The TB does not analysis the actual CSR performance but analysis the content and quality of CSR reporting thereby giving an indication of the CSR importance and performance form the reporting firm. Another difference between the TB and other reputation indices and databases such as MSCI database is that the TB sums up all points related to content and quality criteria, while MSCI database subtracts concerns from strengths. The assessment of the TB ranges from 0 (no description) to 2 (clear description is given), while the assessment of the MSCI database ranges from -2 (major concern) to 2 (major strength).

4.3 MEASUREMENT OF INDEPENDENT VARIABLES

In this study of analyzing the relationship between CSR and various determinants, variables reflecting determinants are the independent variables. This study examines six independent variables which include *size, financial performance, ownership concentration, ownership identity, outside board directors, women board directors* viz. SIZE, FP, OWNCON, OWNIDEN, OUTSIDEBOARD, and WOMENBOARD respectively. A summary of variable definitions is provided in Appendix A.

More specifically, *size* is measured as the book value of total assets, consistent with previous studies (e.g. Brammer & Millington, 2006; Dam & Scholtens, 2013; Marano & Kostova, 2015; Oh et al., 2011; Padgett & Galan, 2010; Punte, 2009). The values for total assets (retrieved from balance sheet) are extracted from the database ORBIS. Following previous studies (e.g. Marano & Kostova, 2015), a natural logarithmic transformation is conducted before using it in the regression analysis because the measure is highly skewed. *Financial performance* is measured

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[9] 'OCSR is an association integrated by fourteen Spanish organizations. The OCSR issues each year a report on CSR disclosures by Spanish listed firms included in the IBEX35 index, which comprises the largest 35 firms in terms of market capitalization. Each of the firms is assigned a score based on the adherence of their CSR disclosures to the specific rules and recommendations' (Reverte, 2009, p. 357).

with accounting-based[10] variable return on assets (ROA), consistent with previous studies (e.g. Barnett & Salomon, 2012; Branco & Rodrigues, 2008; Chiu & Wang, 2014; Chang et al., 2015; Marano & Kostova, 2015; Makni et al., 2008; Oh et al., 2011; Punte, 2009; Reverte, 2009). ROA is calculated by the ratio net income to total assets. Net income is defined as earnings after interests, taxes, depreciation and amortization (Barnett & Salomon, 2012). The values for net income (retrieved from profit and loss account as P/L after tax) and total assets (retrieved from balance sheet) are extracted from the database ORBIS. In addition to accounting-based measure ROA, this study also used a market-based measure of financial performance called total shareholder return (TSR). TSR is calculated as: (ending share price – beginning share price + dividends) / beginning share price and measures how the market evaluates the overall performance of firms. The values for TSR are extracted from ORBIS database under the classification annual stock data.

Ownership concentration is calculated as the percentage of equity ownership by the largest shareholder. The selection is consistent with previous studies of Boerkamp (2016), Brammer & Pavelin (2006), Brammer & Millington (2005), Gamerschlag et al. (2011), and Li & Zhang (2010). This study imposed a minimum shareholding of 5% because in accordance to in Degryse & De Jong (2006, p. 136), 'Dutch disclosure legislation does not require stakes below 5% to be publicly announced'. Ownership concentration values below 5 percent are not valuable and therefore shareholdings below 5 percent are measured as no concentration of ownership. *Ownership identity* is measured as follows: institutional ownership is calculated as the percentage of shares owned by banks, financial firms, insurance firms and mutual & pension funds in the total ownership. Managerial ownership is calculated as the percentage of shares owned by employees, managers and directors in total ownership. The measurement is consistent with previous studies (e.g. Boerkamp, 2016; Barnea & Rubin, 2010; Dam & Scholtens, 2012; Oh et al., 2011; Li & Zhang, 2010; Punte, 2009). Data on ownership is extracted from annual reports and ORBIS database under the classification ownership data.

Outside board directors is assessed as the percentage of outside board directors (members of the supervisory board) in the total number of board members (supervisory board and executive board). According to Degryse & De Jong (2006, p. 131), 'the boards of Dutch firms are two-tier boards, i.e. a managerial (*Raad van Bestuur*) and a supervisory (*Raad van Commissarissen*) board'. The Dutch government states that the supervisory board members are independent from the management and serve the interests of all stakeholders, implying that 'the monitoring role of the

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[10] Measures of financial performance are extracted from accounting-based and market-based data. McWilliams et al. (2006) criticized the use of market-based measures in relation to CSR, as market-measures only relates to financial stakeholders whereas non-financial stakeholders are also affected by CSR. In line with this, McGuire et al. (1998) and Orlitzky et al. (2003) in their studies showed that CSR is more strongly correlated with accounting based measures than market base measures.

supervisory board does not necessarily benefit the shareholder's interests' (Degryse & De Jong, 2006, p. 131). *Women board directors* is calculated as the percentage of women board directors in the total number of board members (supervisory board and executive board). This is in line with previous studies of Bear et al. (2010), Boulouta (2013), Williams (2003), and Webb (2004). The values for the proportions outside and women board directors are extracted from annual reports and the ORBIS database under the classification current directors/managers/contacts.

4.4 CONTROL VARIABLES

Many other factors may influence CSR performance as well. As a result, this study includes five control variables for *firm age, leverage, R&D intensity, board size, industry sensitivity, and year-effects* viz. AGE, LEV, RD, BOARDSIZE, INDSEN and YEARDUM respectively. A summary of variable definitions is provided in Appendix A.

More specifically, this study controlled for *firm age.* Firm age may impact CSR, as mature firms are more stable with more predictable performance and cash flows (Withisuphakorn & Jiraporn, 2016). Younger firms by contrast have more unpredictable cash flows, more growth and have less cash left over to invest in CSR activities (Withisuphakorn & Jiraporn, 2016). To control for the possibility that mature firms may be more inclined to CSR, firm age is measured as the number of years since incorporation. This is consistent with previous studies (e.g. Withisuphakorn & Jiraporn, 2016; Zeng et al., 2012). Data is extracted from the ORBIS database under the classification legal and account information. In addition, this study controlled for *leverage*, as according to Branco & Rodrigues (2008, p. 690): 'the power of creditors depends on the degree to which the firm relies on debt financing'. Consequently, the degree to which firms relies on debt financing influence the degree to which firms are expected to respond to creditor expectations concerning CSR performance (Roberts, 1992). To account for this, leverage is operationalized as the ratio total debt to total assets, consistent with previous studies (e.g. Branco & Rodrigues, 2008; Jo & Na, 2012; Makni et al., 2008; Marano & Kostova, 2015). Data is extracted from ORBIS database under the classification global standard format.

Research & Development (R&D) intensity is also controlled for, as McWilliams & Siegel (2000) and Padgett & Galan (2010) argued that R&D is a form of investment in capital that results in knowledge enhancement, which leads to product and process innovation and eventually to CSR related activities. R&D is operationalized by dividing total expenditure on R&D by total assets, consistent with previous studies (e.g. Hull & Rothenberg, 2008; Padgett & Galan, 2010). Data is retrieved from ORBIS database under the classification global standard format. This study also controlled for *board size*, which may impact CSR performance, as large boards can include more prestigious directors who possess better expertise to manage CSR (De Villiers et al., 2011; Jizi et al., 2014). Board size is operationalized as the number of total board members (supervisory and

executive board members), consistent with previous studies De Villiers et al. (2011). Data is extracted from the ORBIS database under the classification current directors/managers/contacts.

Finally, this study controlled for *industry effects* as McWilliams & Siegel (2000) stated that industry is of key influence on CSR performance. According to Reverte (2009), type of industry may impact CSR as more sensitive industries have more risk of being criticized in CSR matters. Industry types are determined by Standard Industrial Classification (SIC) codes. SIC codes are numerical codes assigned by the U.S. to identity the firm's primary line of business (SIC-code, 2016). The SIC system arrays the economy into 11 divisions, that are divided into 83 2-digit major industry groups, further divided into 416 3-digit industry groups, and finally subdivided into 1,005 4-digit industries[11]. This study classified firms based on 2-digit SIC codes, which are extracted from the ORBIS database under the classification industry and overview. Thereafter, six industry sectors based on 2 digit SIC codes are defined: *(1) mining & construction, (2) manufacturing, (3) transportation & public utilities, (4) wholesale trade & retail trade, (5) finance, insurance & real estate and (6) services.* Following the study of Reverte (2009), industry sectors are measured as a 1/0 variable in accordance to their sensitivity, where 1 if the firm is from a more sensitive industry (industry sector 1, 2 and 3), and zero if not (industry sector 4, 5 and 6). Finally, this study controlled for the *year effects* and included two dummy variables to control for the years 2015, 2012, and 2010.

4.5 ROBUSTNESS TESTING

To ascertain the precision of the results of the main analysis, this study conducts several robustness tests. As a first test of robustness, additional logistic regression analysis is performed. The numerical dependent variable (CSRSCORE) is re-defined in a dichotomous variable, which is equal to 1 when the CSR score is above the median value (indicating high CSR performance) and 0 otherwise (indicating low CSR performance). This is consistent with the study of Artiach et al. (2010). As a second test of robustness, an additional OLS regression analysis is performed for each year of observation separately. This is to ensure that the results are not influenced by a strong relationship between variables for a particular year. As a final test of robustness, the independent variables are re-placed and additional OLS regression analysis is performed. The reason for using multiple variables to measure the same construct is to validate the findings.

More specifically, the independent variable SIZE is re-defined because researchers such as Branco & Rodrigues (2008), Chang et al. (2015), Chiu & Wang, (2015), Marano & Kostova (2015) and Zeng et al. (2012) employed book value of total sales as a measure of firm size. This study applies total sales (TS) as a test for robustness and performed additional OLS regression

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[11] For more information please refer to: https://www.osha.gov/pls/imis/sic_manual.html

analysis. As with total assets, a natural logarithmic transformation is conducted. The values for total sales (retrieved from profit and loss account) are extracted from the database ORBIS. Next, this study re-defines the independent variable FP because researchers such as Artiach et al. (2010), Li & Zhang (2010), Mahoney & Roberts (2007), Makni et al. (2008) and Waddock & Graves (1997) employed return on equity (ROE) as a measure of financial performance. Thus, this study re-defines FP as ROE measured as the ratio net income to shareholder's equity. The values for net income (retrieved from profit and loss account as P/L after tax) and shareholder's equity (retrieved from balance sheet) are extracted from the database ORBIS.

Another robustness test is employed on the variable FP measured as the ratio EBIT/total assets (ROA_EBIT) because researchers such as Artiach et al. (2010) and Goss & Roberts (2011) argued that investment in CSR activities depend on the availability of excess funds. The EBIT/total asset ratio ignores tax and interest expenses thereby focusing only on the firm's ability to generate earnings from operations (Goss & Roberts, 2011). The values for EBIT (retrieved from profit and loss account as operating P/L) and total assets (retrieved from balance sheet) are extracted from the database ORBIS. In addition, this study re-defines the variable OWNCON_PER and includes the average percentage of the four largest shareholders as a test of robustness (OWNCON_AV). The average percentages are extracted from the database ORBIS under the classification size and group information. Finally, the variable WOMENBOARD is replaced by WOMENBOARD_EX, utilizing the number of women executive board directors in total executive board directors. The values are extracted from ORBIS database under the classification directors/managers/contacts.

5. SAMPLE AND DATA

This chapter first presents a description of the sample incorporated in this study. Thereafter, the data sources are discussed.

5.1 SAMPLE

NYSE Euronext is the largest stock exchange in the world with a range of financial products and services. NYSE Euronext consists of six separate stock exchanges in five countries, including Euronext Amsterdam (Euronext, 2016). This study is focusing on Dutch firms listed on Euronext Amsterdam. Euronext Amsterdam is the stock exchange in the Netherlands. According to its website[12], there are 109 listed firms (Dec, 2015) on Euronext Amsterdam. In order to gather financial and non-financial information, annual reports must be publicly available. Also, firms must be included in the ORBIS database. After exclusion of firms with insufficient data a sample of 102 firms remains. The sample is presented in Appendix C. Since this study considers 3 reporting years, the total firm-year observations are 306. Table 6 shows the sample among industrial sectors. It can be seen that the total firm-year observations are 306, whereof 132 observations are in sensitive industries and 174 in less sensitive industries. In addition, the total number of observations with CSR score is 181, whereof 100 observations are in sensitive industries and 81 in less sensitive industries.

Table 6: Sample among industrial sectors

INDUSTRY	SIC-code	NUMBER OF OBSERVATIONS		TOTAL
		CSR score - NO	CSR score - YES	
Sensitive industries				
Mining & Construction	10-19	2	13	15
Manufacturing	20-39	23	73	96
Transportation & Public Utilities	40-49	7	14	21
Total observations in sensitive industries		32	100	132
Less sensitive industries				
Wholesale trade & Retail trade	50-59	6	12	18
Finance, Insurance & Real Estate	60-67	54	45	99
Services	70-89	33	24	57
Total observation in less sensitive industries		93	81	174
Total firms in sample		**125**	**181**	**306**

Notes. The industries are composed based on 2-digit SIC codes.

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[12] For more information please refer to: https://www.euronext.com/en/trading-products

5.2 DATA SOURCE

This study obtains the required financial and non-financial data from the TB database, ORBIS database and annual reports. This study identifies the level of CSR activities using data from the TB database published by the Ministry. The TB database is publicly available and provides information on published scores (including scores archive), criteria, participation and trends. The financial and non-financial data for the explanatory variables is obtained from ORBIS database. ORBIS database is published by Bureau van Dijk (BvD) and contains information on over 200 million private and listed firms worldwide (BvD, 2016). This database is available to students of the University of Twente. The values for dividends per share and R&D are often not available on ORBIS database. Missing values are then searched in the data from the downloaded annual reports. In order to test the reliability of ORBIS database, values that are extracted from ORBIS database are cross-checked randomly with data from annual reports.

6. RESULTS

This chapter presents the results of regression analyses. First, the descriptive statistics of the variables included in this study are presented. In addition, the correlation coefficients between the variables are examined. Furthermore, results of regression analyses are provided. Finally, interaction effects are discussed.

6.1 DESCRIPTIVE STATISTICS

Table 7 displays the descriptive statistics among the variables included in this study. *Panel A* presents the descriptive data on 181 firms with CSR score (hereafter called CSR firm) and *Panel B* presents data on 125 firms without CSR score (hereafter called non-CSR firm). The independent variable RD, which contains the ratio total RD expenses to total assets, comprises 74 observations in *Panel A* and 24 in *Panel B*. The amount of observations is limited because only a fraction of the firms published the R&D expenditures. For the dependent variable CSRSCORE in *Panel A*, it can be seen high variations in CSR scores among the sample firms, as the variable is ranging between 5 and 199. The standard deviation (SD) is 56.97, which suggests high variations. The variable CSRSCORE shows a skewness to the left as the mean (104.37) is lower than the median (111.00). In this case, the median is a better predictor of centrality because the median is less sensitive to outliers. The high variations might cause extreme impacts on the regression results and therefore a natural logarithmic transformation is conducted before using the variable CSRSCORE in regression analysis.

For independent variables in *Panel A*, TA is total assets and TS is total sales in millions of US dollars. On average, Dutch firms have 48.56 million dollars of assets and 14.22 million dollars of sales, which is consistent with previous studies conducted on Dutch firms. For instance, Derksen (2013) reported a mean value of 34.14 million dollars for TA and Punte (2009) reported a mean value of 10.88 million euros for TS. The median values of TA and TS are 3.23 and 2.45 million dollars respectively, which are definitely lower than the mean values. This indicates that the data of the variables TA and TS is skewed to the right. The SD of TA is 159.44 and the range is between .06 and 1,095 and the SD of TS is 51.82, ranging between .02 and 470.17. Given that the variables TA and TS show high variations, a natural logarithmic transformation is conducted before using the variables in regression analysis. Analyzing the descriptive statistics of financial performance of Dutch firms, ROA has mean, median and SD values of .03, .03 and .08 respectively. The values for mean and median are similar, meaning that the variable is not skewed. This is consistent with the study of Punte (2009) on Dutch firms, who reported mean, median and SD values of .04, .04 and .08 respectively. In addition, values of ROA are in line with studies of Makni et al. (2009) on Canadian firms, De Villiers et al. (2009) on U.S. firms, Reverte (2009) on Spanish firms and Oh et al. (2010) on Korean firms. This may indicate that financial performance measured

by ROA of Dutch firms is not very different compared to financial performance of firms in other countries. With regard to other measures of financial performance, ROA_EBIT has a mean and median value of .04, which also indicates that the variable is not skewed. The SD is .08 and the range is between -.25 and .33. The mean and median of ROE are .06 and .08 respectively and the SD is .17, ranging between -.62 and .57. This is in line with previous studies on Dutch firms. For instance, Boerkamp (2016) reported for ROE mean, median and SD values of .05, .07 and .18 respectively.

