

**OWNERSHIP STRUCTURES ASSOCIATED WITH  
COMPANY PERFORMANCE ON CORPORATE SOCIAL  
RESPONSIBILITY: EVIDENCE FROM THE NORDIC  
STOCK LISTED COMPANIES**

**Jyväskylä University  
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## ABSTRACT

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Title Ownership Structures associated with Company Performance on Corporate Social Responsibility: Evidence from the Nordic Stock Listed Companies	
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<p>Abstract</p> <p>A higher presence in topic literature and the practical field indicates the connection between the company's financial performance and subsequent corporate social responsibility performance. Supporting this, the shareholders' demands on these matters have increased, with investors requiring more sustainability initiatives taken by the firms. This thesis focuses on different company ownership structures and their potential connection to the company performance on corporate social responsibility. More specifically, this thesis aims to study the Nordic companies' ownership structures by focusing primarily on institutional and state owners and identify whether these owners could be associated with firm performance on different corporate sustainability metrics.</p> <p>The previous literature about the topic has emerged mixed results. The empirical research has focused on studying the topic by focusing on a specific industry or has been conducted on a global scale. Only a few previous studies have included Northern European companies within their samples. Therefore, a study composing a sample from Danish, Finnish, Norwegian, and Swedish publicly listed companies allow further examination, especially on this market area.</p> <p>The empirical part was implemented by carrying out firm and year fixed effects regression models using the sample of 286 companies listed in the Northern European (Finland, Sweden, Norway, and Denmark) stock exchanges. Both institutional and state ownership was assigned as independent variables to represent the specific ownership structure. Further on, the different variations of environmental, social and governance (ESG) scores were applied to represent the firm performance on corporate social responsibility as a dependent variable on the regression model.</p> <p>The findings implied no significant results between the institutional ownership and firm performance on various corporate social responsibility metrics. Companies with a higher presence of state ownership were found to perform better on corporate sustainability in general. Moreover, the higher state ownership was also identified to associate with higher performance, especially on the environmental matter. Another aim for this thesis was also to identify potential differences between the sample countries. These results implied somewhat mixed results, especially when incorporating the industry-specific characteristics into the equation.</p>	
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## TIIVISTELMÄ

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<p>Tiivistelmä –</p> <p>Korkeampi esiintyvyys sekä aiheeseen liittyvässä kirjallisuudessa, että empiirisesti todistetussa tutkimuksessa on todistanut yhteyden yrityksen taloudellisen menestyksen sekä yritysvastuun välillä. Tätä havaintoa tukien, myös osakkeenomistajien odotukset yrityksen vastuullisuusmenestymiseen ovat tiukentuneet. Tämä tutkielma käsittelee yritysten erilaisia omistajusrakenteita, sekä niiden mahdollista yhteyttä yrityksen menestymiseen eri osa-alueille vastuullisuusmittareilla mitattuna. Tarkemmin sanottuna, tässä tutkielmassa tarkastelen pohjoismaalaisten yritysten instituutio- ja valtionomisteisten yritysten menestystä eri vastuullisuusmittareilla mitattuna.</p> <p>Aikaisempi kirjallisuus aiheesta on johtanut eriäviin tuloksiin. Empiiriset tutkimukset aiheesta ovat keskittyneet tarkastelemaan ilmiötä enemmän esimerkiksi toimialakohtaisesti tai globaalissa mittakaavassa. Vain harva aikaisempi tutkimus on sisällyttänyt pohjoismaalaiset pörssi-yhtiöt otantaansa, joten tutkimus keskittyen ainoastaan Norjan, Tanskan, Suomen ja Ruotsin pörssilistattuihin yhtiöihin mahdollistaa tarkemman tarkastelun erityisesti tällä markkina-alueella.</p> <p>Tämän tutkielman empiirinen osuus on toteutettu hyödyntämällä yritys- ja vuosisidonnaisia kiinteiden vaikutusten regressiomallia. Lopullinen otanta koostui 286 yrityksestä, jotka tutkimushetkellä oli listattuna Oslon, Helsingin, Tukholman tai Kööpenhaminan pörssiin. Sekä instituutio- kuin valtionomistajuus esiintyi omissa malleissaan selittävänä muuttujana. Riippuva muuttuja tässä empiirisessä tutkimuksessa oli yrityksen vastuullisuusmenestys, jota mitattiin yrityksen ympäristö, sosiaalisten ja hallinnollisten (ESG) pisteytysten avulla.</p> <p>Tuloksien valossa ei ole havaittavissa huomattavaa yhteyttä yrityksen instituutio-omistajuuden ja vastuullisuusmenestyksen välillä. Yritykset, jotka raportoivat korkeammasta valtionomistajuudesta menestyivät paremmin vastuullisuusasioissaan. Valtionomistajuus voitiin yhdistää myös parempaan menestykseen erityisesti ympäristöasioissa. Tutkimuksen tavoitteena oli myös tarkastella mahdollisia eroavaisuuksia otantaan kuuluvien markkinoiden välillä. Tulokset maakohtaisista otannoista osoittivat erilaisia tuloksia, erityisesti tarkasteltaessa toimialan vaikutusta tähän yhtälöön.</p>	
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# 1 INTRODUCTION

Increased demand toward sustainability issues evokes the need to study the potential relationships that specific stakeholders might have on companies' performance other than financial metrics. Moreover, focusing mainly on certain shareholders could offer valuable insights into whether specific ownership structures of the firm could potentially strengthen or weaken the subsequent performance on corporate social responsibility related matters. This thesis aims to study different company ownership structures and their possible relationship to a company's performance measured in corporate social responsibility (CSR) metrics.

The main objective is to examine the potential links to whether certain types of equity owners are correlated with better performance on CSR matters. Moreover, another point of interest in this paper is the potential explanations of whether certain ownership structures could explain the better CSR engagement of the companies due to pressure or legislative reasons or other possible factors. This Master's Thesis aims to identify whether abovesaid relationships occur among the Nordic stock listed companies. Furthermore, the key focus is to determine whether institutional or state ownership can be associated with company CSR performance and whether this relationship occurs stronger (or weaker) in specific contexts.

Sustainability can be considered as a megatrend amongst the companies and their investors (Eccles & Klimenko, 2019). Because of increasing pressure from the consumers, public governance objectives, shareholders, and legislative actions (Eccles & Klimenko, 2019; Ioannou & Serafeim, 2010; Johnson & Greening, 1999; Lee, 2009; Pelozo et al., 2012), companies are in the vital role of paying more attention to their triple bottom line, focusing on their economic, ecological, and social impact (Eccles & Klimenko, 2019).