Table 7: Descriptive statistics of all variables

Variables	N	Mean	Median	Standard Deviation	Minimum	Maximum
Panel A: CSRSCORE (YES)						
CSRSCORE	181	104.37	111.00	56.97	5.00	199.00
TA	181	48.56	3.23	159.44	.06	1,095.52
TS	181	14.22	2.45	51.82	.02	470.171
ROA	181	.03	.03	.08	-.35	.42
ROA_EBIT	181	.04	.04	.08	-.25	.33
ROE	177	.06	.08	.17	-.62	.57
TSR	162	.03	.01	.35	-.86	.94
LEV	179	.61	.58	.18	.08	.97
RD	74	.03	.01	.05	.00	.41
AGE	180	63.37	43.00	56.36	1.00	277.00
INDSEN	181	.55	1.00	.50	.00	1.00
OWNCON_PER	170	.20	.14	.18	.00	.81
OWNCON_AV	171	.11	.09	.08	.00	.47
MANOWN	145	.06	.00	.11	.00	.52
INSTOWN	165	.35	.34	.17	.00	.85
OUTSIDEBOARD	174	.65	.64	.10	.40	.91
WOMENBOARD	174	.13	.14	.11	.00	.43
WOMENBOARD_EX	174	.05	.00	.12	.00	.50
BOARDSIZE	175	9.12	9.00	3.02	2.00	18.00
Panel B: CSRSCORE (NO)						
CSRSCORE	125	x	x	x	x	x
TA	93	8.06	.18	25.97	.01	127.70
TS	82	3.97	.14	15.26	.01	94.44
ROA	98	-.05	.01	.21	-.96	.18
ROA_EBIT	97	-.05	.02	.21	-.96	.24
ROE	84	.00	.05	.19	-.80	.35
TSR	79	-.03	.01	.38	-.83	.92
LEV	94	.54	.53	.23	.09	.98
RD	24	.11	.00	.20	.00	.69
AGE	123	28.48	13.00	36.36	1.00	166.00
INDSEN	125	.26	.00	.44	.00	1.00
OWNCON_PER	86	.39	.32	.26	.00	.95
OWNCON_AV	70	.17	.16	.10	.00	.46
MANOWN	70	.10	.00	.16	.00	.52
INSTOWN	61	.19	.15	.17	.00	.91
OUTSIDEBOARD	70	.62	.60	.13	.00	.89
WOMENBOARD	70	.06	.00	.09	.00	.33
WOMENBOARD_EX	69	.02	.00	.08	.00	.33
BOARDSIZE	69	6.35	6.00	2.53	2.00	12.00

Panel C: difference in mean values between panel A and panel B
t-test

	Mean differences	*t*-statistic	
TA	40.51	3.333	***
TS	10.24	2.436	**
ROA	.08	3.708	***
ROA_EBIT	.09	3.919	***
ROE	.06	2.689	***
TSR	.06	1.231	
LEV	.08	2.873	***
RD	-.08	-2.034	*
AGE	34.89	6.547	***
INDSEN	.05	5.497	***
OWNCON_PER	-.19	-6.095	***
OWNCON_AV	-.06	-5.082	***
MANOWN	-.04	-1.694	*
INSTOWN	.16	6.131	***
OUTSIDEBOARD	.03	2.043	**
WOMENBOARD	.07	5.400	***
WOMENBOARD_EX	.03	2.395	**
BOARDSIZE	2.77	6.756	***

Notes. Variable definitions are described in Appendix A. TA and TS x 1.000.000. Equal variance assumption has been checked for using levene's test. *** $\rho < 0.01$, two-tailed. ** $\rho < 0.05$, two-tailed. * $\rho < 0.10$, two-tailed test.

On average, Dutch firms have .61 US dollars of debt per unit of assets. The median value is .58, suggesting a low skewness. The SD is .18 and the range is between .08 and .97. This high level of leverage is also found in previous studies on Dutch firms. For instance, Boerkamp (2016) reported mean, median and SD values of .50, .48 and .21 respectively. In addition, Punte (2009) reported mean, median and SD values of .61, .58 and .19 respectively. This study finds that the mean value of leverage of Dutch firms is high compared to firms in the U.S., as De Villiers et al. (2009) and Artiach et al. (2010) in their studies presented mean values of .22 and .21 respectively. Also, Dutch firms seem to have high leverage compared to U.K. firms, as Brammer & Pavelin (2006) reported a mean value of .22. Leverage is high compared to firms in U.S. and U.K. because in accordance to Degryse & De Jong (2006, p. 126), 'Dutch firms operate in an environment where corporate governance mechanisms are weak, relative to those in the Anglo-Saxon systems'. According to their argumentation, Dutch firms are characterized by close bank-firm ties and debt financing is the second (after internal financing) most important source of finance (Degryse & De Jong, 2006). When looking at the variable AGE, Dutch firms are on average 63.37 years incorporated. The median is 43.00 and the SD lies by 56.36, showing high variations. As with other variables holding high variations, a natural logarithmic transformation is conducted before using it in the regression analysis.

Analyzing the descriptive statistics of the variable OWNCON_PER, results indicate that on average the largest shareholder owns 20 percent of total shares outstanding. Results are in line with the argumentation of Kabir et al. (1997), who argued that ownership structure in the

Netherlands is characterized by concentrated ownership. The median of OWNCON_PER is .14, suggesting that the variable is somewhat skewed to the right. The SD is .17 and the range is between .00 and .81. The lowest value is .00 because this study argues that ownership concentration values are only valuable with shareholdings over 5 percent. Therefore, firms with shareholdings below 5 percent were listed .00. The high values for OWNCON_PER correspond with previous studies on Dutch firms. For instance, Boerkamp (2016) reported mean, median and SD values of .23, .18 and .25 respectively. In addition, Degryse & De Jong (2016) reported mean, median and SD values of .25, .18 and .18 respectively. When looking at the variable MANOWN, managerial owners hold on average 6 percent of the total shares outstanding. Results are in line with the argumentation of Degryse & De Jong (2006), who argued that share ownership by insiders is relatively small in Dutch firms. The median and SD values of MANOWN are .00 and .11 respectively, suggesting that the variable is somewhat skewed to the right. The minimum percentage of managerial shareholdings is 0 and the maximum percentage 52. This is in line with previous studies conducted on Dutch firms. For instance, Punte (2009) reported mean, median and SD values of .02, .00 and .06. He reported a minimum percentage of 0 and a maximum percentage of 43.

On average, institutions hold 35 percent of the total shares outstanding. The median is .34, suggesting that the variable is not skewed. Results are in line with the argumentation of Aguilera & Jackson (2003), who argued that institutions are prevalent shareholders in the Netherlands. The SD of INSTOWN is .17 and the range is between .00 and .85. The values for INSTOWN are in line with previous studies conducted on Dutch firms. For instance, Punte (2009) reported mean, median and SD values of .30, .28 and .22 for institutional ownership. This study finds that institutional ownership in Dutch firms is low compared to firms in U.S. For instance, Bartkus et al. (2002) reported that institutions hold on average 57 percent of shares in U.S. firms. When looking at the variable BOARDSIZE, Dutch firms have on average 9 directors on boards. The mean and median are similar, suggesting that the variable is not skewed. The SD is 3.02 and the range is between 2.00 and 18.00. As with other variables showing high variations, a natural logarithmic transformation is conducted before using the variable in regression analysis. The variable OUTSIDEBOARD has mean, median and SD values of .65, .64 and .10 respectively. This implies that on average the supervisory board hold 65 percent of the total board directors and outnumbers the management board. Findings correspond with previous studies conducted on Dutch firms (e.g. Degryse & De Jong, 2006). When looking at the variable WOMENBOARD, on average 13 percent of total board directors are women board directors. Results indicate that on average the majority of board members is men. The median is .14, suggesting no skewness. The SD is .11, ranging between .00 and .43.

The independent variables of CSR firms and non-CSR firms are statistically compared by tests for differences in mean values with results presented in *Panel C* of Table 7. The *T*-test indicates that CSR firms have statistically significant higher mean values for TA, TS, ROA, ROA_EBIT, ROE, LEV and AGE, suggesting that CSR firms are larger, more profitable, more leveraged and older compared to non-CSR firms. Also, the mean value for industry sensitivity is statistically significant higher for CSR firms than for non-CSR firms. In addition, CSR-firms have statistically significant higher mean values for INSTOWN, WOMENBOARD, OUTSIDEBOARD and BOARDSIZE compared to non-CSR firms. Furthermore, mean values of managerial ownership (MANOWN) and ownership concentration (OWNCON_PER and OWNCON_AV) are statistically significant lower in CSR firms than non-CSR firms. Findings are in accordance to the hypotheses presented in chapter 3. The *T*-test indicates statistically insignificant differences between the mean values of market-based measure of financial performance (TSR).

The *T*-test for the mean differences is repeated by analyzing the differences in the independent variables for CSR firms only. Thus, only firms with CSR score are included. Results are presented in Table 8. Following the study of Reverte (2009), in *Panel A* the sample is split up in two groups: (1) high CSR-group and (2) low CSR-group. The high CSR-group comprises the 40 firms with highest CSR score and the low CSR-group comprises the 40 firms with lowest CSR score. In *Panel B,* the sample is split up in two groups based upon the median value. Since the variable CSRSCORE is skewed, the median is a better predictor of the average CSRSCORE as it is not sensitive to outliers. The first group denotes firms with CSR score above the median value (111.00) and the second group denotes firms with CSR score below the median value. Results of *t*-test in *Panel A* reveal that firms in high CSR-group have statistically significant higher mean scores for TA, TS, AGE and LEV, suggesting that firms in high CSR-group are larger, older, higher leveraged. In addition, firms in high-CSR group have statistically significant higher mean values for INSTOWN, WOMENBOARD and BOARDSIZE and lower mean values for MANOWN, suggesting that firms in high CSR-group have more institutional shareholders, women board directors, larger board and less managerial shareholders compared to firms in low CSR-group. Furthermore, the mean values for ownership concentration (OWNCON_PER and OWNCON_AV) are statistically significant lower for firms in high CSR-group. The mean differences of RD and accounting-based measures ROA, ROA_EBIT and ROE are statistically insignificant. Results in *Panel A* are in line with the results of *t*-test for mean differences in *Panel B*.

All in all, descriptive statistics and *t*-test for mean differences show statistically significant differences in mean values of independent variables between firms with CSR score and firms without CSR score. Moreover, results show statistically significant differences in mean values of independent variables for firms with CSR score only.

Table 8: Differences in independent variables between high and low CSR groups

Variable		Mean	Mean differences	T-statistic	
Panel A					
	High CSR-group	*Low CSR-group*			
TA	129.38	4.55	124.83	2.721	***
TS	20.52	1.14	19.38	6.043	***
ROA	.03	.03	.00	.056	
ROA_EBIT	.03	.05	-.02	-1.186	
ROE	.08	.07	.01	.435	
TSR	-.04	.15	-.19	-2.584	**
LEV	.71	.55	.15	3.891	***
RD	.02	.04	-.02	-1.666	
AGE	95.00	41.73	53.28	4.369	***
INDSEN	.70	.51	.19	1.741	*
OWNCON_PER	.14	.24	-.10	-2.425	**
OWNCON_AV	.08	.14	-.06	-2.835	***
MANOWN	.03	.10	-.07	-2.697	***
INSTOWN	.37	.24	.13	3.225	***
OUTSIDEBOARD	.69	.63	.05	2.319	**
WOMENBOARD	.20	.05	.15	7.289	***
WOMENBOARD_EX	.07	.01	.05	2.142	**
BOARDSIZE	11.14	6.68	4.45	9.006	***
Panel B					
	CSR-score > median	*CSR-score < median*			
TA	87.44	9.26	78.18	3.410	***
TS	26.74	1.55	25.19	3.380	***
ROA	.03	.03	.00	.233	
ROA_EBIT	.03	.04	-.01	-.684	
ROE	.07	.06	.02	.632	
TSR	.00	.07	-.07	-1.260	
LEV	.67	.56	.11	4.197	***
RD	.02	.04	-.03	-1.931	*
AGE	81.41	44.92	36.49	4.594	***
INDSEN	.60	.50	.10	1.412	
OWNCON_PER	.17	.23	-.05	-1.954	*
OWNCON_AV	.09	.12	-.03	-2.464	**
MANOWN	.04	.08	-.04	-1.936	*
INSTOWN	.39	.30	.09	3.529	***
OUTSIDEBOARD	.67	.63	.04	2.619	***
WOMENBOARD	.18	.09	.09	5.902	***
WOMENBOARD_EX	.07	.03	.04	2.388	**
BOARDSIZE	10.70	7.56	3.14	8.052	***

Notes. Variable definitions are described in Appendix A. In *Panel A*, high CSR-group denotes 40 firms with highest CSR score and low CSR-groups denotes 40 firms with lowest CSR score. In *Panel B*, first group denotes firms with CSR score above the median value and the second group denotes firms with CSR score below the median value. Equal variance assumption has been checked for using Levene's test. *** $\rho < 0.01$, two-tailed. ** $\rho < 0.05$, two-tailed. * $\rho < 0.10$, two-tailed test.

6.2 CORRELATION ANALYSIS

Table 9 displays Pearson's correlations among the variables included in this study. It can be seen that CSRSCORE is statistically significant correlated with firm size (r=.54, p<.01), leverage (r=.23, p<.01), RD (r=-.33, p<.01), age (r=.36, p<.01), industry sensitivity (r=.31, p<.01), ownership

concentration (r=-.43, p<.01), managerial ownership (r=-.19, p<.01), institutional ownership (r=.44, p<.01), outside board directors (r=.17, p<.01), women board directors (r=.41, p<.01) and board size (r=.53, p<.01). In addition, CSRSCORE is statistically significant correlated with accounting-based financial performance measures ROA (r=.23, p<.01), ROA_EBIT (r=.27, p<.01) and ROE (r=.16, p<.01). CSRSCORE shows a statistically insignificant correlation with TSR. The correlation coefficients are in accordance to the hypotheses presented in chapter 3.

More specifically, the first hypothesis predicts that large firms undertake more CSR activities. As can be seen in Table 9, the correlation coefficients of TA and TS are statistically significant and positively correlated with CSRSCORE, suggesting that large firms undertake more CSR activities. Consistent with hypothesis 2 of firms with high financial performance undertake more CSR activities, all correlation coefficients of accounting-based measures are statistically significant and positively correlated with CSR. However, the correlation coefficient of TSR is statistically insignificant. The third hypothesis states to a negative relationship between concentrated ownership and CSR activities. In line with hypothesis 3, the correlation coefficients of ownership concentration measures are statistically significant and negatively correlated with CSRSCORE. Consistent with hypothesis 4 of firms with high managerial ownership undertake less CSR activities, the correlation coefficient of MANOWN is statistically significant and negatively correlated with CSRSCORE. Hypothesis 5 pertains to a positive relationship between institutional ownership and CSR. As can be seen in Table 9, the correlation coefficient of institutional ownership is statistically significant and positively correlated with CSRSCORE. The same holds true for hypothesis 6, which predicts that firms with high outside board directors undertake more CSR activities. Consistent with hypothesis 7 of firms with high women board directors undertake more CSR activities, the correlation coefficient of WOMENBOARD is statistically significant and positively correlated with CSRSCORE.

With regard to the Pearson's correlations between the independent variables, as expected there is a statistically significant correlation between TA and TS (r=.86, p<.01). This is because these two both reflect firm size. The same holds true for the statistically significant correlations between all accounting-based financial performance indicators, viz. ROA and ROA_EBIT (r=.94, p<.01), ROA and ROE (r=.85, p<.01), and ROA_EBIT and ROE (r=.77, p<.01), for the correlation between two ownership concentration measures, viz. OWNCON_PER and OWNCON_AV (r=.84, p<.01), and for the correlation between women board measures, viz. WOMENBOARD, WOMENBOARD_EX (r=.46, p<.01). In addition, the correlations coefficients between TA and BOARDSIZE (r=.78, p<.01) and TA and WOMENBOARD (r=.40, p<.01) are statistically significant. The significant and positive correlations may indicate that firm size is a predictor of board size and a predictor of women board directors. The relation between firm size and board size is

empirical investigated by Boone, Field, Karpoff & Raheja (2007). They examined determinants of corporate board size and composition and found that larger firms have larger boards.