Due to the increased profile within the relevant stakeholders, studies about corporate social responsibility have grown in number during the past few decades (Galant & Cadez, 2017; Garde-Sanchez et al., 2018; Griffin & Mahon, 1997; Orlitzky et al., 2003). Moreover, the attention in the literature has been drawn into the discussion of whether the relationship between corporate sustainability and financial performance of a firm exists (Griffin & Mahon, 1997) or should even be considered as an important relationship to consider (see, for instance, Alexander & Buchholz, 1978). Some scholars argue that investing in CSR weakens the firm's future profitability (e.g., Friedman, 1970). In contrast, some scholars have stated that firms engaging in CSR are able to perform better also on financial matters (Orlitzky et al., 2003), whereas some even suggest that firms are not able to succeed in the long term without it (e.g., Fernando et al., 2019; Earnhart & Lizal, 2006; Lamb & Butler, 2016;). Even though the scholars are not unanimous on whether the relationship between corporate financial performance and corporate social performance exists as a positive or negative, it is still recognized as a trend relevant to consider both in the practical field and academia.

Companies performing better both in financial and CSR metrics can also be seen to gain a position as a more lucrative investment target in the eyes of investors (Harjoto et al., 2017). Therefore, to ensure a better stakeholder relationship, companies can benefit from investing in CSR (Peloza et al., 2021). If not compliant with various CSR related aspects, some investors are even found to avoid these companies (Clark & Hebb, 2005) as such might bring unnecessary risk within these investors' portfolios. Some investor profiles are even recognized as promoting actors to encourage companies to involve more sustainability-related initiatives (Erhemjamts & Huang, 2019).

The role of ownership structures influencing the company CSR performance has evidenced somewhat differing results within the previous literature. Some scholars have been able to identify a negative association with specific ownership structures and company CSR performance (e.g., Ducassy & Montandrou, 2015; Fan et al., 2021; Seckin-Halac et al., 2021), while some suggest a strengthening effect of certain ownership presence to corporate responsibility (e.g., Aksoy et al., 2020; Bose et al., 2017; Harjoto & Rossi, 2019; Kabir & Thai, 2021; Lamb & Butler, 2016). Some studies have also focused on the factors that might influence this relationship (e.g., Samara et al., 2017), while some have also concluded with insignificant findings (e.g., Cruz et al., 2014; Dam & Scholtens, 2012).

The sample of this study is conducted from companies from the Nordic listed companies resulting in a final sample of 286 companies from Denmark, Finland, Norway, and Sweden. The previous literature from the topic field has rather focused either on a specific industry (see, for instance, Darus et al., 2014; Govindan et al., 2021; Liu et al., 2019; Uyar et al., 2020) or focused on studying the companies from the perspective of a particular ownership structure, such as Abeysekera and Fernando (2020), who focused only on family-owned firms, whereas Bose et al. (2017) and Motta and Uchida (2018) studied only the relationship between the institutional ownership and CSR.

Geographically, more studies have been conducted either with global samples (for instance, Samara et al., 2017; Seckin-Halac et al., 2021; Uyar et al., 2020) or focusing on Asian (Bose et al., 2017; Fan et al., 2021; Shu & Chiang, 2020) or U.S context (e.g., Erhemjamts & Huang, 2019; Lamb & Butler, 2016). A relatively small number of studies focused merely on the European context (for instance, Cruz et al., 2014; Ducassy & Montandrou, 2015; Earnhart & Lizal, 2006; Harjoto & Rossi, 2019). Therefore, it is justified to conduct a study with a focus on these above mentioned Northern European markets. This also answers the research's calls by, e.g., Faller and Knyphausen-Aufseß (2018), who highlighted the need for studies with cross-national samples. Moreover, this also allows the comparison of findings, as it would be interesting to evaluate whether the findings between the Nordic markets are alike or highly differing.

The identified research problems will be studied by carrying out an empirical study with regression models by incorporating institutional and state ownerships of firms as independent (explanatory) variables and corporate social responsibility as a dependent (response) variable. Multiple controlling variables



will also be applied to the equation. The regression models will be applied with firm and year level fixed effects regression models.

The results imply that a higher proportion of state ownership within the Nordic stock listed companies could explain the firms' better performance, especially on environmental matters on CSR. Finnish companies evidenced the positive association also within the companies that were not characterised to operate within the industries that would be more prone to CSR issues. Danish companies also benefitted from the state presence with enhancing effect to their CSR, especially on social matters.

Institutional ownership was found to enhance the social performance of the companies that operated within the industries sensitive to various sustainability-related issues. When scrutinizing the results from the separate countries, Danish companies seemed to benefit the most from the institutional ownership when measuring their performance, especially on environmental and governance matters. Swedish companies evidenced an enhancing effect of institutional ownership on their social pillar scores. Further on, institutional ownership seemed to enhance the overall CSR performance of Norwegian companies that operated within industries more subject to various sustainability threats, while Finnish companies were exhibiting somewhat mixed results.

This Master's Thesis is structured as follows. First, the theoretical background with relevant literature from the topic field will be introduced. The previous literature will be analysed to identify possible trends in existing research, as well as to point out potential gaps in the previous literature where further research is needed. Further on, section 4 will introduce the empirical part of this thesis with the data and methods used to answer the conducted research questions. Section 5 will focus on the findings acquired and include the discussion of these, and finally, conclusions are represented at the very end of this paper with suggestions for future research.

## 2 THEORETICAL FRAMEWORK

### 2.1 Corporate Responsibility as a Rising Trend

An increasing amount of shareholder interest is found to gravitate towards the companies aware of different sustainability-related issues (Eccles & Klimenko, 2019; Sievänen et al., 2013). Further, the number of instruments that comply with socially responsible investing (SRI) is rising in number (Eccles & Klimenko, 2019). Therefore, it is relevant to discuss more what lies behind this trend and how different types of shareholders could potentially be associated with it.

Corporate social responsibility and its relation to the business world has risen in status both in the daily operations of companies but also within the scientific field. The Stakeholder Theory by Freeman (1984) can be assessed as one of the starting points where corporate actions beyond the traditional profit maximisation started to draw more attention amongst scholars. This theory advocates for the argument that corporations bear responsibility beyond shareholder value maximisation. Moreover, rather than purely focusing on the shareholders' interests, this theory supports the ideology of minding the different participants, directly or indirectly associated ones, into the company decision making.