When looking at the ownership variables, OWNCON_PER and INSTOWN are statistically significant and negatively correlated (r=-.25, p<.01), while OWNCON_PER and MANOWN are statistically significant and positively correlated (r=.38, p<.01). This may indicate that the largest shareholder of the firm is often a managerial shareholder instead of an institutional shareholder. In addition, the correlation coefficient between OWNCON_PER and TA shows a statistically significant and negative correlation (r=-.28, p<.01). The correlation coefficient between INSTOWN and TA shows a statistically significant and positive correlation (r=.34, p<.01), suggesting that large firms have more institutional shareholders with small percentages of shareholdings. Furthermore, the correlation coefficients in Table 9 show that INSTOWN and ROA are statistically significant and positively correlated (r=.20, p<.01). This indicates that institutional ownership may lead to more possibilities for control and monitoring, thereby having a positive effect on firm performance. As can be seen in Table 9, the correlation coefficient between OUTSIDEBOARD and ROA is also statistically significant and positive (r=.21, p<.01). An explanation for the significant correlation may be that outside board directors have monitoring responsibilities and therefore positively influence firm performance.

All in all, the correlation coefficients show high correlations among some independent variables. If variables highly influence each other (multicollinearity), regression results will be less reliable. In line with previous studies (e.g. Marano & Kostova, 2015; Reverte, 2009), multicollinearity is measured via the variable inflation factor (VIF) and tolerance values[13]. The VIFs and tolerance values are presented in Table 10. According to Marano & Kostova (2015, p. 40), 'multicollinearity is not a concern as VIFs are considerably lower than the recommended cut-off of 10'. As can be seen in Table 10, the independent variables of the original regression model have VIFs that are lower than 10. Accordingly, multicollinearity is not a concern in this study. However, this study takes into account that high correlations among some independent variables might influence the regression results.

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[13] VIF is an indicator of the effect that the other independent variables have on the standard error of a regression coefficient. The VIF is directly related to the tolerance value (VIF= 1/TOL) (Hair et al., 2010).

Table 9: Pearson's correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
CSRSCORE[a] (1)	1																		
TA[a] (2)	.54**	1																	
TS[a] (3)	.58**	.86**	1																
ROA (4)	.26**	.19**	.10	1															
ROA_EBIT (5)	.27**	.19**	.10	.94**	1														
ROE (6)	.16**	.10	.13*	.85**	.77**	1													
TSR (7)	.04	.09	.05	.22**	.27**	.26**	1												
LEV (8)	.23**	.49**	.33**	-.04	-.07	.00	.10	1											
RD (9)	-.33**	-.48**	-.38**	-.61**	-.68**	-.26*	.00	-.46**	1										
AGE[a] (10)	.36**	.08	.15**	.17**	.21**	.14*	.07	.01	-.23*	1									
INDSEN (11)	.31**	-.05	.15*	.05	.05	.11	.10	-.17**	-.11	.15**	1								
OWNCON_PER (12)	-.43**	-.28**	-.26**	-.10	-.14*	.03	-.04	-.12	-.07	-.11	-.11	1							
OWNCON_AV (13)	-.37**	-.37**	-.32**	-.10	-.12	-.01	-.01	-.15*	.06	.02	-.01	.84**	1						
MANOWN (14)	-.19**	-.10	-.10	.03	-.00	-.02	-.10	-.08	.04	-.02	.03	.38**	.42**	1					
INSTOWN (15)	.44**	.34**	.29**	.20**	.21**	.11	.15*	.08	-.17	.19**	.07	-.25**	-.15*	-.21**	1				
OUTSIDEBOARD (16)	.17**	.18**	.21**	.24**	.21**	.12	.03	-.01	.01	.11	.17**	-.25**	-.23**	-.06	.06	1			
WOMENBOARD (17)	.41**	.40**	.43**	.06	.02	.07	.02	.22**	-.04	.20**	.08	-.30**	-.23**	-.12	.30**	.20**	1		
WOMENBOARD_EX (18)	.16*	.09	.12	-.05**	-.04	-.08	-.03	.06	-.02	-.01	.03	-.13	-.13*	.06	.18*	-.02	.46**	1	
BOARDSIZE[a] (19)	.53**	.80**	.74**	.28**	.28**	.09	.09	.35**	-.18	.08	-.01	-.36**	-.34**	-.17*	.40**	.19**	.42**	.20**	1

Notes.[a] Log transformed variable. Variable definitions are described in Appendix A. ** $\rho < 0.01$. * $\rho < 0.05$.

Table 10: Collinearity diagnostics

Variables (all)	Tolerance	VIF	Variables (original model)	Tolerance	VIF
TA[a]	.055	18.156	TA[a]	.227	4.403
TS[a]	.079	12.723	ROA	.836	1.196
ROA	.021	48.755	TSR	.679	1.472
ROA_EBIT	.041	24.507	LEV	.578	1.730
ROE	.056	17.897	RD	.435	2.297
TSR	.560	1.787	AGE[a]	.712	1.404
LEV	.424	2.361	INDSEN	.870	1.149
RD	.418	2.391	OWNCON_PER	.509	1.963
AGE[a]	.636	1.572	MANOWN	.380	2.634
INDSEN	.501	1.997	INSTOWN	.530	1.886
OWNCON_PER	.163	6.152	OUTSIDEBOARD	.689	1.451
OWNCON_AV	.142	7.031	WOMENBOARD	.622	1.607
MANOWN	.294	3.398	BOARDSIZE[a]	.216	4.629
INSTOWN	.421	2.377			
OUTSIDEBOARD	.603	1.659			
WOMENBOARD	.487	2.055			
WOMENBOARD_EX	.564	1.772			
BOARDSIZE[a]	.190	5.269			

Notes. VIF: Variance Inflation Factor. [a]Log transformed variable. Variable definitions are described in Appendix A.

6.3 REGRESSION ANALYSIS

This study, investigating the relationship between various determinants and CSR, has performed logistic and OLS regression analyses. As shown in Table 11, *Panel A* displays the results of logistic regression analysis with a dichotomous dependent variable, which is equal to 1 for firms with CSR score and 0 for firms without CSR score. *Panel B* displays the results of OLS regression analysis with the numerical CSR score as the dependent variable. As the base model in *Panel A,* Model 1 has all of the control variables. However, the number of observations is only 86 because RD comprises limited observations. Therefore, RD is excluded from further regression analyses. Model 2 in *Panel A* and Model 16 in *Panel B* include all control variables (RD excluded), showing the influence of the additional explanatory factors on CSR, viz. AGE, LEV, BOARDSIZE, INDSEN, YEARDUM. The remaining models in *Panel A* and *Panel B* are designed to test the formulated hypotheses.

In order to test the robustness of the regression results, three alternative regression analyses are performed. Alternative regression analyses only include observations with CSR score. As a first test of robustness, additional logistic regression analysis is performed where the dependent variable is re-constructed in a dichotomous variable, which is equal to 1 if CSR score is above the median value (111.00) (indicating high CSR activities) and 0 otherwise (indicating low CSR activities). Results of logistic regression analysis are presented in Table 16 in Appendix D. As a second test of robustness, additional OLS regression analysis is performed for each year separately with the numerical CSR score as dependent variable. Results pertained are presented

in Table 17 in Appendix E, with results of 2015 in *Panel A*, 2012 in *Panel B*, 2010 in *Panel C*. As a final test of robustness, the independent variables are replaced and additional OLS regression analysis is performed. Table 18 in Appendix F displays the results of regressing the re-defined independent variables in various models on the dependent variable CSRSCORE.

6.3.1 FIRM SIZE

The first hypothesis states that large firms undertake more CSR activities. As shown in Table 11, Model 3 and Model 17 are the first models designed to test this hypothesis. It can be seen that the coefficients of the variable TA in Model 3 (b=1.06, t=11.04, p<.01) and Model 17 (b=.13, t=3.92, p<.01) are statistically significant and positively related to CSRSCORE. Analyzing coefficients of TA in the remaining models in Table 11, the statistically significant and positive effect holds true. In order to test the robustness of the results, Table 16 in Appendix D displays results of additional logistic regression analysis. As with the main analysis, Model 2 in Table 16 shows a statistically significant and positive coefficient for TA (b=1.34, t=9.13, p<.01). Results of the remaining models are relatively consistent. As a second test of robustness, Table 17 in Appendix E shows additional results of OLS regression for each year of observation separately. Consistent with the main analysis, Model 2 shows a statistically significant and positive coefficient for TA (b=.13, t=3.39, p<.01). Analyzing all regression models in Table 17, coefficients of TA are positive. Although the statistically significance show small differences, results are relatively consistent. As a final test of robustness, the variable TA being defined in terms of total assets is replaced by total sales (TS) and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. Model 1 in Table 18 shows a statistically significant and positive coefficient for the variable TS (b=.12, t=3.87, p<.01), justifying the main analysis for TA. Analyzing all models in Table 18, coefficients of TS remain statistically significant and positive. All in all, regression models support the first hypothesis, implying that large firms undertake more CSR activities. This is in line with previous studies (e.g. Artiach et al., 2010; Brammer & Millington, 2006; Brammer & Pavelin, 2004, 2006; Chiu & Wang, 2014; Cormier & Magnan, 2003; Darnall et al., 2010; Johnson & Greening, 1999; Kansal et al., 2014; Roa & Tilt, 2016; Udayasankar, 2008; Zeng et al., 2012).

6.3.2 FINANCIAL PERFORMANCE

The second hypothesis predicts that firms with high financial performance undertake more CSR activities. As shown in Table 11, Model 4 and Model 18 are the first models designed to test the relationship between the accounting-based financial performance variable ROA and CSRSCORE. It can be seen that the coefficients of the variable ROA in Model 4 (b=4.07, t=3.38, p>.10) and Model 18 (b=-.01, t=-.04, p>.10) are statistically insignificant, consisting of positive and negative signs. The insignificance of the results may be due to problems of multicollinearity as the variable

ROA is statistically significant correlated with TA and BOARDSIZE. In order to test this, Model 5 and Model 19 are designed. It can be seen that the coefficient of the variable ROA in Model 5 has changed and has become statistically significant (b=5.11, t=8.83, p<.01). In addition, the coefficient of ROA in Model 19 has become positive but statistically insignificant (b=.18, t=.61, p>.10). Analyzing the coefficients of ROA in the remaining models in Table 11, the statistically insignificant effect holds true, consisting of positive and negative signs. Regarding the market-based financial performance variable TSR, the results are relatively consistent as the coefficients in all models of Table 11 show statistically insignificance.

In order to test the robustness of the results, Table 16 in Appendix D shows results of additional logistic regression analysis. As with the main analysis, all models in Table 16 show statistically insignificant coefficients for ROA and TSR. Table 17 in Appendix E displays additional results of OLS regression for the years separately. Consistent with the main analysis, all models in Table 17 show statistically insignificant coefficients for ROA, consisting of positive and negative signs. Regarding TSR, the coefficients in Model 5-9 in *Panel A* (2015) are statistically significant and negative. Analyzing the coefficients of TSR in the remaining models in Table 17, the statistically insignificant effect holds true, consisting of positive and negative signs. As a final test of robustness, the variable ROA is replaced by ROA using earnings before interest and taxation (ROA_EBIT) and return on equity (ROE) and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. Model 2 (b=-.23, t=-.88, p>.10) and Model 4 (b=-.15, t=-1.30, p>.10) show statistically insignificant and negative coefficients for the variables ROA_EBIT and ROE. The replaced variables justify the main analysis for ROA. Analyzing all models in Table 18, the coefficients of ROA_EBIT and ROE remain insignificant, consisting of positive and negative signs. All in All, directions of the coefficients are incorrect and dominated by statistically insignificant levels. Therefore, regression models do not support the second hypothesis of firms with high financial performance undertake more CSR activities.

6.3.3 OWNERSHIP CONCENTRATION

The third hypothesis predicts that firms with high concentrated ownership undertake less CSR activities. As shown in Table 11, Model 7 and Model 21 are the first models designed to test this hypothesis. It can be seen that the coefficient of OWNCON_PER in Model 7 is statistically significant and negative (b=-4.49, t=-15.35, p<.01). In Model 21, the coefficient of OWNCON_PER is also negative but statistically insignificant (b=-.21, t=-1.66, p>.10). The insignificance of this result may be due to problems of multicollinearity as the variable OWNCON_PER is statistically significant correlated with TA and BOARDSIZE. In order to test this, Model 21 is designed. It can be seen that the coefficient of OWNCON_PER in Model 21 has changed and has become statistically significant and negative (b=-.44, t=-3.08, p<.01). Analyzing the coefficients of OWNCON_PER in the

remaining models in Table 11, the negative effect holds true. Regarding the statistically significance, the coefficients of OWNCON_PER show statistically significance in *Panel A* but insignificance in *Panel B.*

In order to test the robustness of the results, Table 16 in Appendix D displays results of regressing the independent variables on the dichotomous dependent variable, which is equal to 1 if the CSR score is above the median value (indicating high CSR activities) and 0 otherwise. As with the main analysis, Model 6 in Table 16 shows a negative coefficient for OWNCON_PER (b=-.82, t=.28, p>.10). However, the coefficient is statistically insignificant. The results of the remaining models are relatively consistent. As a second test of robustness, Table 17 in Appendix E shows additional results of OLS regression analysis for each year separately. It can be seen that the coefficients of OWNCON_PER in *Panel A* and *Panel B* are in most models negative and statistically insignificant. Regarding *Panel C*, the coefficient of OWNCON_PER in Model 36 is statistically significant and negative (b=-.69, t=-3.59, p<.01). Analyzing the coefficients of OWNCON_PER in the remaining models in *Panel C*, the statistically significant and negative effect holds true. As a final test of robustness, the variable OWNCON_PER is replaced by OWNCON_AV utilizing the average percentage shareholding of the four largest shareholders and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. Model 5 in Table 18 shows a statistically significant and negative coefficient for the variable OWNCON_AV (b=-.65, t=-2.55, p<.05), justifying the main analysis for OWNCON_PER. Analyzing the coefficients of OWNCON_AV in the remaining models in Table 18, the statistically significant and positive effect holds true in most cases. All in all, although the statistically significance show small differences, the negative coefficients are consistent. Therefore, regression models partly support the third hypothesis of firms with high concentrated ownership undertake less CSR activities. This is in line with previous studies (e.g. Barnea & Rubin, 2010; Bartkus et al., 2002; Brammer & Pavelin, 2006; Crisostomo & Oliveira, 2015; Dam & Scholtens, 2013; Li & Zhang, 2010).

6.3.4 OWNERSHIP IDENTITY

This study is focusing on two types of ownership, including managerial ownership and institutional ownership.

MANAGERIAL OWNERSHIP

Hypothesis 4 states that firms with high managerial ownership undertake less CSR activities. As shown in Table 11, Model 8 and Model 23 are the first models designed to test this hypothesis. It can be seen that the coefficient of the variable MANOWN in Model 8 is statistically insignificant and positive (b=.40, t=.05, p>.10). The insignificance and positive sign of the coefficient may be due to problems of multicollinearity as the variable MANOWN is statistically significant correlated

with the variable OWNCON_PER. In order to test this, Model 9 is designed. It can be seen that the coefficient of MANOWN in Model 9 has changed and has become negative (b=-1.67, t=1.05, p>.10). However, the coefficient remains statistically insignificant. Analyzing the coefficients of MANOWN in the reaming models in *Panel A*, the statistically insignificant effect holds true. However, in Model 23 the coefficient of the variable MANOWN is statistically significant (b=-.64, t=-3.17, p<.01). Analyzing the coefficients of MANOWN in the remaining models in *Panel B*, the statistically significant and negative effect holds true.

In order to test the robustness of the results, Table 16 in Appendix D displays results of additional logistic regression analysis. Model 8 in Table 16 shows a statistically insignificant and negative coefficient for MANOWN (b=-2.78, t=-1.31, p>.10). Results of the remaining models in Table 16 are relatively consistent. As a second test of robustness, Table 17 in Appendix E shows additional results of OLS regression. It can be seen that all coefficients of the variable MANOWN in *Panel A* and *Panel B* are negative and insignificant. Regarding *Panel C*, the coefficients of MANOWN are negative and in cases where the variable OWNCON_PER is deleted statistically significant. As a final test of robustness, additional OLS regression analysis is performed with re-defined independent variables. Results are presented in Table 18 in Appendix F. Model 7 in Table 18 shows a statistically significant and negative coefficient for the variable MANOWN (b=-.79, t=-3.38, p<.01). Analyzing the remaining models in Table 18, the coefficients of MANOWN remain statistically significant and negative. All in all, although the statistically significance show small differences, the negative coefficients are consistent. Therefore, regression models partly support hypothesis 4 of firms with high managerial ownership undertake less CSR activities. This is in line with previous studies (e.g. Barnea & Rubin, 2010; Dam & Scholtens, 2012; Li & Zhang, 2010; Oh et al., 2011; Punte, 2009).

INSTITUTIONAL OWNERSHIP

Hypothesis 5 states that firms with high institutional ownership undertake more CSR activities. As shown in Table 11, Model 10 and Model 24 are the first models designed to test this hypothesis. It can be seen that the coefficients of the variable INSTOWN in Model 10 (b=1.05, t=.42, p>.10) and Model 24 (b=.21, t=1.67, p>.10) are positively related to CSRSCORE. However, the effect is statistically insignificant. The insignificance may be due to problems of multicollinearity as the variable INSTOWN is statistically significant correlated with the variables TA, OWNCON_PER, ROA, MANOWN and BOARDSIZE. In order to test this, Model 11 and Model 25 are designed. It can be seen that the coefficients of INSTOWN in Model 11 (b=5.06, t=12.84, p<.01) and Model 25 (b=.62, t=4.67, p<.01) have changed and have become statistically significant. Analyzing the coefficients of INSTOWN in the remaining models in Table 11, the positive coefficient of INSTOWN holds true and is in some cases statistically significant.

In order to test the robustness of the results, Table 16 in Appendix D display results of additional logistic regression analysis. As with the main analysis, the coefficients of INSTOWN remain positive. Model 11 in Table 16 shows a statistically significant coefficient (b=4.68, t=10.72, p<.01). As a second test of robustness, Table 17 in Appendix E show additional results of OLS regression for each year of observation separately. It can be seen that the coefficients of INSTOWN in *Panel A, Panel B* and *Panel C* are largely consistent, showing in all models positive signs. Model 10 in Table 17 shows a statistically significant and positive coefficient for INSTOWN (b=.32, t=2.03, p<.05). The same holds true for Model 11, Model 26 and Model 40. As a final test of robustness, independent variables are replaced and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. Model 10 in Table 18 shows a statistically significant and positive coefficient for the variable INSTOWN (b=.32, t=2.03, p<.05). Analyzing the remaining models in Table 18, the coefficient of INSTOWN remains positive but differ in statistically significance. All in all, although the statistically significance show small differences, the positive coefficients are consistent. Therefore, regression models partly support hypothesis 5 of firms with high institutional ownership undertake more CSR activities. This is in line with previous studies (e.g. Cox et al., 2004; Graves & Waddock, 1994; Harjoto & Jo, 2011; Johnson & Greening, 1999; Mahoney & Roberts, 2007; Oh et al., 2011; Punte, 2009).

6.3.5 OUTSIDE BOARD DIRECTORS

Hypothesis 6 states that firms with high outside board directors undertake more CSR activities. As shown in Table 11, Model 12 and Model 26 are the first models designed to test this hypothesis. It can be seen that the coefficients of the variable OUTSIDEBOARD in Model 12 (b=-4.52, t=2.04, p>.10) and Model 26 (b=-.12, t=-.48, p>.10) are statistically insignificant and negatively related to CSRSCORE. This even remains the case in the regression models (see Model 14 and Model 25) wherein highly correlated variables are deleted. Analyzing the coefficients of OUTSIDEBOARD in the remaining models in Table 11, the statistically insignificant and negative effect holds true.

In order to test the robustness of the results, Table 16 in Appendix D displays results of additional logistic regression analysis. Contrary to the main analysis, the coefficients of OUTSIDEBOARD in Table 16 are positive but remain statistically insignificant. As a second test of robustness, Table 17 in Appendix E displays additional results of OLS regression for each year of observation separately. As shown in Table 17, the coefficients of the variable OUTSIDEBOARD show statistically insignificance, consisting of positive and negative signs. As a final test of robustness, independent variables are replaced and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. As with other robustness tests, the coefficients show statistically insignificance, consisting of positive and negative signs. All in All, directions of the coefficients are incorrect and dominated by statistically insignificant levels.

Therefore, regression models do not support hypothesis 6 of firms with high outside board directors undertake more CSR activities.

6.3.6 WOMEN BOARD DIRECTORS

The last hypothesis predicts that firms with high women board directors undertake more CSR activities. As shown in Table 11, Model 13 and Model 28 are the first models designed to test this hypothesis. It can be seen that the coefficient of the variable WOMENBOARD in Model 13 (b=-.09, t=.00, p>.10) is statistically insignificant and negatively related to CSRSCORE. The insignificance and negative sign of the coefficient may be due to problems of multicollinearity as the variable WOMENBOARD is statistically significant correlated with the variables TA, OWNCON_PER, INSTOWN and BOARDSIZE. In order to test this, Model 15 is designed. It can be seen that the coefficient of WOMENBOARD in Model 15 has changed and has become statistically significant (b=5.06, t=4.27, p<.05). In Model 28, the coefficient of the variable WOMENBOARD is positive but statistically insignificant (b=.39, t=1.58, p>.10). Analyzing the coefficients of WOMENBOARD in the remaining models in *Panel B* in Table 11, the positive effect holds true. In Model 30, which is a regression model wherein the variable BOARDSIZE is deleted, the coefficient of the variable WOMENBOARD is statistically significant (b=.57, t=2.35, p<.05).

In order to test the robustness of the results, Table 16 in Appendix D displays results of additional logistic regression analysis. As with the main analysis, the coefficients of WOMENBOARD in Table 16 are positive but remain statistically insignificant. As a second test of robustness, Table 17 in Appendix E shows additional results of OLS regression for each year of observation separately. As shown in Table 17, all coefficients of the variable WOMENBOARD in *Panel A*, *Panel B* and *Panel C* are positive but only the coefficient in Model 15 is statistically significant (b=.77, t=2.72, p<.01). As a final test of robustness, the variable WOMENBOARD is replaced by WOMENBOARD_EX utilizing the number of women executive board directors in total executive board directors and additional OLS regression analysis is performed. Results are presented in Table 18 in Appendix F. Model 10 in Table 18 shows a positive coefficient for the variable WOMENBOARD_EX but statistically insignificant (b=.18, t=.95, p>.10), justifying the main analysis for WOMENBOARD. Analyzing the remaining models of WOMENBOARD_EX in Table 18, the coefficients remain statistically insignificant and positive. All in all, the coefficients in regression models are in most cases positive but dominated by statistically insignificance. Therefore, regression models do not support the last hypothesis of firms with more women board directors undertake more CSR activities.

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Table 11: Regression analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Panel A: Logistic Regression															
Intercept	-4.28	-8.34**	-10.09**	-9.94**	-3.73**	-10.03**	-8.06**	-7.82**	-9.05**	-6.74**	-4.50**	-4.00	-4.03	-5.90*	-1.25
	(2.11)	(32.47)	(33.52)	(31.51)	(22.84)	(28.19)	(15.93)	(13.15)	(19.53)	(9.57)	(16.68)	(1.99)	(1.79)	(4.86)	(.51)
TA[a]			1.06**	.97**		1.16**	.92*	.66	.98*	.36		.25	.25	.53	
			(11.04)	(9.04)		(10.36)	(5.74)	(2.54)	(6.36)	(.65)		(.27)	(.27)	(1.57)	
ROA				4.07	5.11**		5.41	1.54	1.31	5.66		4.55	4.55		4.32
				(3.38)	(8.83)		(2.21)	(.14)	(.15)	(1.73)		(.89)	(.89)		(2.80)
TSR						-.87	-1.12	-.85	-1.10	-1.14	-.16	-1.15	-1.16	-.88	-1.06
						(1.33)	(1.30)	(.63)	(1.43)	(1.13)	(.05)	(.91)	(.91)	(.98)	(1.53)
OWNCON_PER							-4.49**	-4.35**		-4.15**		-5.31**	-5.32**		
							(15.35)	(10.64)		(10.45)		(11.22)	(11.12)		
MANOWN								.40	-1.67			.77	.77	-1.82	-2.11
								(.05)	(1.05)			(.15)	(.15)	(1.06)	(2.04)
INSTOWN										1.05	5.06**	.34	.35	1.22	
										(.42)	(12.84)	(.05)	(.05)	(.61)	
OUTSIDEBOARD												-4.52	-4.52	-2.88	-.45
												(2.04)	(2.04)	(1.09)	(.04)
WOMENBOARD													-.09	.61	5.06*
													(.00)	(.04)	(4.27)
AGE[a]	2.46**	1.22**	1.29**	1.24**	1.30**	1.25*	1.62**	1.85**	1.38*	1.48*	1.46**	1.71*	1.71*	1.21	.93
	(7.62)	(8.45)	(8.17)	(7.60)	(13.95)	(5.21)	(7.57)	(8.27)	(5.55)	(5.52)	(9.24)	(5.65)	(5.36)	(3.59)	(3.18)
LEV	-1.37	1.68	.43	.75	3.09**	-1.31	-1.59	-2.37	-2.19	-2.15	2.20*	-2.14	-2.14	-2.49	1.11
	(.35)	(3.01)	(.16)	(.45)	(15.35)	(1.06)	(1.15)	(1.66)	(1.77)	(1.29)	(3.96)	(1.04)	(1.04)	(1.78)	(.79)
RD	-5.52														
	(1.13)														
BOARDSIZE[a]	1.54	6.71**	2.14	2.38		2.63	2.76	4.61	3.59	5.28*		6.37	6.38	5.04	
	(.46)	(26.49)	(1.36)	(1.61)		(1.59)	(1.38)	(3.24)	(2.55)	(3.37)		(3.54)	(3.47)	(2.88)	
INDSEN	2.50**	1.47**	1.51**	1.52**	1.28**	1.71**	2.00**	1.72**	1.44**	2.04**	1.00*	2.14**	2.14**	1.52**	1.38**
	(9.70)	(15.00)	(14.84)	(14.48)	(15.66)	(15.12)	(15.13)	(9.78)	(9.01)	(11.55)	(5.87)	(10.60)	(10.49)	(7.93)	(9.41)
YEAR2015	1.34	.57	.50	.44	.53	.65	.74	.90	.50	1.01	1.28*	.89	.90	.73	-.28
	(1.95)	(1.67)	(1.19)	(.89)	(2.03)	(1.37)	(1.21)	(1.34)	(.56)	(1.72)	(5.28)	(1.01)	(.94)	(1.05)	(.20)
YEAR2012	.19	-.08	-.15	-.21	.10	-.45	-.43	-.50	-.61	-.08	.28	-.29	-.29	-.20	-.61
	(.82)	(.03)	(.75)	(.21)	(.07)	(.52)	(.32)	(.33)	(.63)	(.01)	(.26)	(.09)	(.09)	(.08)	(.81)
Nagelkerke R square	.43	.40	.44	.44	.33	.45	.54	.50	.42	.49	.35	.49	.49	.38	.25
Chi-square	25.78**	76.23**	82.47**	83.82**	71.06**	73.35**	88.29**	62.70**	52.37**	62.19**	50.40**	52.63**	52.63**	39.87**	30.17**
Observations	86	237	234	233	265	204	196	158	163	174	193	143	143	147	163

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Panel B: OLS Regression

	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26	Model 27	Model 28	Model 29	Model 30
Intercept	.13	-.08	-.08	1.07**	-.05	.05	1.17**	.17	.04	.97**	.23	.20**	.36	.33	1.06**
	(.82)	(-.53)	(-.53)	(8.19)	(-.30)	(.26)	(7.55)	(.81)	(.25)	(6.90)	(.99)	(.93)	(1.48)	(1.29)	(4.75)
TA[a]		.13**	.13**		.13**	.13**		.14**	.07*		.08*	.08	.09*		.16**
		(3.92)	(3.91)		(3.60)	(3.61)		(3.36)	(2.11)		(2.01)	(1.96)	(2.22)		(4.92)
ROA			-.01	.18		.10	.30	-.05	.07		-.05		-.07	-.14	-.07
			(-.04)	(.61)		(.37)	(.94)	(-.15)	(.28)		(-.16)		(-.24)	(-.41)	(-.21)
TSR					-.12	-.13	-.05	-.14	-.07	-.03	-.09	-.11	-.09	-.14	-.10
					(-1.61)	(-1.62)	(-.54)	(-1.57)	(-1.03)	(-.32)	(-1.07)	(-1.40)	(-1.14)	(-1.50)	(-1.23)
OWNCON_PER						-.21	-.44**	-.14	-.17		-.21		-.20		-.22
						(-1.66)	(-3.08)	(-.98)	(-1.47)		(-1.44)		(-1.38)		(-1.52)
MANOWN								-.64**			-.46*	-.57**	-.45*	-.68**	-.51**
								(-3.17)			(-2.40)	(-3.25)	(-2.40)	(-3.44)	(-2.62)
INSTOWN									.21	.62**	.25	.23**	.22		.30*
									(1.67)	(4.67)	(1.83)	(1.70)	(1.62)		(2.18)
OUTSIDEBOARD											-.12	-.06	-.20	.26	-.30
											(-.48)	(-.26)	(-.81)	(1.05)	(-1.18)
WOMENBOARD													.39	.24	.57*
													(1.58)	(.88)	(2.35)
AGE[a]	.16**	.14**	.14**	.18**	.16**	.17**	.22**	.14*	.16**	.17**	.13*	.12*	.12*	.14*	.09
	(3.78)	(3.26)	(3.25)	(3.46)	(3.17)	(3.24)	(3.67)	(2.39)	(3.28)	(2.94)	(2.42)	(2.21)	(2.08)	(2.29)	(1.53)
LEV	.27*	.09	.09	.62**	.03	.04	.52**	.00	.14	.61**	.09	.10	.06	.22	.04
	(2.45)	(.73)	(.70)	(4.75)	(.25)	(.26)	(3.56)	(.02)	(1.01)	(4.63)	(.59)	(.65)	(.35)	(1.44)	(.24)
RD															
BOARDSIZE[a]	1.22**	.70**	.70**		.69**	.58**		.50*	.89**		.77**	.79**	.65*	.93**	
	(8.94)	(3.75)	(3.73)		(3.41)	(2.74)		(2.15)	(4.09)		(3.05)	(3.19)	(2.48)	(4.91)	
INDSEN	.16**	.18**	.18**	.13**	.19**	.19**	.12*	.20**	.14**	.07	.17**	.16**	.18**	.17**	.18**
	(4.01)	(4.68)	(4.66)	(2.67)	(4.68)	(4.44)	(2.55)	(4.30)	(3.55)	(1.61)	(3.57)	(3.44)	(3.76)	(3.54)	(3.78)
YEAR2015	.23**	.22**	.22**	.18**	.18**	.18**	.16*	.20**	.17**	.12	.19**	.18**	.16*	.19**	.14*
	(4.92)	(4.90)	(4.88)	(3.22)	(3.34)	(3.16)	(2.40)	(3.14)	(3.15)	(1.89)	(3.19)	(3.19)	(2.44)	(2.65)	(2.11)
YEAR2012	.13**	.13**	.13**	.14*	.06	.06	.10	.10	.10	.10	.14	.12	.13	.09	.14
	(2.77)	(2.82)	(2.80)	(2.40)	(.96)	(.90)	(1.24)	(1.24)	(1.60)	(1.34)	(1.94)	(1.80)	(1.88)	(1.17)	(1.88)
Adjusted R$_2$	.45	.49	.49	.19	.48	.46	.22	.49	.52	.30	.55	.55	.55	.45	.34
Observations	173	173	173	178	154	149	154	122	142	149	115	118	115	124	124

Notes. [a]Log transformed variable. Unstandardized coefficients are reported. Figures in parentheses represent the t-statistics. Variable definitions are described in Appendix A. ** $\rho < 0.01$. * $\rho < 0.05$.

6.4 INTERACTION EFFECTS

The Pearson's correlations matrix in Table 10 shows high correlations among some independent variables. As shown in regression analyses, this study has taken into account the relationship between independent variables by regressing models wherein highly correlated variables are deleted. In the following section, this study considers the relationship between independent variables by regressing interaction effects. Results are presented in Table 12.

The first interaction effect is examined between TA and LEV, as the correlation coefficient is .49 at the significant level of .01. Titman & Wessels (1988) suggested that leverage ratios may be related to firm size. According to them (1) large firms should be more highly leveraged because they tend to be more diversified and less prone to bankruptcy, and (2) small firms may be more leveraged because small firms pay more than large firms to issue new equity. Since the relationship between firm size and CSR is supported, it is reasonable to expect that the influence of leverage can be exerted by strengthen or weaken this relationship. Notwithstanding, Model 2 in Table 12 shows a statistically insignificant interaction coefficient between TA and LEV (b=-.04, t=-.25, ρ>.10). As a second interaction effect, the interaction between firm size and board size is examined. The correlation coefficient between TA and BOARDSIZE is .80 at the significance level of .01. The relationship between firm size and board size is empirical investigated by Boone et al. (2007). They examined determinants of corporate board size and composition and found that larger firms have larger boards. Since the relationship between firm size and CSR is supported, it is reasonable to suspect that the influence of board size can be exerted by strengthen this relationship. Notwithstanding, looking at Model 2 in Table 12 the interaction coefficient between TA and BOARDSIZE is statistically insignificant (b=.21, t=1.03, ρ>.10).