Besides the stakeholder theory, the opposing stand of Shareholder Theory by Friedman (1970) considers the corporate activities initiated from other than financial motivations are seen as irresponsible. This theory considers the shareholders to be interested in only gaining maximal financial returns to their investments. Thus, the company investing their profits in initiating corporate socially responsible operations might lead to investors experiencing this to have a negative effect on their dividends or other potential returns gained to their assets.

Responsible investing has widely grown during the past decades. This has also been seen in the behaviour of investors, as they are seeking more socially responsible investments in their portfolios (Eccles & Klimenko, 2019). Although the investment decision-making is made based on the financial expectations and potential yields from the investment, investors pay more attention to the factors that might either threaten or strengthen the profitability expectancy of their portfolio companies (Petersen & Vredenburg, 2009; Sievänen et al., 2013). Further on, the investors include the CSR activities of the portfolio companies as other criteria when making the final decision whether to invest or not (Harjoto et al., 2017; Sievänen et al., 2013).

## 2.2 Corporate Social Performance

Different to company financial performance, corporate social responsibility does not have a clear and structured manner on how it is measured or reported (Aybars et al., 2019; Galant & Cadez, 2017). However, becoming one of the essential criteria besides the financial metrics in the investors' decision-making (Sievänen et al., 2013), corporate social performance (CSP) is disclosed in company publications in growing numbers (Galant & Cadez, 2017).

From the regulatory perspective, companies do face obligations to publish information about their non-financial activities. The legal obligations towards company CSR disclosures have stemmed mainly from the different stakeholders' increased attention to prevailing sustainability issues and the demand for more action from companies to answer these (Ioannou & Serafeim, 2010; Renneboog et al., 2008). Within the EU, all publicly listed companies have been mandated to disclose their non-financial information about their operations. This directive (Directive 2014/95/EU) obligates companies meeting the specific criteria to offer this information yearly, starting from 2017. Similar regulations within the EU have also come into force, such as Sustainable Finance Disclosure Regulation (SFDR), making it easier to compare different financial instruments from the perspective of corporate social responsibility.

As mentioned, the regulatory obligations stem from the pressure of various stakeholders to companies taking more responsibility in sustainability-related matters. Enhanced transparency on these matters also helps their shareholders to make more sustainable decisions with their investments (Orlitzky et al., 2003). Nevertheless, reporting on corporate social responsibility might not exclude the threat of biased interpretation of this information (Berry & Junkus, 2013), therefore reporting of these matters should be done in a reliable manner.

Being a multidimensional variable (Griffin & Mahon, 1997), quantitative measures of CSR offer the most comparable conclusion about the company's overall performance on these aspects (Al-Tuwaijri et al., 2003; Aybars et al., 2019; Galant & Cadez, 2017). The numerical values of CSR performance also offer more valuable insights for the potential investors (Berry & Junkus, 2013), as the quantitative methods of measuring CSR performance of firm might be subject to biased picture (Galant & Cadez, 2017) or even deliberate misinterpretation.

## 2.3 CSR in relation to Corporate Financial Performance

Company initiatives within social responsibility, especially its potential influence on its corresponding financial profitability, have been a trend in the previous literature. The results have been somewhat differing, with some scholars suggesting that investing in CSR is the only way in which companies can also thrive in the future (e.g., Fernando et al., 2019; Lamb & Butler, 2016), eventually allowing companies to outperform their peers also in financial metrics (e.g.,

Mattila, 2006). Contrarily, some believe that investments beyond the direct profit maximization are paid from the shareholders' returns and thus might not bring requisite value for the investors (Orlitzky et al., 2003).

Two different schools of Stakeholder Theory (Freeman, 1984) and Shareholder Theory (Friedman, 1970) about CSR and companies role pursuing these initiatives can be seen to partition the literature on this matter. As these different theories represent, responsible initiatives pursued by a company are controversially assessed when discussing its relation to the company's bottom line. However, the question is not explicit, as the previous literature has shown.

In previous literature, the relationship between corporate financial performance (CFP) and corporate social performance (CSP) has been a trend during the past few decades. Although many scholars can identify a positive association between these two (see for instance, Grewatsch & Kleindienst, 2015; Earnhart & Lizal, 2006), some scholars still argue this relationship either existing as either negative or non-existent. Moreover, the relationship has also been discussed to exist more as a bidirectional (Orlitzky et al., 2003), where better performance on financial matters also strengthens the company's performance in CSR and vice versa.

However, as a prevailing global issue, sustainability is more commonly being seen as a business opportunity rather than a threatening factor when incorporated with the profitability discussion (Mattila, 2006). For instance, some scholars have found evidence about the balancing effect of CSR on stock volatility (Petersen & Vredenburg, 2009) or the mitigating impact of enhanced CSR performance to associated risks that might be a cause from the poor performance on these matters (Berry & Junkus, 2013).

The lack of CSR engagement has also been discussed by Lamb and Butler (2016). They suggested that a rather indifferent or unconscious stance for the prevailing sustainability issues might endanger the future overall profitability of the company. Nevertheless, CSR is considered as an essential aspect in the strategic decision making of the company (Mattila, 2006) to guarantee, e.g., the future returns for the investors.

The relationship between the CSR performance and the financial performance of a firm can also be addressed from another point of view. In other words, more profitable companies can invest more in CSR and thus perform better in these matters (Ioannou & Serafeim, 2010). Supporting findings were obtained from the Egyptian context, where Wahba and Elsayed (2014) evidenced the better financial performance to associate with enhanced performance on CSR metrics, which was positively perceived also by the potential investors. Similarly, Earnhart and Lizal (2006) noticed that companies who expressed good financial performance were able to outperform their peers in environmental matters during the following financial years.

Liu et al. (2019) suggested that the relationship between the Chinese companies' performance on environmental matters and their subsequent financial performance were not directly associated. However, the companies with better financial success were found to associate with better environmental

performance due to a higher degree of regulatory aspects (Liu et al., 2019). Similarly, as was also noted by Orlitzky et al. (2003), companies are being highly encouraged to report their non-financial activities in a structured and regular manner, which creates external pressure for companies to pay more attention to these matters. Also, this can reflect companies as a trust from the investors due to a higher level of transparency from the company operations.