The third interaction effect is examined between ownership concentration and managerial ownership. The correlation coefficient between the variables OWNCON_PER and MANOWN is .38 at the significant level of .01. It is argued that large shareholders pay a high price for social performance (Dam & Scholtens, 2013) and that managers have short-term motives that conflict with CSR (Aguilera et al., 2007). Therefore, managerial shareholders may strengthen the negative relationship between ownership concentration and CSR. As expected, Model 2 in Table 12 shows a statistically significant and negative interaction coefficient between OWNCON_PER and MANOWN (b=-1.55, t=-2.05, ρ<.05). Thus, if the largest shareholder of the firm is a managerial shareholder, the effect on CSR is negative. The fourth interaction effect is examined between ownership concentration and institutional ownership. The correlation coefficient between the variables OWNCON_PER and INSTOWN is -.25 at the significance level of .01. Contrary to managerial shareholders, institutional shareholders support CSR activities because CSR activities enhance long-term performance (Graves & Waddock, 1994). Therefore, institutional shareholders can weaken the negative relationship between ownership concentration and CSR. In other words,

if the largest shareholder of the firm is an institutional shareholder, the effect on CSR should be positive. Notwithstanding, Model 2 in Table 12 shows a statistically insignificant interaction coefficient between OWNCON_PER and INSTOWN (b=1.22, t=1.65, ρ>.10).

The last interaction is examined between WOMENBOARD and BOARDSIZE, as the correlation coefficient is .42 at the statistically significance level of .01. In line with De Villiers et al. (2011), it is expected that women's actions towards CSR can be influenced by board structure configurations (e.g. board size). In other words, the positive effect of women board directors on CSR may become weaker with larger boards as directors that do not prefer women's ethical actions and sensitivity towards social performance may intervene. Notwithstanding, Model 2 in Table 12 shows a statistically insignificant interaction coefficient between WOMENBOARD and BOARDSIZE (b=-4.50, t=-1.45, ρ>.10). All in all, this study has taken into account interaction effects between independent variables in relation to CSR. The interaction between ownership concentration and managerial ownership is statistically supported. Unfortunately, this study could not find other statistically significant interaction effects.

Table 12: Interaction effects

Variable	Model 1	Model 2
Intercept	.36	.96
	(1.48)	(.86)
TA[a]	.09*	-.03
	(2.22)	(-.16)
ROA	-.07	-.02
	(-.24)	(-.08)
TSR	-.09	-.09
	(-1.14)	(-1.06)
OWNCON_PER	-.20	-.40
	(-1.38)	(-1.24)
MANOWN	-.45*	.22
	(-2.40)	(.66)
INSTOWN	.22	-.12
	(1.62)	(-.51)
OUTSIDEBOARD	-.20	-.29
	(-.81)	(-1.21)
WOMENBOARD	.39	4.23*
	(1.58)	(2.61)
TA x LEV		-.04
		(-.25)
TA x BOARDSIZE		.21
		(1.03)
OWNCON_PER x MANOWN		-1.55*
		(-2.05)
OWNCON_PER x INSTOWN		1.22
		(1.65)
WOMENBOARD x BOARDSIZE		-4.50
		(-1.45)
AGE[a]	.12*	.14**
	(2.08)	(2.59)
LEV	.06	.20
	(.35)	(.18)
BOARDSIZE[a]	.65*	-.35
	(2.48)	(-.26)
INDSEN	.18**	.18**
	(3.76)	(2.74)
YEAR2015	.16*	.17**
	(2.44)	(2.74)
YEAR2012	.13	.12
	(1.88)	(1.78)
Adjusted R-square	.55	.62
Observations	115	115

Notes. [a]Log transformed variable. Unstandardized coefficients are reported. Figures in parentheses represent the t-statistics. Variable definitions are described in Appendix A. ** $\rho < 0.01$. * $\rho < 0.05$.

7. CONCLUSIONS AND LIMITATIONS

At first, in this chapter the empirical analysis is discussed with considerations of the theories. Second the limitations and recommendations for future research are described.

7.1 CONCLUSION

This study has investigated various determinants for Dutch firms in relation to CSR, using the TB scores provided by the Ministry to identify the level of CSR activities. Empirical results support that firm size is positively and statistically significant related to CSR, suggesting that large firms undertake more CSR activities. In addition, results partially support the level of ownership concentration, managerial ownership, and institutional ownership influence CSR. Results show that firms with high concentrated ownership and high managerial ownership undertake less CSR activities and firms with high institutional ownership undertake more CSR activities. Contrary to expectations, neither financial performance, the number of outside board directors or the number of women board directors is associated with CSR activities.

The implications of the results are summarized as follows. First, results have been found to statistically support hypothesis 1 of large firms undertake more CSR activities. This is consistent with previous studies that find that firm size and CSR are related (e.g. Artiach et al., 2010; Brammer & Pavelin, 2004, 2006; Cormier & Magnan, 2003; Darnall et al., 2010; Kansal et al., 2014; Roa & Tilt, 2016; Udayasankar, 2008; Zeng et al., 2012). According to agency theorists, large firms are more visible and associated with higher stakeholder pressure to comply with levels of CSR and therefore engage in CSR to a larger extent. Consistent with resource based theory, large firms hold more capacity to provide resources to CSR. In addition, results provide some statistically significant support for hypothesis 3, especially when all observations are included in regression analyses. Consistent with previous studies (e.g. Barnea & Rubin, 2010; Bartkus et al., 2002; Brammer & Pavelin, 2006; Crisostomo & Oliveira, 2015; Dam & Scholtens, 2013; Li & Zhang, 2010), results show that ownership concentration and CSR are related. In particular, firms with high concentrated ownership undertake less CSR activities. Agency theorists argued that large shareholders do not prefer investments in CSR because large shareholders bear more CSR related costs compared to small shareholders. Furthermore, results provide some statistically significant support for hypothesis 4, stating that firms with high managerial ownership undertake less CSR activities and hypothesis 5, stating that firms with high institutional ownership undertake more CSR activities. Results are consistent with previous studies, showing that managerial ownership and CSR (e.g. Barnea & Rubin, 2010; Dam & Scholtens, 2012; Li & Zhang, 2010; Oh et al., 2011; Punte, 2009) and institutional ownership and CSR (e.g. Cox et al., 2004; Graves & Waddock, 1994; Harjoto & Jo, 2011; Johnson & Greening, 1999; Mahoney & Roberts, 2007; Oh et al., 2011; Punte, 2009) are related. Agency theorists argued that managers have short-term motives which conflict

with CSR. Institutions are long-term investors and support CSR because they see CSR enhances long-term performance.

No results have been found to support hypothesis 2, predicting that firms with high financial performance undertake more CSR activities. Directions of the regression coefficients were incorrect and dominated by statistically insignificant levels. In addition, no support have been found for hypothesis 6, which pertains to a positive relationship between outside board directors and CSR activities. Furthermore, no results have been found to support hypothesis 7, predicts that firms with high women board directors undertake more CSR activities. Although the directions of the regression coefficients were correct, they were dominated by statistically insignificant levels. This study also analyzes interaction effects between variables. Results have been found to statistically support the interaction between ownership concentration and managerial ownership, showing that large managerial shareholders strengthen the negative relationship between ownership concentration and CSR.

This study finds that determinants of CSR of Dutch firms are not statistically different than those of firms in other countries. More specifically, studies on all geographical origins support that firm size is positively related to CSR. The relationship between financial performance and CSR has also received attention globally. As with findings in this study, many other global studies did not find a relationship neither did Punte (2009) in his study on Dutch firms. Regarding ownership concentration, this study provides some support for the relationship between ownership concentration and CSR. This has not previously been analyzed for Dutch firms. Results are consistent with studies on firms in U.K., U.S., Brazil, China, as well as other global studies. The relationship between ownership identity and CSR is also wide studied globally. As with findings in this study, those studies show that ownership by managers is negatively related to CSR, while ownership by institutions is positively related. Punte (2009) has also found the same in his study on Dutch firms. Regarding outside board directors and women board directors as determinants of CSR, some studies found support. However, results of this study do not support these determinants.

All in all, this study contributes to existing literature by investigating various determinants of CSR for Dutch listed firms. Results support firm size as determinant of CSR and provide some support for ownership concentration and ownership identity as determinants of CSR. Financial performance, outside board directors and women board directors are not supported as determinants.

7.2 LIMITATIONS

This study has provided relevant results. However, as with all studies, this study is subjected to limitations. The first limitation is the exclusion of the institutional effect, as this study is limited to

Dutch firms only. Previous studies have shown that institutional effects influence and contribute to CSR performance (e.g. Campbell, 2006, 2007). To examine the effect of the Dutch institutional context on CSR, future research is needed including multiple institutions. This leads to the second limitation, as this study may not be applicable for firms in other countries (institutions). The TB scores provided by the Ministry to identify the level of CSR activities are formed over Dutch firms only and thus difficult to compare. The third limitation is related to the assessment process of the TB scores that are applied in this study. The Ministry benchmarks Dutch firms based on their content and quality of CSR disclosures. Information disclosed can be different from actual firm actions. Thus, the level of CSR activities in this study can be different from the firm's actual CSR performance.

The fourth limitation is related to generalizability, as the final sample consist of only 181 firm-year observations. This sample size is limited as other studies investigating determinants of CSR include over 500 to 1000 firm-year observations (e.g. Brammer & Millington, 2004, 2006; Gamerschlag et al, 2010). Future research including more firm-year observations may build further reliability and validity of the findings and may find statistically significant levels for board characteristics as determinants of CSR for Dutch firms. The final limitation is related to the sample as well. Dutch firms included in this study are the largest firms based on market capitalization. Studies investigating CSR showed that CSR for large firms differ in comparison to medium and small firms (e.g. Udayasankar, 2008; Park & Ghauri, 2015). Future research including firms of all sizes may identify if determinants of CSR differ between large, medium and small firms. In addition to the limitations, there is another opportunity for future research. A broader set of variables that can act as factors influencing or contributing to CSR of Dutch firms could be considered. For instance, future research may focus on the relationship between characteristics of CEOs and CSR.

REFERENCES

Aguinis, H. & Glavas, A. (2012). What we know and don't know about corporate social responsibility: a review and research agenda. *Journal of Management,* 38(4), 932-968.

Aguilera, R.V., & Jackson, G. (2003). The cross-national diversity of corporate governance: dimensions and determinants. *Academy of Management Review*, 28(3), 447-465.

Aguilera, R.V., Rupp, D. E., Williams, A.C., & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: a multilevel theory of social change in organizations. *Academy of Management Review*, 32 (3), 836-863.

Albinger, H.S., & Freeman, S.J. (2000). Corporate social performance and attractiveness as an employer to different job seeking populations. *Journal of Business Ethics*, 28(3), 243-253.

Ali, I., Rehman, K.U., Ali, S.I., Yousaf, J., & Zia, M. (2010). Corporate social responsibility influences, employee commitment, and organizational performance. *Journal of Business Management,* 4, (12), 2796-2801.

Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: a study based on the top global firms. *Journal of Business Ethics,* 108 (1), 61-79.

Artiach, T., Lee, D., Nelson, D. & Walker, J., (2010). The determinants of corporate sustainability performance. *Accounting and Finance*, 50,31-51.

Barnea, A., & Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics*, 97 (1), 71-86.

Barnett, M.L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management review*, 32(3), 794-816.

Barnett, M.L., & Salomon, R.M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33 (11), 1304-1320.

Barney, J. (1991). Company resources and sustained competitive advantage. *Journal of Management*, 17 (1), 99-120.

Bartkus, B.R., Morris, S.A., & Seifert, B. (2002). Governance and corporate philanthropy, restraining robin hood? *Business Society*, 41(3), 319-344.

Bashir, R., Hassan, A., & Cheema, F.E.A. (2012). Impact of corporate social responsibility activities over the employees of the organizations: an exploratory study. *Journal of Management and Social Sciences*, 8 (2), 11-21.

Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibly and company reputation. *Journal of Business Ethics*, 97, 207-221.

Becchetti, L., Ciciretti, R., & Giovannelli, A. (2013). Corporate social responsibility and earnings forecasting unbiasedness. *Journal of Banking & Finance*, 37, 3654-3668.

Bhattacharya, C.B., Korschun, D., Sen, S. (2009). Strengthening stakeholder-firm relationships through mutually beneficial corporate social responsibility initiatives. *Journal of Business Ethics*, 85, 257-272.

Boerkamp, E. (2016). Ownership concentration, ownership identity and firm performance: an empirical analysis of Dutch listed firms. Essay: University of Twente. Retrieved from: http://essay.utwente.nl/70140/1/Boerkamp_BA_BMS.pdf (Retrieved May, 2016).

Boone, A.L., Field, L.C., Karpoff, J.M., & Raheja, C.G. (2007). The determinants of corporate board size and composition: an empirical analysis. *Journal of Financial Economics*, 85, 66-101.

Boulouta, I. (2013). Hidden connections: the link between board gender diversity and corporate social performance. *Journal of Business Ethics*, 113 (2), 185-197.

Bowen, H.R. (1953). *Social responsibilities of the businessman.* New York: Harper.

Branco, M.C., & Rodrigues, L.L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69, 111-132.

Branco, M.C., & Rodrigues, L.L. (2008) Factors influencing social responsibility disclosure by Portuguese companies. *Journal of Business Ethics*, 83, 685-701.

Brammer, S., & Millington, A. (2004). The development of Corporate Charitable Contributions in the U.K.: a stakeholder analysis. *Journal of Management Studies*, 41 (8), 1411- 1434.

Brammer, S., & Millington, A. (2005). Profit maximization vs. agency: an analysis of charitable giving by UK companies. *Cambridge Journal of Economics*, 29, 517-534.

Brammer, S., & Millington, A. (2006). Company size, organizational visibility and corporate philanthropy: an empirical analysis. *Business Ethics: A European review*, 15 (1), 6- 18.

Brammer, S., Millington, A., & Rayton, B. (2007). The contribution of corporate social responsibility to organizational commitment. *Journal of Human Resource Management*, 18 (10), 1701- 1719.

Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management,* 35 (3), 97-116.

Brammer, S.J. & Pavelin, S. (2004). Voluntary social disclosures by large UK companies. *Business Ethics: European Review*, 13 (3), 86-99.

Brammer, S.J. & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting*, 33 (8), 1168-1188.

Bureau van Dijk (BvD), (2016). Company information and business intelligence. Retrieved from http://www.bvdinfo.com/en-us/home (Retrieved August, 2016).

Campbell, J.L. (2006). Institutional analysis and the paradox of Corporate Social Responsibility. *American Behavioral Scientist,* 49 (7), 925-938.

Campbell, J.L. (2007). Why would organizations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32: 946–967.

Carmeli, A., Gilat, G., & Waldman, D.A. (2007). The role of perceived organizational performance in organizational identification, adjustment and job performance. *Journal of Management studies*, 44(6), 972-992.

Carroll, A.B. (1991). The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Business Horizons*, 34 (4), 39-48.

Carroll, A.B. (1999). Corporate social responsibility: evolution of a definitional construct. *Business and Society*, 38 (3), 268-295.

Chang, Y.K., Oh, W., Park, J.H., & Jang, M.G. (2015). Exploring the relationship between board characteristics and CSR: empirical evidence from Korea. *Journal of Business Ethics*, 1-18.

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35 (1), 1 – 23.

Chih, H.L., Chih, H.H., & Chen, T.Y., (2010). On the determinants of corporate social responsibility: international evidence on the financial industry. *Journal of Business Ethics*, 93, 115- 135.

Chiu, T., & Wang, Y. (2014). Determinants of social disclosure quality in Taiwan: an application of stakeholder theory. *Journal of Business Ethics*, 129(2), 373-398.

Cochran, P.L. & Wood, R.A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal,* 27(1), 42-56.

Coffey, B.S., & Wang, J. (1998). Board diversity and managerial control as predictors of corporate social performance. *Journal of Business Ethics,* 17(14), 1595-1603.

Cormier, D., & Magnan, M. (1999). Corporate environmental disclosure strategies: determinants, costs and benefits. *Journal of Accounting, Auditing & Finance*, 14(4), 429-451.

Cormier, D., & Magnan, M. (2003). Environmental reporting management: a continental European perspective. *Journal of Accounting and Public Policy*, 22(1), 43-62.

Cox, P., Brammer, S., & Millington, A. (2004). An empirical examination of institutional investor preferences for Corporate Social Performance. *Journal of Business Ethics,* 52 (1), 27-43.

Crisostomo, V.L. & Oliveira, M.R. (2015). An analysis of determinants of corporate social responsibility of Brazilian firms. *Brazilian Business Review, Forthcoming*. Retrieved from: http://dx.doi.org/10.2139/ssrn.2644837 (Retrieved August, 2016).

Dahlsrud, A. (2008). How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate social responsibility and environmental management,* 15 (1), 1-13.

Dam, L., & Scholtens, B. (2012). Does ownership type matter for corporate social responsibility? *Corporate Governance: An International Review*, 20(3), 233-252.

Dam, L., & Scholtens, B. (2013). Ownership concentration and CSR policy of European multinational enterprises. *Journal of Business ethics*, 118(1), 117-126.

Darnall, N., Henriques, I., & Sadorsky, P. (2010). Adopting proactive environmental strategy: the influence of stakeholders and company size. *Journal of Management Studies*, 47 (6), 1072-1094.

Davis, K. (1973). The case for and against business assumption of social responsibilities. *Academy of Management Journal*, 16 (2), 312-322.

De Villiers, C., Naiker, V., & van Staden, C.J. (2011). The effect of board characteristics on company environmental performance. *Journal of Management,* 37 (6), 1636-1663.

Degryse, H. & de Jong, A. (2006). Investment and internal finance: asymmetric information or managerial discretion. *International Journal of Industrial Organization,* 24, 125-147.

Derksen, J. (2013). The quality of corporate social responsibility (CSR) reporting in the Netherlands. Essay; University of Amsterdam. Retrieved from: http://dare.uva.nl/cgi/arno/show.cgi?fid=515827 (Retrieved May, 2016)

Dhaliwal, D., Li, O., Zhang, A., & Yang, Y. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: the initiations of corporate social responsibility reporting. *Accounting Review*, 86(1), 59–100.

Donaldson, T., & Preston, L.E. (1995). The stakeholder theory of the company: concepts, evidence and implications. *Academy of Management Review*, 20 (1), 65-91.

Doh, J.P., & Guay, T. R. (2006). Corporate social responsibility, public policy, and NGO activism in Europe and the United States: an institutional-stakeholder perspective. *Journal of Management* Studies, 43(1), 47 -72.

Doh, J.P., Howton, S.D., Howton, S.W., & Siegel, D.S. (2010). Does the market respond to an endorsement of social responsibility? The role of Institutions, Information and legitimacy. *Journal of Management*, 36 (6), 1461-1485.

Eisenhardt, K.M. (1989). Agency theory: an assessment and review. *Academy of Management Review*, 14 (1), 57-74.

El-Ghoul, S., Guedhami, O., Kwok, C.C.Y., & Mishra, D.R., (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking & Finance*, 35 (9), 2388- 2406.

Euronext, (2016). Euronext: we are Euronext. Retrieved from: https://www.euronext.com/fr/we-are-euronext (Retrieved August, 2016).

European Commission (2008). Corporate social responsibility: *a business contribution to sustainable development.* Retrieved from: http://europa.eu/scadplus/leg/en/lvb/n26034.htm (retrieved March, 2016).

European Commission (2011). Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the committee of the regions. Retrieved from: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0681&from=EN (retrieved August, 2016).

Etzion, D. (2007). Research on organization and the natural environment, 1992-present: a review. *Journal of Management,* 33, 637-664.

Frynas, J.G., & Yamahaki, C. (2016). Corporate social responsibility: review and roadmap of theoretical perspectives. *Journal of Business Ethics*, 25(3), 258-285.

Galbreath, J. (2011). Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *Journal of Management & Organization*, 17(1), 17-38.

Gamerschlag, R., Müller, K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: empirical evidence from Germany. *Review of Management Science*, 5, 233-262.

Gelb, D.S., & Strawser, J.A. (2001). Corporate social responsibility and financial disclosures: an alternative explanation for increased disclosure. *Journal of Business Ethics,* 33(1), 1-13.

Global Reporting Initiative (GRI), (2015). Empowering sustainable decisions. Retrieved from: https://www.globalreporting.org/Pages/default.aspx (Retrieved August, 2016).

Godfrey, P.C., Merrill, C.B., & Hansen, J.M. (2009). The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strategic Management Journal,* 30, 425-445.

Goss, A., & Roberts, G. (2011). The impact of corporate social responsibility on the cost of bank loan. *Journal of Banking & Finance*, 35, 1794–1810.

Government of the Netherlands, (2016). Putting corporate social responsibility (CSR) into practice: *government stimulus for CSR*. Retrieved from: https://www.government.nl/topics/corporate-social-responsibility-csr/contents (Retrieved August, 2016).

Gjolberg, M. (2009). The origin of corporate social responsibility: global forces or national legacies? *Socio-Economic Review,* 3, 1 -33.

Graafland, J.J., Van de Ven, B., & Stoffele, N. (2003). Strategies and instruments for organizing CSR by small and large business in the Netherlands. *Journal of Business Ethics*, 47, 45-60.

Graves, S.B., & Waddock, S.A. (1994). Institutional owners and corporate social performance. *Academy of Management Journal*, 37 (4), 1034-1046.

Greening, D.W., & Turban, D.B. (2000). Corporate social performance as a competitive advantage in attracting a quality workforce. *Business Society*, 39(3), 254-280.

Griffin, J.J., & Mahon, J.F. (1997). The corporate social performance and corporate financial performance debate: twenty-five years of incomparable research. *Business Society*, 36(1), 5-31.

Hackston, D., & Milne, J.M. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing, & Accountability Journal*, 9(1), 77-108.

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, 59, 5 - 21.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis.* Seventh Edition. Prentice Hall: New Jersey.

Harjoto, M.A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics*, 100, 45- 67.

Holder-Webb, L., Cohen, J., Nath, L., & Wood, D. (2009). The supply of corporate social responsibility disclosures among U.S. firms. *Journal of Business Ethics*, 84(4), 497-527.

Hull, C.E., & Rothenberg, S. (2008). Company performance: the interaction of corporate social performance with innovation and industry differentiation. *Strategic Management Journal,* 29 (7), 781-789.

Jackson, G., & Apostolakou, A. (2010). Corporate social responsibility in Western Europe: an institutional mirror or substitute? *Journal of Business Ethics*, 94, 371-394.

Jizi, M.I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate governance and corporate social responsibility disclosure: Evidence from the US Banking Sector. *Journal of Business Ethics,* 125 (4), 601-615.

Jo, H., & Harjoto, M.A. (2011). Corporate governance and firm value: the impact of corporate social responsibility. Journal of Business Ethics, 103 (3), 351-383.

Jo, H., & Na, H. (2012). Does CSR reduce firm risk? Evidence from controversial industry sectors. *Journal of Business Ethics,* 110 (4), 441-456.

Johnson, R.A., & Greening, D.W. (1999). The effects of corporate governance and institutional ownership on corporate social performance. *The academy of Management Journal*, 4 (5), 464-579.

Kabir, R., Cantrijn, D., & Jeunink, A. (1997). Takeover defenses, ownership structure and stock returns in the Netherlands: an empirical analyses. *Strategic Management Journal,* 18(2), 97-109.

Kabongo, J.D., Chang, K., & Li, Y. (2013). The impact of operational diversity on corporate philanthropy: an empirical study of U.S. companies. *Journal of Business Ethics*, 116 (1), 49 – 65.

Kansal, M., Joshi, M., & Batra, S.G. (2014). Determinants of Corporate social responsibility disclosures: evidence from India. *Advances in Accounting*, 30 (1), 217-229.

Kim, H., Lee, M., Lee, H., & Kim, N. (2010). Corporate social responsibility and employee-company identification. *Journal of Business Ethics*, 95, 557-569.

Kor, Y.Y., Sundaramurthy, C. (2009). Experience-based human capital and social capital of outside directors. *Journal of Management*, 35(4), 981-1006.

Lee, M.D.P. (2011). Configuration of external influences: the combined effects of institutions and stakeholder on corporate social responsibility strategies. *Journal of Business Ethics,* 102 (2), 281-298.

Li, W., & Zhang, R. (2010). Corporate social responsibility, ownership Structure, and political interference: Evidence from China. *Journal of Business Ethics*, 96 (4), 631-645.

Lourenco, I.C., & Branco, M.C. (2013). Determinants of corporate sustainability performance in emerging markets: the Brazilian case. *Journal of Cleaner Production*, 57, 131-141.

Mahoney, L., & Roberts, R.W. (2007). Corporate social performance, financial performance and institutional ownership in Canadian companies. *Accounting Forum*, 31 (3), 233-253.

Maignan, I., & Ralston, D.A. (2002). Corporate social responsibility in Europe and the U.S.: insights from businesses' self-presentations. *Journal of International Business studies*, 33(3), 497- 514.

Makni, R., Francoeur, C., & Bellavance, F. (2008). Causality between corporate social performance and financial performance: evidence from Canadian firms. *Journal of Business Ethics,* 89, 409-422.

Marano, V., & Kostova, T. (2015). Unpacking the institutional complexity in adoption of corporate social responsibility practices in Multinational Enterprises. *Journal of Management Studies*, 53 (1), 28-54.

Margolis, J.D., & Walsh, J.P. (2003). Misery loves companies: rethinking social initiatives by business. *Administrative Science Quarterly*, 48 (2), 268-305.

Matten, D., & Moon, J. (2008). Implicit and explicit CSR: a conceptual framework for a comparative understanding of corporate social responsibility. *The Academy of Management Review,* 33 (2), 404-424.

McGuire, J.B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of Management Journal*, 31(4), 854-872.

McWilliams, A., & Siegel, D.S. (2000). Corporate social responsibility and firm financial performance. *Strategic Management Journal*, 21 (5), 602-609.

McWilliams, A., Sigel, D.S., & Wright, P.M. (2006). Corporate social responsibility: strategic implications. *Journal of Management Studies*, 43(1), 1-18.

Mellahi, K., Frynas, G.J., Sun, P., & Siegel, D. (2016). A review of the nonmarket strategy literature: toward a multi-theoretical integration. *Journal of Management Studies*, 24, 1-31.

Mitchell, R.K., Agle, B.R., & Wood, D.J. (1997). Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Academy of Management review*, 22(4), 853-886.

Mishra, S., & Suar, D. (2010). Do stakeholder management strategy and salience influence corporate social responsibility in Indian Companies? *Social Responsibility Journal*, 6 (2), 306-327.

Muller, A., & Kolk, A. (2010). Extrinsic and intrinsic drivers of corporate social performance: evidence from foreign and domestic companies in Mexico. *Journal of Management Studies*, 47 (1), 1-26.

Muthuri, J.N., & Gilbert, V. (2011). An institutional analysis of corporate social responsibility in Kenya. *Journal of Business Ethics,* 98, 467-483.

Murphy, P.E., & Schlegelmilch, B.B. (2013). Corporate social responsibility and corporate social irresponsibility: introduction to a special topic section. *Journal of Business Research,* 66, 1807-1813.

Oh, W. Y., Chang, Y.K., & Martynov, A. (2011). The effect of ownership structure on corporate social responsibility: empirical evidence from Korea. *Journal of Business Ethics*, 104 (2), 283-297.

Orlitzky, M. & Benjamin, J. D. (2001). Corporate social responsibility and firm risk: a meta-analytic review, *Business and Society*, 40(4), 369–396.

Orlitzky, M., Schmidt, F.L., & Rynes, S.L. (2003). Corporate social and financial performance: a meta-analysis. *Organization Studies,* 24 (3), 404-441.

Padgett, R.C., & Galan, J.I. (2010). The effect of R&D intensity on corporate social responsibility. *Journal of Business Ethics,* 93, 407 – 418.

Park, B., & Ghauri, P.N. (2015). Determinants influencing CSR practices in small and medium sized MNE subsidiaries: a stakeholder perspective. *Journal of World Business*, 50 (1), 192-204.

Peloza, J. (2009). The challenge of measuring financial impacts from investments in corporate social performance. *Journal of Management*, 35 (6), 1518-1541.

Perez-Batres, L.A., Doh, J.P., Miller, V.V., & Pisani, M.J. (2012). Stakeholder pressures as determinants of CSR strategic choice: why do companies choose symbolic versus substantive self-regulatory codes of conduct? *Journal of Business Ethics*, 110 (2), 157- 172.

Peterson, D.K. (2004). The relationship between perceptions of corporate citizenship and organizational commitment. *Business & Society,* 43 (2), 296- 319.

Pfeffer, J., & Salancik, G.R. (1978). The external control of organizations: *a resource dependence perspective.* Harper & Raw: New York.

Pfeffer, J., & Salancik, G.R. (2003). The external control of organizations: *a resource dependence perspective.* Stanford: California.

Philips, R., Freeman, R.E., & Wicks, A.C. (2003). What stakeholder theory is not. *Business Ethics Quarterly*, 13 (4), 479-502.

Post, C., Rahman, N., & Rubow, E. (2011). Green governance: boards of directors' composition and environmental corporate social responsibility. *Business & Society*, 50 (1), 189-223.

Prado-Lorenzo, J.M., Gallego-Alvarez, I., & Garcia-Sanchez, I.M. (2009). Stakeholder engagement and corporate social responsibility reporting: the ownership structure effect. *Corporate Social Responsibility and Environmental Management,* 16(2), 94-107.

Punte, L. (2013). Determinants of corporate social responsibility activities of Dutch listed companies. *Essay: University of Twente*. Retrieved from: http://essay.utwente.nl/63942/ (Retrieved May, 2016).

Rao, K., & Tilt, C. (2016). Board diversity and CSR reporting: an Australian study. *Accountancy Resource,* 24 (2), 182-210.

Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics,* 88, 351-366.

Roberts, P.W. (1992). Determinants of corporate social responsibility disclosure: an application of stakeholder theory. *Accounting, Companies and Society*, 17(6), 595-612.

Rodrigo, P., & Arenas, D. (2008). Do employees care about CSR programs? A typology of employees according to their attitudes. *Journal of Business Ethics,* 83, 265-283.

Rupp, E.D., Ganapathi, J., Aguilera, R.V., & Williams, C.A. (2006). Employee reactions to corporate social responsibility: an organizational justice framework. *Journal of Organizational Behavior*, 27 (4), 537-543.

Russo, M.V., & Fouts, P.A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal,* 40(3), 534-559.

Sheehy, B. (2015). Defining CSR: problems and solutions. *Journal of Business Ethics,* 131 (3), 625-648.

Sic-code, (2016). The leader in SIC Codes. Retrieved from http://siccode.com/ (Retrieved August, 2016)

Sims, R.L., & Keon, T.L. (1997). Ethical work climate as a factor in the development of person-organization fit. *Journal of Business Ethics,* 16 (11), 1095-1105.

Stanwick, P.A., & Stanwick, S.D. (1998). The relationship between corporate social performance, and organizational size, financial performance, and environmental performance: an empirical examination. *Journal of Business Ethics,* 17 (2), 195-204.

Surroca, J., Tribo, J.A., & Waddock, S. (2010). Corporate responsibility and financial performance: the role of intangible resources. *Strategic Management Journal,* 31 (5), 463-490.

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43(1), 1-19.

Transparency Benchmark (TB), (2015A). *Ministry of Economic Affair: about transparency benchmark.* Retrieved from: https://www.transparantiebenchmark.nl/en/about-transparency-benchmark (Retrieved May, 2016).

Transparency Benchmark (TB), (2015B). *Ministry of Economic Affair: assessment process.* Retrieved from: https://www.transparantiebenchmark.nl/en/about-transparantiebenchmark/assessment-process (Retrieved May, 2016).

Turban, D.B., & Greening, D.W. (1996). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3), 658-672.

Turker, D. (2009A). How corporate social responsibility influences organizational commitment. *Journal of Business Ethics*, 89, 189-204.

Turker, D. (2009B). Measuring corporate social responsibility: a scale development study. *Journal of Business Ethics*, 85 (4), 411-427.

Udayasankar, K. (2008). Corporate social responsibility and Size. *Journal of Business Ethics*, 83, 167-175.

Ullmann, A. (1985). Data in search of a theory: a critical examination of the relationship among social performance, social disclosure, & economic performance. *Academy of Management Review*, 10, 450-477.

Waddock, S.A., & Graves, S.B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18 (4), 303-319.

Wang, T., & Bansal, P. (2012). Social Responsibility in new ventures: profiting from a long-term orientation. *Strategic Management Journal*, 33 (10), 1135-1153.

Wang, H., & Choi, J. (2013). A new look at the corporate social – financial performance relationship. *Journal of Management*, 39 (2), 416-441.

Wang, H., Tong, L., Takeuchi, R., & George, G. (2016). Corporate Social Responsibility: an overview and new research directions thematic issue on Corporate Social Responsibility. *Academy of Management Journal*, 59 (2), 534-544.

Wang, J., Coffey, B.S. (1992). Board composition and corporate philanthropy. *Journal of Business Ethics*, 11 (10), 771-778.

Webb, E. (2004). An examination of socially responsible companies' board structure. *Journal of Management and Governance*, 8, 255-277.

Williams, R.J. (2003). Woman on corporate boards of directors and their influence on Corporate Philanthropy. *Journal of Business Ethics*, 42 (1), 1 – 10.