The better success in non-financial metrics could also be explained by those companies larger in size having better abilities to practice responsible business activities due to their more extensive resources (Dam & Scholtens, 2012; Stanwick & Stanwick, 1998). These companies are also subject to greater external pressure from various stakeholders (Earnhart & Lizal, 2006; Lee, 2009), which could highlight back to better engagement in CSR.

The differences in findings are explained through multiple different variables. For instance, the geographical location where the company is operating is found to explain significant gaps between the two relatively similar companies' CSR performances (Ioannou & Serafeim, 2010) due to the country's political or legal setting. Ioannou and Serafeim (2010) also suggested that industry affects the companies' abilities to thrive in CSR related matters. This might be due to certain industry-specific characteristics, such as industry-related regulation (Darus et al., 2014), or specific sustainability-related issues being more present within some industries compared to others (Grewatsch & Kleindienst, 2015). The varying level of sustainability disclosure or corporate governance is also found to affect the obtained results from the CSP-CFP relationship (Dam & Scholtens, 2012),

As discussed above, the regulatory pressures drive companies to pay more attention to their non-financial performance. However, other drivers also play their role in motivating companies to initiate responsible activities within their daily business operations. The previous literature and theories about the CSR engagement of companies include both financial and non-financial incentives for the companies.

A company's involvement in investing in CSR is seen to differ due to different shareholders' perceptions towards the associated risks (Faller & Knyphausen, 2018). For instance, good performance in environmental and social aspects can offer companies the opportunity to gain a positive competitive advantage. Moreover, the competitive environment has been noted as one of the critical sources of motivation for companies practicing their operations in responsible manners (Leong & Yang, 2020). Furthermore, competitive advantage in better CSR performance can also ensure companies survival and profitability in the long run (Fernando et al., 2019; Lamb & Butler, 2016). Thus, investing in CSR has also another benefit for the companies besides *doing what is good*. Discussed for instance, by Harjoto et al. (2017), investing in various socially responsible activities can help companies to become an attractive investment target for the current and potential shareholders.

The following section will focus more on how the different types of owners perceive the CSR among their portfolio companies and whether there are some aspects they are found to prioritize in sustainability questions within the previous literature.

## 3 OWNERSHIP ASSOCIATED WITH CSR

### 3.1 Ownership Structures and Firm Performance

The ownership structures have been found to influence the firm performance in CSR related matters. Panapanaan et al. (2003) supported this by noting that ownership structure is found to be somehow related to the future company success in corporate social responsibility among the Finnish companies. Further associations have been found within the previous literature also from other market areas. For instance, Liu et al. (2019) applied the different ownership structures as independent variables in their study to explain potential variations within their sample to the dependent variable of firm environmental performance. Similar methods were used, for instance, by Ioannou and Serafeim (2010) and Bose and Biswas (2017). Moreover, the specific ownership structures were associated with significant improvements in CSR performance (Liu et al., 2019), which sheds light on what will be discussed further in this chapter.

#### 3.1.1 Equity Concentration

The association of the concentration of the equity ownership to CSR performance is being found to present mixed evidence from the previous literature. For instance, Faller and Knyphausen-Aufseß (2018) noted in their literature review that divergent proportions of ownership concentration were differently associated with corresponding companies' engagement in various sustainability-related aspects. These matters were also found to influence the decision-making in CSR related questions (Faller & Knyphausen-Aufseß, 2018). Similar notations were made earlier, for instance, by Dam and Scholtens (2012). They supported the idea that differing ownership structures having a significant influence on a particular company's strategic decision-making, especially on sustainability-related questions. This is especially interesting, due to the shareholder's substantial role influencing the decision-making of firms (Motta & Uchida, 2018) and due to the potential financial gains that companies would be allowed to achieve with better CSR engagement (Mattila, 2006), which in turn naturally benefits the shareholders.

The concentration of firm ownership was also discussed by Earnhart and Lizal (2006), who noted that among Czech companies, more concentrated ownership structures were positively associated with better performance in corporate social responsibility matters. These findings were explained from the greater power that, e.g., the institutional investors have on their portfolio companies, and thus these owners can create a positive pressure to drive companies towards more sustainable activities (Earnhart & Lizal, 2006). Similar findings were also obtained by Govindan et al. (2021) in their study among the sample of global companies from the logistics sector.

On the other hand, large stockholders with lower willingness to drive the portfolio companies' decision-making towards more socially responsible solutions might exhibit poorer performance in these matters. Supporting findings to this was acquired from the French context, where poor CSR performance was slightly negatively associated with a higher ownership concentration (Ducassy & Montandrou, 2015).

When it comes to publicly listed companies, higher visibility and more dispersed ownership concentration associated with better performance on CSR gains support among the previous literature. Supporting these findings, Ioannou and Serafeim (2010) found evidence about the positive association between dispersed equity ownership and better corporate performance on CSR related matters. Aksoy et al. (2020) also exhibited similar results, suggesting that a higher level of diversity and independent members in boards among the Turkish companies were found to be positively associated with higher ratings in all CSR indicators. Uyar et al. (2020) concluded with similar findings, suggesting that in some cases, individual board members might be explicitly appointed due to their expertise in various CSR matters, which in turn is reflected in the company overall CSR performance increase.

In the Taiwanese context, the concentrated ownership structure was found to exhibit differing results. Shu and Chiang (2020) evidenced that *internal* owners were less interested in investing in CSR related initiatives. Contrarily, the *external* block ownership was found to have a positive association with better CSR engagement. This was explained due to facilitated monitoring on CSR matters, which could also be reflected as better performance in these matters.

Contradictory points were also noted by Lee (2009), who argued against the publicly traded companies' superior performance on corporate social responsibility. These arguments were explained due to public companies' more extensive exposure to varying shareholder interests, which might be evidenced in merely short-term profit maximation goals. However, Lee (2009) acknowledged the obtained results about the greater accountability and external pressure for public companies to act upon the prevailing sustainability issues, thus the relationship between public ownership and CSP is not unambiguous.

### **3.1.2 The influence of Industry & Level of CSR Disclosure**

There are also other influencing factors to ownership and CSR performance relationship. For instance, as suggested by Earnhart & Lizal (2006), the companies operating even within the same industry are found to exhibit divergent CSR performance, which can originate from the different ownership structures. This is especially interesting, as, for instance, some sustainability-related challenges can be tied upon to a specific industry (Ioannou & Serafeim, 2010) or geographical location (Tang et al., 2018).

For instance, Ioannou and Serafeim (2010) noted that Finnish companies were performing better on environmental indicators compared to their U.S. peers. Similarly, Bose and Biswas (2017) found that companies operating within the financial industry had more incentives to practice socially and environmentally

responsible activities and disclose these factors in their reporting compared to other industries. On the other hand, the findings by Liu et al. (2019) resulted in poor environmental performance among the manufacturing firms in the global sample.

The presence of governmental involvement is also found to shape the CSR engagement among the companies. This is exhibited especially from different governmental objectives (Faller & Knyphausen-Aufseß, 2018) that might be targeted towards, for instance, either specific industries or specific CSR related goals. The relationship between the effectiveness of government actions and better CSR performing companies have also been demonstrated in the previous literature (see for instance, Ioannou & Serafeim, 2010). More about governmental participation is discussed later in this paper in the following subsection 3.2.

Other associations between the firms' ownership structure and subsequent performance on corporate social matters have also been linked to the level of CSR reporting executed by the firm. These might also result from the industry-specific obligations that some companies might face (Bose & Biswas, 2017). For instance, Dam and Scholtens (2012) identified a relationship between these two to be varying due to different levels of disclosure on corporate social responsibility. Furthermore, this has been reflected in the company performance also on financial and non-financial matters, indicating that a higher level of CSR disclosure also enhances the actual performance on these matters.

As highlighted by Dam and Scholtens (2012), further studies are needed about the different ownership structures and their potentially differing associations to corporate CSR performance. The following sub-sections will further explore different ownership structures that were selected as the primary focus areas in this paper. These ownership types were chosen as the main area of interest in this paper based on the availability of previous literature and studies conducted on this topic.

### **3.2 Different Ownership Structures**

Previous literature on the ownership structures and their association with firm CSR performance has rather been focusing on companies that are for-profit oriented (Faller & Knyphausen-Aufseß, 2018), excluding the non-profit organizations from the focus. Following this suggestion, this thesis will focus on four for-profit types of ownership types that were most often referred to in the related literature. The four main types of ownership structures include family, foreign, institutional, and state ownership. The first two sub-sections will discuss more the family and foreign owners of the businesses and how these have been associated with CSR within the past literature. The following two sections will concentrate more thoroughly on two main ownership types of interest in this thesis: institutional ownership and SEOs.



### 3.2.1 Family-owned Businesses

Multiple research papers have focused on studying the ownership concentrations and characteristics' association to the corporate social performance by focusing primarily on family-owned businesses. These papers have conducted their studies mostly on samples from a specific geographical market. For instance, studies were conducted of samples from Chinese (Fan, Zhang & Zhu, 2021), Turkish (Aksoy et al., 2020) and the U.S. (Lamb & Butler, 2016) listed companies. Some scholars also conducted studies in the cross-national setting with global samples (see for instance, Abeysekera & Fernando, 2020; Seckin-Halac et al., 2021; Sierra et al., 2017).

Family-owned businesses are considered as those companies of which a certain percentage of shares are held by one family. Some studies had defined a business to be family-owned when over 20 percent of the company shares were held by a family (Cruz et al., 2014). Some studies handled companies as family-owned also with lower percentages. For instance, Fan et al. (2021) required 10% of the family holding on company shares to include the company within their sample of family-owned businesses. Due to their highly varying nature and interest, and abilities to practice socially responsible initiatives, some scholars argue that family-owned businesses should not be considered as one group of companies in the research (Samara et al., 2018).

The strategic decision-making in CSR related matters in family firms is strongly shaped based on the family members own values, especially in the case of companies where the founding entrepreneurs are holding most of its shares (Earnhart & Lizal, 2006). This is explained partly due to the entrepreneur's own value basis (Harjoto & Rossi, 2019), risk appetite (Abeysekera & Fernando, 2020) or transgenerational thinking (Cruz et al., 2014). Transgenerational consideration was also discussed by Lamb and Butler (2016), suggesting that this is one of the most significant reasons why family owners choose to invest in CSR, as this would allow future generations to continue with their family invented businesses.

The previous literature indicates contradictory findings when it comes to family-owned companies and their corresponding performance in different corporate responsibility metrics. Some studies have demonstrated the negative relationship between family-owned businesses and their subsequent CSR performance. Although multiple studies have expected to find a positive association between family ownership and subsequent CSR performance, the results are often shifted upside-down (Faller & Knyphausen-Aufseß, 2018).

Findings by Samara et al. (2018) proposed that a possible lack of expertise in different CSR related matters within family firms might limit the possibilities of family firms to practice responsible business operations. Moreover, the inexperience merging the CSR related activities with daily business operations might be seen as threatening activities around CSR, especially from the profitability perspective, and thus these steps to enhance CSR performance might be left neglected. Also, especially within the smaller family firms, the risk associated with CSR investments is perceived higher, and due to low willingness

to risk the potential future returns, family firms choose to retain from additional investments (Faller & Knyphausen-Aufseß, 2018).

Studies by Fan et al. (2021) and Lamb and Butler (2016) both associated the existence of institutional ownership with weaker CSR performance amongst the businesses with family-owning. This indicates that a higher degree of institutional ownership in family-owned companies brought negative consequences and, therefore, might threaten the family businesses' abilities to practice socially responsible activities due to institutional pressure in their strategic decision-making.

A positive association between family ownership and enhanced performance on CSR was found by Seckin-Halac et al. (2021), who identified the strengthening effect of board diversity on company CSR. This association was found especially between the social sustainability matters. Similar findings were obtained by Samara et al. (2018), concluding with findings that family firms are often found to pay attention to community-tied social aspects in their CSR related initiatives.

Although the family owners are grouped as one within the academic literature, they come in various shapes and needs and thus cannot be unequivocally grouped as one type of owners (Samara et al., 2018). Like companies with other ownership structures, the family businesses also be tied to the external factors that can explain the variances of their CSR performance, like industry-specific characteristics (Cruz et al., 2014) or governmental obligations (Cruz et al., 2014; Samara et al., 2018).

### **3.2.2 Foreign Ownership**

Foreign investors include the investors that are geographically located elsewhere compared to the stock held. As family firms can be tied upon to a specific location and prioritizing their attention, especially to CSR issues related to their local communities (Cruz et al., 2014; Samara et al., 2018), foreign investors are found to have higher demands for the good overall performance of their portfolio companies (Kabir & Thai, 2021).