Withisuphakorn, P., & Jiraporn, P. (2016). The effect of company maturity on corporate social responsibility (CSR): do older companies invest more in CSR? *Applied Economics Letters*, 23 (4), 298-301.

Wood, D.J. (1991). Corporate social performance revisited. *Academy of Management Review*, 16(4), 691-718.

Zeng, S., Xu, X., Yin, H., & Tam, C. (2012). Factors that drive Chinese listed firms in voluntary disclosure of environmental information. *Journal of Business Ethics,* 109 (3), 309-321.

APPENDICES

APPENDIX A   VARIABLE DEFINITIONS

Table 13: Variable definitions

Category	Variable	Description
Dependent	CSRSCORE	Score yes=1 or no=0 (dichotomous)
		Score (ratio scale)
Independent	TA	The natural logarithm of firm total assets
	TS	The natural logarithm of firm total sales
	ROA	Net income/ total assets
	ROE	Net income/ shareholder's equity
	ROA_EBIT	EBIT/ total assets
	TSR	(ending share price – beginning share price + dividends) / beginning share price
	OWNCON_PER	Percentage shareholding of the largest shareholder
	OWNCON_AV	Average percentage shareholding of the four largest shareholders
	MANOWN	Percentage shareholdings of managerial (managers, employees and directors) shareholders
	INSTOWN	Percentage shareholdings of institutional (banks, financial, insurance and mutual & pension funds) shareholders
	OUTSIDEBOARD	Number of outside board directors/ total board directors
	WOMENBOARD	Number of women board directors/ total board directors
	WOMENBOARD_EX	Number of executive women directors/ total executive board directors
Control	AGE	Years of incorporation
	LEV	Debt/ total assets
	RD	R&D expenditure/ total assets
	BOARDSIZE	Number of total board members
	INDSEN	Zero/one variable: (1) sensitive industries: mining & construction, manufacturing, transportation & public utilities, and (0) less sensitive: wholesale & retail trade, finance insurance & real estate, services.
	YEARDUM	Two dummy variables based on three years: (1) 2015, (2) 2012, (3) 2010.

APPENDIX B   TB SCORES PERIOD 2010-2015

Table 14: Firms in sample and TB scores 2010-2015

Firm	2015	2014	2013	2012	2011	2010	Firm	2015	2014	2013	2012	2011	2010
SBM OFFSHORE N.V.	167	97	95	132	138	96	ATRIUM REAL ESTATE	X	X	X	X	X	X
OCI N.V.	36	38	X	X	X	X	EUROCASTLE INVESTMENT	X	85	X	X	X	X
Koninklijke BOSKALIS WESTMINSTER N.V.	143	157	184	164	111	51	AIR FRANCE – KLM	166	168	168	169	170	151
HEIJMANS N.V.	173	156	176	164	145	116	ROYAL DUTCH SHELL PLC	146	192	183	120	143	150
Koninklijke BAM GROEP N.V.	193	192	195	189	186	155	VAN LANSCHOT N.V.	180	183	186	167	137	93
ACCELL GROUP N.V.	139	136	143	118	53	43	UNIBAIL-RODAMCO WINKELS B.V.	157	151	127	131	146	111
BE SEMICONDUCTOR INDUSTRIES N.V.	90	110	60	39	26	15	REFRESCO HOLDING B.V.	44	42	69	54	48	53
ASML HOLDING N.V.	153	147	166	150	143	143	ALTICE	X	X	X	X	X	X
ASM INTERNATIONAL N.V.	58	37	41	20	22	22	INTERTRUST	X	X	X	X	X	X
NEWAYS ELECTRONICS INTERNATIONAL N.V.	33	36	25	22	29	29	IMCD GROUP	X	X	X	X	X	X
NEDAP N.V.	67	87	64	93	98	10	BATENBURG TECHNIEK	X	X	X	X	X	X
VALUE8 N.V.	28	12	X	X	X	X	CURETIS	X	X	X	X	X	X
TOMTOM N.V.	67	26	85	70	45	91	EURONEXT	X	X	X	X	X	X
Koninklijke PHILIPS N.V.	195	189	198	195	194	196	NOVISOURCE	X	X	X	X	X	X
AALBERTS INDUSTRIES N.V.	81	65	93	75	81	28	EUROCOMMERCIAL PROPERTIES N.V.	76	85	58	38	35	31

Firm							Firm						
TKH GROUP N.V.	128	125	83	49	68	38	VASTNED N.V.	73	55	49	30	52	45
ARCELORMITTAL	X	X	106	X	X	X	NIEUW STEEN INVESTMENTS N.V.	51	X	X	51	X	X
APERAM N.V.	100	90	80	64	X	X	WERELDHAVE N.V.	105	111	44	54	47	48
ADVANCED METALLURGICAL GROUP N.V.	59	76	86	85	82	54	GROOTHANDELSGEBOUW N.V.	30	X	X	X	X	X
PORCELEYNE FLES	X	X	X	X	X	X	WDP	X	X	X	X	X	X
KENDRION N.V.	167	158	142	124	72	38	R&S RETAIL GROUP	X	X	X	X	X	X
HYDRATEC INDUSTRIES	X	X	X	X	X	X	DELTA LLOYD N.V.	124	133	166	146	144	120
AKZO NOBEL N.V.	196	193	198	198	193	156	NN GROUP N.V.	157	X	X	X	X	X
PROBIODRUG	X	X	X	X	X	X	AEGON N.V.	185	170	177	173	188	149
Koninklijke DSM N.V.	179	175	195	199	198	195	AGEAS INSURANCE INTERNATIONAL N.V.	49	X	X	X	X	X
HOLLAND COLOURS	X	X	X	X	X	X	KAS BANK N.V.	32	23	X	X	X	X
VER. NED. COMPAGNIE	153	146	180	169	143	83	FLOW TRADERS	X	X	X	X	X	X
Koninklijke BRILL N.V.	30	36	13	X	X	X	HAL TRUST UNITS	X	X	X	X	X	X
RELX N.V.	139	145	151	126	124	135	YATRA CAPITAL	X	X	X	X	X	X
TELEGRAAF MEDIA GROEP N.V.	153	134	87	78	78	48	ING BANK N.V.	181	172	188	185	179	172
BETER BED HOLDING N.V.	116	115	123	96	35	21	ABN AMRO BANK N.V.	171	155	176	153	122	82
HUNTER DOUGLAS N.V.	133	30	18	15	16	5	BINCKBANK N.V.	55	60	X	78	43	35
Koninklijke WESSANEN N.V.	161	161	175	175	98	71	RABOBANK	169	168	191	179	183	186
CORBION N.V.	119	110	152	143	82	81	BRUNEL INTERNATIONAL N.V.	54	43	37	54	42	25

HEINEKEN N.V.	182	186	193	193	172	143	GALAPAGOS N.V.	53	X	X	x	X	X
LUCAS BOLS	X	X	X	X	X	X	KIADIS PHARMA	X	X	X	x	X	X
UNILEVER GROUP N.V.	194	191	161	147	161	165	FUGRO N.V.	83	103	71	69	72	57
Koninklijke Vopak N.V.	131	110	143	146	132	96	ARCADIS N.V.	111	83	135	135	112	78
POSTNL N.V.	177	168	176	179	192	X	ESPERITE N.V.	18	X	X	X	X	X
TNT EXPRESS N.V.	131	118	161	160	192	X	AFC AJAX	X	X	X	X	X	X
Koninklijke KPN N.V.	192	193	196	194	192	197	DPA GROUP N.V.	27	X	X	X	X	X
ORDINA N.V.	150	147	84	87	119	98	GEMALTO N.V.	80	88	X	X	X	X
INVERKO	X	X	X	X	X	X	ORANJEWOUD N.V.	35	77	35	X	X	X
FAGRON N.V.	30	38	X	X	X	X	WOLTERS KLUWER N.V.	121	117	134	126	134	114
ROYAL REESINK	X	X	X	X	X	X	AND INT. PUBLISHERS	X	11	X	X	X	X
SLIGRO FOOD GROUP N.V.	111	120	138	99	93	53	CTAC	X	X	X	X	X	X
AMSTERDAM COMMODITIES N.V.	55	33	17	9	20	27	ICT Automatisering N.V.	50	24	45	x	X	x
Koninklijke AHOLD N.V.	168	168	176	164	175	124	TIE KINETIX	X	X	X	X	X	X
STERN GROEP N.V.	70	81	91	5	32	27	RANDSTAD HOLDING N.V.	140	146	144	120	102	112
GRANDVISION	X	X	X	X	X	X	USG PEOPLE N.V.	126	154	129	77	45	23
							SOURCE GROUP	X	X	X	X	X	X

APPENDIX C   SAMPLE AND TB SCORES

Table 15: Firms in sample and TB scores 2015, 2012, 2010

Firm	CSRSCORE 2015	CSRSCORE 2012	CSRSCORE 2010	Firm	CSRSCORE 2015	CSRSCORE 2012	CSRSCORE 2010
SBM OFFSHORE N.V.	167	132	96	ATRIUM REAL ESTATE	X	X	X
OCI N.V.	36	X	X	EUROCASTLE INVESTMENT	X	X	X
Koninklijke BOSKALIS WESTMINSTER N.V.	143	164	51	AIR FRANCE – KLM	166	169	151
HEIJMANS N.V.	173	164	116	ROYAL DUTCH SHELL PLC	146	120	150
Koninklijke BAM GROEP N.V.	193	189	155	VAN LANSCHOT N.V.	180	167	93
ACCELL GROUP N.V.	139	118	43	UNIBAIL-RODAMCO WINKELS B.V.	157	131	111
BE SEMICONDUCTOR INDUSTRIES N.V.	90	39	15	REFRESCO HOLDING B.V.	44	54	53
ASML HOLDING N.V.	153	150	143	ALTICE	X	X	X
ASM INTERNATIONAL N.V.	58	20	22	INTERTRUST	X	X	X
NEWAYS ELECTRONICS INTERNATIONAL N.V.	33	22	29	IMCD GROUP	X	X	X
NEDAP N.V.	67	93	10	BATENBURG TECHNIEK	X	X	X

VALUE8 N.V.	28	X	X	CURETIS	X	X	X
TOMTOM N.V.	67	70	91	EURONEXT	X	X	X
Koninklijke PHILIPS N.V.	195	195	196	NOVISOURCE	X	X	X
AALBERTS INDUSTRIES N.V.	81	75	28	EUROCOMMERCIAL PROPERTIES N.V.	76	38	31
TKH GROUP N.V.	128	49	38	VASTNED N.V.	73	30	45
ARCELORMITTAL	X	X	X	NIEUW STEEN INVESTMENTS N.V.	51	51	X
APERAM N.V.	100	64	X	WERELDHAVE N.V.	105	54	48
ADVANCED METALLURGICAL GROUP N.V.	59	85	54	GROOTHANDELSGEBOUW N.V.	30	X	X
PORCELEYNE FLES	X	X	X	WDP	X	X	X
KENDRION N.V.	167	124	38	R&S RETAIL GROUP	X	X	X
HYDRATEC INDUSTRIES	X	X	X	DELTA LLOYD N.V.	124	146	120
AKZO NOBEL N.V.	196	198	156	NN GROUP N.V.	157	X	X
PROBIODRUG	X	X	X	AEGON N.V.	185	173	149
Koninklijke DSM N.V.	179	199	195	AGEAS INSURANCE INTERNATIONAL N.V.	49	X	X
HOLLAND COLOURS	X	X	X	KAS BANK N.V.	32	X	X
VER. NED. COMPAGNIE	153	169	83	FLOW TRADERS	X	X	X
Koninklijke BRILL N.V.	30	X	X	HAL TRUST UNITS	X	X	X
RELX N.V.	139	126	135	YATRA CAPITAL	X	X	X
TELEGRAAF MEDIA GROEP N.V.	153	78	48	ING BANK N.V.	181	185	172
BETER BED HOLDING N.V.	116	96	21	ABN AMRO BANK N.V.	171	153	82

HUNDER DOUGLAS N.V.	133	15	5	BINCKBANK N.V.	55	78	35
Koninklijke WESSANEN N.V.	161	175	71	RABOBANK	169	179	186
CORBION N.V.	119	143	81	BRUNEL INTERNATIONAL N.V.	54	54	25
HEINEKEN N.V.	182	193	143	GALAPAGOS N.V.	53	X	X
LUCAS BOLS	X	X	X	KIADIS PHARMA	X	X	X
UNILEVER GROUP N.V.	194	147	165	FUGRO N.V.	83	69	57
Koninklijke Vopak N.V.	131	146	96	ARCADIS N.V.	111	135	78
POSTNL N.V.	177	179	X	ESPERITE N.V.	18	X	X
TNT EXPRESS N.V.	131	160	X	AFC AJAX	X	X	X
Koninklijke KPN N.V.	192	194	197	DPA GROUP N.V.	27	X	X
ORDINA N.V.	150	87	98	GEMALTO N.V.	80	X	X
INVERKO	X	X	X	ORANJEWOUD N.V.	35	X	X
FAGRON N.V.	30	X	X	WOLTERS KLUWER N.V.	121	126	114
ROYAL REESINK	X	X	X	AND INT. PUBLISHERS	X	X	X
SLIGRO FOOD GROUP N.V.	111	99	53	CTAC	X	X	X
AMSTERDAM COMMODITIES N.V.	55	9	27	ICT Automatisering N.V.	50	X	X
Koninklijke AHOLD N.V.	168	164	124	TIE KINETIX	X	X	X
STERN GROEP N.V.	70	5	27	RANDSTAD HOLDING N.V.	140	120	112
GRANDVISION	X	X	X	USG PEOPLE N.V.	126	77	23
				SOURCE GROUP	X	X	X

APPENDIX D   ADDITIONAL RESULTS FROM LOGISTIC REGRESSION ANALYSIS

Table 16: Additional results from logistic regression analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Intercept	-21.27**	-24.40**	-24.47**	-8.34**	-23.58**	-23.04**	-8.28**	-20.63**	-20.90**	-25.64**	-13.86**	-24.16**	-23.43**	-23.85**	-9.42**
	(44.38)	(45.78)	(45.97)	(38.19)	(40.03)	(37.39)	(27.80)	(28.27)	(29.11)	(34.35)	(25.55)	(22.72)	(23.15)	(21.65)	(15.57)
TA[a]		1.34**	1.34**		1.34**	1.37**		1.26*	1.25*	1.09*		.87	.85	.91	
		(9.16)	(9.16)		(7.94)	(7.83)		(6.37)	(6.35)	(4.87)		(2.56)	(2.48)	(2.66)	
ROA			1.62	3.10		2.92	4.05	2.24	2.20	3.92		3.55		3.55	2.13
			(.37)	(1.58)		(.96)	(2.02)	(.42)	(.42)	(1.42)		(.88)		(.88)	(.45)
TSR					-.68	-.81	.19	-.98	-1.03	-1.14	.40	-1.19	-.81	-1.21	-.16
					(.63)	(.80)	(.06)	(1.05)	(1.16)	(1.39)	(.26)	(1.37)	(.75)	(1.42)	(.04)
OWNCON_PER						-.82	-2.25	-.29		.93		1.22		1.26	
						(.28)	(3.37)	(.03)		(.29)		(.34)		(.36)	
MANOWN								-2.78	-2.93			-2.42	-2.37	-2.41	-3.48
								(1.31)	(1.70)			(.73)	(.82)	(.71)	(2.75)
INSTOWN										1.40	4.68**	1.54	1.70	1.54	
										(.51)	(10.72)	(.62)	(.82)	(.62)	
OUTSIDEBOARD												2.54	2.32	2.12	3.40
												(.51)	(.44)	(.32)	(1.68)
WOMENBOARD														1.15	3.77
														(.13)	(2.39)
AGE[a]	2.91**	2.81**	2.85**	2.19**	2.87**	2.91**	2.44**	2.45**	2.49**	3.25**	2.64**	2.82**	2.73**	2.77**	1.60*
	(23.03)	(20.74)	(20.74)	(21.52)	(16.01)	(15.66)	(18.30)	(9.74)	(10.19)	(14.78)	(15.06)	(9.48)	(9.79)	(8.89)	(6.19)
LEV	4.45**	2.59	2.71	5.63**	1.99	2.14	5.31**	1.69	1.74	2.75	6.40**	2.39	2.21**	2.29	4.63**
	(9.10)	(2.72)	(2.88)	(22.29)	(1.36)	(1.51)	(16.48)	(.88)	(.93)	(1.95)	(18.92)	(1.32)	(1.18)	(1.21)	(9.75)
BOARDSIZE[a]	12.15**	7.26**	7.20**		6.80**	6.07*		5.26	5.45*	9.34**		8.58*	8.33*	8.25*	
	(30.82)	(8.01)	(7.78)		(6.66)	(4.81)		(3.60)	(3.92)	(7.68)		(6.08)	(5.92)	(5.27)	
INDSEN	2.04**	2.25**	2.25**	.89**	2.37**	2.31**	.98*	2.19**	2.23**	2.19**	.68	1.94*	197**	1.98*	.97*
	(13.32)	(14.85)	(14.66)	(5.35)	(15.10)	(13.51)	(5.51)	(10.77)	(11.48)	(10.00)	(2.21)	(6.50)	(7.29)	(6.53)	(4.01)
YEAR2015	2.32**	2.39**	2.35**	1.18**	2.20**	2.12**	1.38*	2.14**	2.13**	1.75*	.91	1.66*	1.87*	1.54	1.15
	(13.55)	(12.66)	(12.20)	(6.81)	(8.88)	(7.83)	(6.07)	(7.44)	(7.41)	(4.75)	(2.22)	(4.09)	(5.47)	(3.01)	(2.98)
YEAR2012	1.36*	1.52*	1.47*	.96*	1.16	1.02	.99	1.33	1.31	.69	.80	1.00	1.36	.97	1.05
	(5.38)	(5.74)	(5.33)	(4.39)	(2.21)	(1.55)	(2.31)	(2.37)	(2.32)	(.62)	(1.26)	(1.14)	(2.33)	(1.06)	(2.02)
Nagelkerke R-square	.63	.67	.67	,38	.66	.65	.39	.59	.61	.68	.50	.63	.63	.63	.42
Chi-square	109.81**	120.63**	121.01**	59.45**	104.30**	99.24**	53.19**	71.93**	75.72**	100.90**	66.97**	73.61**	75.97**	73.73**	47.36**
Observations	173	173	173	178	154	149	154	122	125	142	145	115	118	115	124

Notes. Additional results from logistic regression analysis. Dependent variable is dichotomous, where 1 if the CSR score is higher than the median value, or 0 if not.