This has been supported widely within the previous literature. Even though some scholars have associated the foreign investors with weaker succession on CSR matters (Earnhart & Lizal, 2006), most of the scholars indicate either an insignificant or a positive relationship between these two.

As discussed above, better performance on corporate responsibility allows companies to become more lucrative investment targets for the potential shareholders. This is the case also for the foreign investors, who are often found to require even more transparent reporting on these matters compared to their national counterparts (Kalev et al., 2008; Motta & Uchida, 2018). Higher transparency on these matters accelerates the trust between the company and the investors, especially due to the potential asymmetry of information on these matters that the foreign investors might experience (Kalev et al., 2008). Within the Finnish context, this has been found to explain also the better financial returns

that domestic investors have been able to gain compared to their foreign peers (Kalev et al., 2008).

Furthermore, the importance of transparency on sustainability issues has been highlighted, especially in the emerging markets, where a higher proportion of foreign ownership has been found to significantly progress the opportunities for the companies to go towards more sustainable business practices (Aksoy et al., 2020; Ioannou & Serafeim, 2010). On the other hand, the companies from the emerging markets also benefit financially from the foreign investors, enhancing their opportunities to thrive also in the future (Kabir & Thai, 2021). This also allows them to become more compelling investment target in the eyes of foreign investors (Ioannou & Serafeim, 2010).

Foreign ownership was positively associated with enhanced CSR performance within the Turkish context by Aksoy et al. (2020). They further suggest that this is due to the higher level of diversity that foreign investors create for the firm ownership structure, which further on allows companies to thrive on CSR related matters. Thus, higher transparency on CSR related matters (Motta & Uchida, 2018) and a more diversified ownership structure shapes the companies and their managers to engage more in CSR to better answer to the different demands of their foreign shareholders (Aksoy et al., 2020).

### 3.2.3 Institutional Ownership

Previous literature about ownership structures and firm performance on corporate social responsibility has widely focused merely on institutional ownership. Institutional owners in the context of corporate social responsibility have been focused on the previous literature, for instance, by Aksoy et al. (2020), Bose et al. (2017), Fan et al. (2021), Lamb and Butler (2016), and Motta and Uchida (2018). Before going further to what has been discussed about the institutional owner's association and perception towards the CSR, the concept of *institution* is defined.

Institutions are defined as organizations or group that holds a usually relatively large amount of company shares. Pension funds, governmental organizations, mutual funds, banks, and insurance companies are all identified as institutional investors (Çelik & Isaksson, 2014; Choi & Sias, 2009; Dam & Scholtens, 2012; Earnhart & Lizal, 2006; Erhemjants & Huang, 2019; Johnson & Greening, 1999). The percentage of shares owned by the above-mentioned shareholders are usually considered as institutional ownership percentage (Earnhart & Lizal, 2006). Further on, some scholars within the previous literature have distinguished the institutional owners according to their type of investments (Johnson & Greening, 1999), investment horizons (Erhemjants & Huang, 2019), geographic location in relation to their portfolio company (Motta & Uchida, 2018), or according to their willingness to take a risk with their investment decisions (Faller & Knyphausen-Aufseß, 2018; Hiquet & Oh, 2018).

Although institutional investors vary in nature (Erhemjants & Huang, 2019), common for them is that they usually hold larger stakes of the company, in which they have invested in assets that are managed on behalf of others (Çelik

& Isaksson, 2014; Ducassy & Montandrou, 2015). Pension funds could be considered as an example, as these investors are aiming to create profits and maintain the value of the pension savings of the public. Moreover, the general assumption can be drawn that especially the institutional investors aim to find equilibrium between profit maximation, and risk taken (Ducassy & Montandrou, 2015; Wahba & Elsayed, 2014).

As a stakeholder group, shareholders should be considered the ones to highly prioritize due to their nature with legitimacy and power influencing the company (Mitchell et al., 1997). Therefore, institutional investors are with increasing power towards their portfolio companies (Boubaker et al., 2017), but also to the whole capital markets (Ryan & Schneider, 2003). In relation to enhanced engagement in corporate social responsibility, firms are evidenced investing more significant amounts to CSR to better answer to their shareholders' demands (Peloza et al., 2012). This results from the goal to reach higher profits, as higher stakeholder engagement through better CSR performance is seen to increase the firm profitability and thus bring higher returns for the investors (Peloza et al., 2012). In line with these, Sievänen et al. (2013) advocated the importance of good stakeholder relations, especially within the smaller institutions in the context of CSR.

It is also of interest for the institutional owners to invest in companies that perform well on social indicators. Institutional investors have been found to favour more sustainably driven companies in their portfolios (Aksoy et al., 2020). Nevertheless, especially the European pension funds larger in size have been found to associate with a more significant presence of socially responsible investments within their portfolios (Sievänen et al., 2013). This phenomenon among the larger pension funds has been explained especially with, the greater exposure to regulatory aspects on these matters.

Due to increasing regulation and more extensive external pressures, institutional investors might see companies not compliant with CSR practices as a threat in their portfolios (Clark & Hebb, 2005). This might bring unnecessary negative publicity for the institutions if they would not demand more sustainable practices from their portfolio companies. Moreover, the public pressures, together with individual investors as a driving force, motivate the institutions to make more sustainable investment decisions (Lee, 2009).

Despite the benefits of investing according to socially responsible investing (SRI) principles, the presence of institutional ownership has evidenced somewhat mixed results in company CSR performances. Some studies have evidenced a strong positive relationship between these two. For instance, both Motta and Uchida (2018) and Johnson and Greening (1999) found a positive association between institutional ownership and higher engagement to CSR initiatives implemented. Moreover, the companies which included a higher proportion of institutional investors were also found to have greater transparency on these matters, as the rate of CSR disclosures were higher in companies with more significant institutional owner presence (Motta & Uchida, 2018). This could also be explained through the higher demand of CSR disclosure among the

institutional investors, as these types of shareholders are found to value the greater transparency on these matters (Orlitzky et al., 2003).

Results with positive association were also obtained by Aksoy et al. (2020) and Bose et al. (2017), who both evidenced a strengthening effect of institutional ownership on the CSR performance of the firm. In the Turkish context, Aksoy et al. (2020) identified a positive association between institutional investors and their portfolio companies' improvement in various corporate sustainability matters. Bose et al. (2017), in turn, found a significant positive association between institutional ownership and a higher level of philanthropic giving among the companies from the Bangladeshi financial industry.