[a] Log transformed variable. Unstandardized coefficients are reported. Figures in parentheses represent the t-statistics. Variable definitions are described in Appendix A. *** $\rho < 0.01$. ** $\rho < 0.05$. * $\rho < 0.10$.

APPENDIX E   ADDITIONAL RESULTS YEARS SEPERATELY

Table 17: Additional results from OLS regression analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Panel A: Year 2015															
Intercept	.65**	.44*	.44*	1.31**	.38*	.36	1.29**	.37	.51*	.26	.15**	.30	.51	.46	1.44**
	(3.75)	(2.54)	(2.53)	(8.50)	(2.18)	(1.71)	(7.30)	(1.35)	(2.16)	(1.24)	(7.41)	(.89)	(1.81)	(1.40)	(5.35)
TA[a]		.13**	.13**		.14**	.14**		.18**	.17**	.11*		.13*	.12*	.15*	
		(3.39)	(3.35)		(3.45)	(3.30)		(3.30)	(3.25)	(2.47)		(2.26)	(2.10)	(2.53)	
ROA			-.14	.23		.32	.50	.60	.54	.31	.33	.49		.47	.24
			(-.35)	(.45)		(.68)	(.85)	(1.09)	(1.01)	(.65)	(.57)	(.89)		(.88)	(.40)
TSR					-.24*	-.28*	-.24	-.38**	-.35*	-.20	-.18	-.27	-.18	-.29*	-.21
					(-2.49)	(-2.43)	(-1.64)	(-2.71)	(-2.60)	(-1.76)	(-1.32)	(-1.86)	(-1.54)	(-2.04)	(-1.39)
OWNCON_PER						.07	-.16	.28		.20		.27		.35	
						(.42)	(-.78)	(1.06)		(1.16)		(1.04)		(1.34)	
MANOWN								-.40	-.34			-.24	-.21	-.30	-.60
								(-1.23)	(-1.10)			(-.72)	(-.67)	(-.91)	(-1.72)
INSTOWN										.32*	.56**	.34	.29	.29	
										(2.03)	(3.45)	(1.82)	(1.70)	(1.60)	
OUTSIDEBOARD												.06	-.10	-.04	.00
												(.17)	(-.34)	(-.12)	(.01)
WOMENBOARD														.49	.77**
														(1.83)	(2.72)
AGE[a]	.26**	.24**	.24**	.27**	.29**	.30**	.32**	.28**	.26**	.26**	.26**	.24**	.21**	.21*	.17*
	(4.78)	(4.60)	(4.58)	(3.95)	(5.27)	(5.10)	(4.29)	(3.45)	(3.70)	(4.23)	(3.57)	(2.94)	(2.83)	(2.54)	(2.04)
LEV	.08	-.14	-.16	.26	-.22	-.15	.19	-.21	-.21	-.08	.25	-.11	-.15	-.17	.12
	(.65)	(-1.08)	(-1.13)	(1.65)	(-1.59)	(-1.01)	(1.14)	(-1.20)	(-1.25)	(-.53)	(1.60)	(-.62)	(-.88)	(.95)	(.73)
BOARDSIZE[a]	.85**	.31	.32		.26	.20		.01	-.00	.45		.27	.33	.06	
	(5.56)	(1.44)	(1.46)		(1.22)	(.82)		(.03)	(-.01)	(1.57)		(.69)	(.90)	(.16)	
INDSEN	.16**	.18**	.18**	.15*	.19**	.18**	.15*	.17**	.17**	.15**	.12*	.14*	.16**	.16*	.18**
	(3.30)	(3.93)	(3.92)	(2.48)	(4.30)	(3.75)	(2.36)	(2.92)	(3.27)	(3.07)	(2.11)	(2.32)	(2.88)	(2.65)	(2.75)
Adjusted R-square	.49	.56	.56	.24	.60	.56	.27	.51	.53	.60	.39	.54	.55	.57	.35
Observations	68	68	68	68	64	59	59	50	53	56	60	48	51	48	53

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Panel B: Year 2012

	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26	Model 27	Model 28	Model 29	Model 30
Intercept	.24	-.01	-.01	1.18**	-.15	-.11	1.16**	-.02	-.02	.26	1.05**	.50	.37	.73	.92
	(.72)	(-.04)	(-.02)	(4.50)	(-.37)	(-.26)	(3.88)	(-.04)	(-.05)	(.71)	(4.48)	(1.08)	(.85)	(1.50)	(1.95)
TA[a]		.14*	.14*		.15	.15		.15	.15	.03		.05	.04	.08	
		(2.05)	(2.03)		(1.93)	(1.90)		(1.74)	(1.75)	(.41)		(.53)	(.45)	(.83)	
ROA			-.07	-.12		-.02	.01	-.15	-.17	-.10		-.39		-.41	-.28
			(-.17)	(-.25)		(-.05)	(.02)	(-.20)	(-.24)	(-.25)		(-.65)		(-.70)	(-.35)
TSR					-.19	-.19	-.05	-.29	-.28	-.02	.06	-.03	-.10	.04	-.19
					(.93)	(-.91)	(-.24)	(-1.12)	(-1.13)	(-.09)	(.34)	(-.14)	(-.49)	(.17)	(-.67)
OWNCON_PER						-.07	-.28	-.05		-.11		-.11		-.12	
						(-.28)	(-1.11)	(-.20)		(-.54)		(-.53)		(-.58)	
MANOWN								-.67	-.69			-.55	-.50	-.45	-.80
								(-1.76)	(-1.88)			(-1.69)	(-1.70)	(-1.38)	(-1.92)
INSTOWN										.13	.47*	.06	.08	.03	
										(.53)	(2.03)	(.22)	(.32)	(.11)	
OUTSIDEBOARD												-.28	-.22	-.47	.82
												(-.53)	(-.43)	(-.87)	(1.46)
WOMENBOARD														.76	.58
														(1.36)	(.86)
AGE[a]	.06	.03	.03	.09	.05	.06	.13	.05	.04	.08	.09	.07	.07	.02	-.04
	(.62)	(.34)	(.32)	(.84)	(.47)	(.47)	(1.01)	(.34)	(.32)	(.80)	(.82)	(.61)	(.64)	(.21)	(-.29)
LEV	.8	.22	.22	.85**	.20	.20	.83**	.05	.05	.47	.93**	.33	.40	.26	.68
	(1.44)	(.83)	(.81)	(3.18)	(.66)	(.63)	(2.78)	(.12)	(.13)	(1.76)	(3.85)	(.89)	(1.13)	(.72)	(1.75)
BOARDSIZE[a]	1.28**	.71	.71		.73	.70		.70	.72	1.01*		.98*	1.02*	.73	
	(3.87)	(1.67)	(1.65)		(1.62)	(1.46)		(1.40)	(1.48)	(2.43)		(2.20)	(2.39)	(1.55)	
INDSEN	.26**	.27**	.27**	.20*	.27**	.27**	.18	.32**	.32**	.18*	.11	.23*	.24*	.23*	.17
	(3.04)	(3.34)	(3.31)	(2.23)	(3.12)	(2.99)	(1.93)	(3.07)	(3.12)	(2.27)	(1.33)	(2.38)	(2.58)	(2.43)	(1.49)
Adjusted R-square	.33	.37	.36	.14	.36	.33	.14	.36	.38	.41	.27	.43	.45	.44	.22
Observations	54	54	54	57	50	50	53	41	41	49	51	40	40	40	41

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Panel C: Year 2010

	Model 31	Model 32	Model 33	Model 34	Model 35	Model 36	Model 37	Model 38	Model 39	Model 40	Model 41	Model 42	Model 43	Model 44
Intercept	-.42	-.60*	-.60*	.87**	-.68	-.42	-.54	-.72	-.32	.79*	.03	-.35	.11	.85
	(-1.64)	(-2.25)	(-2.22)	(3.33)	(-1.96)	(-1.34)	(-1.21)	(-1.60)	(-.98)	(2.35)	(.05)	(-.50)	(.15)	(1.44)
TA[a]		.11	.11		.12	.13*	.14	.14	.11		.11	.11	.12	
		(1.92)	(1.90)		(1.73)	(2.20)	(1.94)	(1.94)	(1.79)		(1.19)	(1.09)	(1.20)	
ROA			.02	.37		-.13	-.02	.02	.06		.16		.14	.16
			(.04)	(.64)		(-.29)	(-.03)	(.04)	(.14)		(.26)		(.22)	(.21)
TSR					.02	.06	.07	.07	.08	.17	.09	.05	.09	.07
					(.15)	(.55)	(.50)	(.49)	(.69)	(1.09)	(.48)	(.24)	(.44)	(.33)
OWNCON_PER						-.69**	-.44		-.96**	-1.19**	-1.00		-1.01	
						(-3.59)	(-1.57)		(-4.18)	(-3.98)	(-2.00)		(-1.95)	
MANOWN							.62	-1.04**			.02	-.97*	.02	-1.09*
							(1.42)	(-2.87)			(.03)	(-2.35)	(.02)	(-2.21)
INSTOWN									.22	.67*	.33	.30	.30	
									(.94)	(2.25)	(.92)	(.79)	(.79)	
OUTSIDEBOARD											-.50	-.16	-.57	-.06
											(-.86)	(-.27)	(-.91)	(-.10)
WOMENBOARD													.30	1.24
													(.37)	(1.40)
AGE[a]	.15*	.13	.13	.18	.10	.13	.16	.16	.13	.17	.13	.14	.13	.11
	(2.28)	(1.93)	(1.91)	(1.88)	(1.04)	(1.48)	(1.39)	(1.40)	(1.45)	(1.43)	(.93)	(.92)	(.89)	(.70)
LEV	.41*	.26	.26	1.01**	.37	.39	.47	.48	.47	1.10**	.58	.66	.55	1.11*
	(2.01)	(1.22)	(1.17)	(3.66)	(1.23)	(1.51)	(1.37)	(1.37)	(1.70)	(3.38)	(1.31)	(1.45)	(1.20)	(2.38)
BOARDSIZE[a]	1.77**	1.31**	1.31**		1.31**	1.01*	.95*	1.01*	.95*		.80	.87	.74	
	(7.20)	(3.86)	(3.80)		(3.13)	(2.71)	(2.09)	(2.15)	(2.51)		(1.36)	(1.40)	(1.16)	
INDSEN	.07	.10	.10	.03	.11	.11	.15	.17	.13	.04	.12	.08	.13	.05
	(1.12)	(1.53)	(1.51)	(.34)	(1.42)	(1.56)	(1.53)	(1.75)	(1.71)	(.40)	(.88)	(.59)	(.90)	(.41)
Adjusted R-square	.61	.63	.63	.18	.62	.72	.63	.60	.74	.51	.61	.56	.58	.26
Observations	51	51	51	53	40	40	31	31	37	38	27	27	27	30

Notes. Additional results from OLS regression analysis for years separately. [a]Log transformed variable. Unstandardized coefficients are reported. Figures in parentheses represent the t-statistics. Variable definitions are described in Appendix A. *** $\rho < 0.01$. ** $\rho < 0.05$. * $\rho < 0.10$.

APPENDIX F   ADDITIONAL RESULTS FOR INDEPENDENT VARIABLES

Table 18: Additional results for independent variables from OLS regression analysis

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Intercept	-.13	-.12	1.08**	-.15	.09	1.23**	.04	.07	.10	.10	1.07**
	(-.82)	(-.77)	(8.12)	(-.93)	(.47)	(8.13)	(.19)	(.42)	(.43)	(.43)	(5.07)
TS[a]	.12**	.13**		.13**	.12**		.17**	.10**	.13**	.14**	
	(3.87)	(3.96)		(3.93)	(3.51)		(3.81)	(3.18)	(3.27)	(3.36)	
ROA_EBIT		-.23	.07		-.15	.16	-.27	-.12	-.24	-.22	.03
		(-.88)	(.22)		(-.48)	(.44)	(-.76)	(-.41)	(-.78)	(-.71)	(.09)
ROE				-.15							
				(-1.30)							
TSR					-.09	-.05	-.11	-.05	-.07	-.07	-.05
					(-1.15)	(-.59)	(-1.31)	(-.06)	(-.90)	(-.83)	(-.57)
OWNCON_AV					-.65*	-1.25**	-.11	-.61**	-.30	-.23	-.52
					(-2.55)	(-4.38)	(-.34)	(-2.74)	(-1.04)	(-.79)	(-1.55)
MANOWN							-.79**		-.55*	-.61**	-.51*
							(-3.38)		(-2.59)	(-2.75)	(-2.04)
INSTOWN								.25*	.27*	.25*	.56**
								(2.12)	(2.13)	(1.94)	(3.93)
OUTSIDEBOARD									-.05	-.04	.11
									(-.21)	(-.18)	(.42)
WOMENBOARD_EX										.18	.26
										(.95)	(1.15)
AGE[a]	.12**	.12**	.18**	.13**	.15**	.22**	.12*	.14**	.11*	.11*	.09
	(2.81)	(2.80)	(3.43)	(2.88)	(2.91)	(3.77)	(1.97)	(2.90)	(2.02)	(1.99)	(1.55)
LEV	.18	.15	.61**	.15	.10	.48**	.02	.14	.07	.07	.56**
	(1.65)	(1.27)	(4.58)	(1.30)	(.78)	(3.36)	(.09)	(1.20)	(.49)	(.51)	(3.90)
BOARDSIZE[a]	.80**	.79**		.83**	.67**		.50*	.78**	.62**	.58*	
	(4.68)	(4.65)		(4.81)	(3.61)		(2.31)	(4.01)	(2.65)	(2.44)	
INDSEN	.13**	.13**	.13**	.13**	.15**	.15**	.13**	.11**	.11*	.11*	.10
	(3.49)	(3.45)	(2.68)	(3.43)	(3.53)	(3.06)	(2.73)	(3.01)	(2.42)	(2.46)	(1.91)
YEAR2015	.23**	.23**	.18**	.23**	.20**	.15*	.23**	.18**	.21**	.20**	.17*
	(5.12)	(5.13)	(3.26)	(5.16)	(3.59)	(1.20)	(3.61)	(3.52)	(3.67)	(3.56)	(2.49)
YEAR2012	.13**	.13**	.14*	.13**	.09	.10	.12	.12	.15*	.16*	.15
	(2.81)	(2.86)	(2.43)	(2.80)	(1.28)	(1.20)	(1.56)	(1.92)	(2.25)	(2.32)	(1.90)
Adjusted R-square	.49	.49	.19	.49	.48	.26	.50	.57	.58	.58	.40
Observations	173	173	178	171	150	155	122	145	117	117	117

Notes. Additional results from OLS regression analysis. Robustness checks for independent variables. [a]Log transformed variable. Unstandardized coefficients are reported. Figures in parentheses represent the t-statistics. Variable definitions are described in Appendix A. *** $\rho < 0.01$. ** $\rho < 0.05$. * $\rho < 0.10$.