Insignificant findings on these matters were also obtained. Within the European context, Dam and Scholtens (2012) were not able to identify a significant relationship between the institutional holdings and corporate sustainability performance. Fauzi et al. (2007) were also unable to address a relationship between these two within the Indonesian context, suggesting that CSR was not seen to shape the investment decisions of institutional investors. Similarly, Graves and Waddock (1994) concluded their findings with insignificant results between institutional ownership and better corporate social performance.

Harjoto et al. (2017), on the other hand, saw the institutional presence in company ownership structure rather as a concave function of CSR, suggesting that institutional investors were associated with slightly better performance in CSR matters. However, the relationship was not evidenced as exponential, meaning that institutional ownership did not enhance the CSR performance after a certain level was met (Harjoto et al., 2017). This could be explained with regulatory aspects included in sustainable financing, as institutions might require a certain level of CSR engagement from their portfolio companies but not necessarily promoting them to do more than is necessary.

Some studies also showed a negative association between institutional ownership and corporate engagement in sustainability matters. For instance, a study by Ioannou and Serafeim (2010) resulted in findings with a large proportion of shares held by certain investors being more likely to associate with poorer performance on CSR related indicators. This is in line with what was earlier discussed about a more dispersed ownership structure and its benefitting force to the company tripe-bottom line.

Multiple previous researchers have approached institutional investors through the time horizons that institutional investors have in their investment strategies. *Dedicated institutional owners* (Porter, 1992) are characterised based on their longer investment horizons and more scattered portfolios. These types of institutional investors are identified to associate positively with better performance in corporate social responsibility matters (see for instance, Erhemjamts & Huang, 2019; Lamb & Butler, 2016). Moreover, the role of institutions with long-term investment horizons is also identified to promote CSR within their portfolio companies (Erhemjamts & Huang, 2019), as these types of investors usually put more weight also to the non-financial performance of the companies. Further on, institutional owners that are more interested in the long-

term performance of a company the institutional investors can be expected to pay more attention to the non-financial performance of a company too, as engaging in CSR initiatives are found to associate also with better financial profitability in the long-term (Fernando et al., 2019).

Contrarily, *transient owners* are usually identified as investors with shorter time-horizons in their portfolios (Porter, 1992). These types of institutional owners make the investment decisions more from the financial profitability perspective (Orlitzky et al., 2003) and are less interested in corporate performance on non-financial indicators (Erhemjamts & Huang, 2019). Therefore, transient institutional owners have evidenced a relatively neutral or even a slightly negative relationship with the corresponding CSR performance in their portfolios (Boubaker et al., 2017; Erhemjamts & Huang, 2019; Lamb & Butler, 2016). In some cases, the investors have been found to have even discouraging attitudes towards company CSR engagements (Erhemjamts & Huang, 2019).

Following the suggestion given by Boubaker et al. (2017) and empirical findings acquired, for instance, by Aksoy et al. (2020), Bose et al. (2017), Lee (2009), and Motta and Uchida (2018) supporting this, the first hypothesis about the institutional owner's association to the company CSR performance can be drawn. This hypothesis is also in line with the arguments of the stakeholder theory, suggesting that institutional investors wield a role in the society where they could positively influence companies towards more socially responsible initiatives:

H1: *The presence of institutional investors in company ownership structure is positively associated with enhanced company CSR performance.*

Higher pressures to meet the demands of both governmental agencies (Sievänen et al., 2013) and retail investors (Lee, 2009), institutional investors face other concerns too about the responsibility of their assets. The institutions are required to manage their investments with an appropriate level of risk to ensure that they do not threaten their future asset value. As was discussed earlier, the specific sustainability threats might occur on a broader scale in some industries than others. Thus, it is interesting to examine whether there are specific trends that institutional investors apply when making their decisions to invest in a company.

The three-way interaction between institutional ownership, corporate social responsibility and industry-specific matters has not gained too much attention within the previous literature. Instead, earlier studies have primarily focused on discussing the ownership structures within a specific industry. Thus, the empirical papers from this aspect remain in the minor seat in the literature.

Choi and Sias (2009) demonstrated that, among the institutional investors, the decision-making of peers affected the investment decisions made by other institutions. They call the phenomenon as *institutional herding*, suggesting that institutional owners share similar perceptions towards certain financial instruments, and especially towards the specific industries they wish to hold in

their portfolios. Like suggestions given by Dam and Scholtens (2012), Motta and Uchida (2018) and Orlitzky et al. (2003), Choi and Sias (2009) also support the notation about some industries being prone to disclose more transparently about their CSR related activities due to their industry-specific factors.

Some companies have been found to reflect the activities their peers perform in CSR related aspects. This phenomenon is explained in organisational theory as a term of *mimetic isomorphism*, which means organisational behaviour that occurs within the companies that share similarities in their characteristics, such as in their ownership structures or features associated with a specific industry. *Mimetic isomorphism* was further studied, for instance, by Singh et al. (2021), who discovered that the presence of institutional investors moderated the peer-reflecting behaviour of companies.

Institutional investors have also revealed varying behaviour to industry-specific sustainability issues when scrutinised more from the investment time horizon point-of-view. Controversial industries, such as those operating with tobacco, gambling, firearms, et cetera, were less likely associated with companies that had long-term institutional investors involved (Erhemjamts & Huang, 2019). Industries that bore fewer threats to potential risks from the corporate responsibility perspective were found to attract more institutional investors in general, also within the findings of Aksoy et al. (2020).

Although some findings within the previous literature could support the argument of institutional investors being more present among the companies operating within a more responsible industry, some scholars lean towards the opposite direction. Even though the industry might influence the corporate performance on socially responsible matters, institutional investors have been exhibited to prefer firms that are demonstrating good overall performance on these matters. Thus, investors are not excluding companies purely based on their industry-based characteristics (Berry & Junkus, 2013). However, based on the majority of the findings and arguments presented (see for instance, Erhemjamts & Huang, 2019), the second hypothesis about the institutional owners and subsequent performance on corporate responsibility can be drawn:

*H2: Institutional ownership has a strengthening impact on company CSR performance within the companies that operate in industries sensitive to sustainability-related threats.*

### **3.2.4 State-Owned Enterprises (SEOs)**

Sharing similar characteristics to institutional investors, governmental agencies are often included within the institutional owners in the previous literature (e.g., Earnhart & Lizal, 2006; Fan et al., 2021; Motta & Uchida, 2018). Thus, as multiple prior studies have included state ownership within the institutional owners' sample, the segregation between these two types is difficult. However, the states are identified as a separate group of shareholders in this paper because of their rather multidimensional nature as a shareholder and potentially broader interest

in their portfolio companies (Earnhart & Lizal, 2006). In other words, states are considered as stockholders that usually share other interests too besides profit maximation. Examples of other interests would be to drive companies towards supporting the governmental objectives (Earnhart & Lizal, 2006; Faller & Knyphausen-Aufseß, 2018) that aim to answer to demands of a larger public.

However, in the previous literature, the state-owned enterprises (SEOs) are not unequivocally identified to operate well in all non-financial metrics, although these could be seen to fit the interest of governmental shareholders.

The existence of state ownership and its possible relation to company CSR performance is found to exhibit mixed evidence within the previous literature. As previously mentioned, macro-level pressure drives companies to invest more into CSR initiatives (Ioannou & Serafeim, 2010). This is also evidenced through the existence of state ownership in relation to CSR performance in previous literature. For instance, the findings by Liu et al. (2019) surprisingly showed a better environmental performance among the Chinese state-owned manufacturing companies compared to non-state-owned peers. They further analysed and concluded their results by suggesting that state ownership affects the managerial decision making on taking further steps toward advancing the R&D around environmental matters. In favour of their findings, Liu et al. (2019) included multiple other studies with similar results.

A trend about improving the force of state involvement in corporate environmental performance was also displayed in the Czech context. However, as Earnhart and Lizal (2006) noted, the state ownership was more attached to the companies that were exhibiting relatively poor performance due to industry-specific characteristics. Moreover, state ownership could be associated with improving environmental performance within Czech companies. However, the governmental proprietorship was more present in companies whose pollution levels were above average, which might explain the obtained negative association.

As the SEOs are subject to greater pressure regarding various CSR topics, that could explain their better engagement in these matters. However, some studies indicate the opposite findings, suggesting that SEOs actually evidenced poorer performance in these metrics. The reason for this could be explained through negative association and the potential threatening nature of state involvement for a business from the competitive perspective (Earnhart & Lizal, 2006).

Following the notations of stakeholder theory and the findings from the previous studies in the context of state ownership (e.g., Dam & Scholtens, 2012; Earnhart & Lizal, 2006), the third hypothesis is drawn. Although the previous findings have also indicated a negative association, the hypothesis is based on the arguments about state presence being more exposed to serve the interests of the larger public and not making the investment decisions merely from the financial point of view:



H3: *State ownership is positively associated with better firm performance on CSR matters.*

Associating state ownership negatively with company CSR performance has been approached through different explanatory factors. For instance, state involvement has been connected to specific industries with a higher probability to perform poorly on CSR metrics (Earnhart & Lizal, 2006). Due to greater state involvement within the sustainably sensitive industries that has been evidenced in the European context (Earnhart & Lizal, 2006), state ownership has been associated with poor CSR performance, especially in the environmental performance indicators. Moreover, poor performance on corporate governance has been explained due to high state involvement amongst the already highly regulated financial industry, where improvements on these matters are harder to acquire (Darus et al., 2014).

Dispersion of state ownership through the different industries is found to moderate the potential negative relationship with CSR performance that state ownership has been associated with. For instance, in countries with political settings not that affirmative to promote greater engagement to corporate responsibility, state ownership was less frequently associated with weaker CSR performance of firms when the state held stocks of companies from various industries (Liu et al., 2019).

However, state involvement has been found to have an improving role in the association where it has guaranteed at least some level of engagement on CSR within the company activities. This was discussed by Harjoto et al. (2017), supporting the idea that institutional (state) presence improved the future firm performance on CSR matters. However, this association was not necessarily found to enhance already well-performing companies' CSR matters or ensure exponential improvement in CSR in general.

Based on these notations obtained from the previous literature, the fourth and final hypothesis is drawn:

H4: *State ownership has a strengthening effect on company CSR performance within the companies that operate in industries sensitive to sustainability-related threats.*

The following sections of this Master's Thesis will concentrate more on the empirical part of this paper. The methods that are introduced in the next section are based on the theoretical background presented above.

## 4 DATA AND METHODOLOGY

This chapter and the following subchapters will focus on the empirical part of this Master's Thesis. This section will introduce the data and methodology used to answer the research questions represented in the previous section, and finally, consider the limitations relevant for the empirical model with the robustness tests to justify the selection of the used model.

### 4.1 Research Design

Within this paper, the empirical part will be built around the quantitative methods carried out. When conducting an empirical research, it is relevant to consider whether quantitative or qualitative approach is more suitable. One of the most simplistic comparisons of quantitative and qualitative methods is given by Lichtman (2017), stating that "*quantitative researchers rely on numbers, while qualitative researchers use words and visuals*". Further on, some scholars perceive these two representing the two different schools of scientific research (Lichtman, 2017; Mahoney & Goertz, 2006). Yet, both of these methods are exploited to gain a better understanding of the studied topic (Mahoney & Goertz, 2006).

Quantitative methods on empirical research are explained to fit for the research that aims to explain e.g., the frequency of certain factor or value, or focuses on studying the cause and effect between the number of variables (Lichtman, 2017). The qualitative methods used in social sciences are found to provide new avenues to conduct an empirical study, potentially resulting in findings that might not be expected nor possible to acquire with quantitative methods (Lichtman, 2017). Moreover, the qualitative approach is relevant to use especially when studying the human interactions within a specific phenomenon which might be difficult to measure, e.g., with numerical values (Lichtman, 2017).

The topic around the ownership structures and related firm CSR performance has been approached with both quantitative and qualitative methods within the previous literature (see, for instance, Boubaker et al., 2017; Dam & Scholtens, 2021; Faller & Knyphausen-Aufseß, 2018; Galant & Cadez, 2015; Garde-Sanchez et al., 2018). The qualitative methods used to study the potential association between the firm ownership structures and related CSR performance have been approached, for instance, with qualitative content analyses (Liu et al., 2019) or surveys (Samara et al., 2017). Other qualitative methods that could be applied in this context would be interviews with relevant company professionals, which could potentially offer exciting insights from the topic field. Although these methods would result in insightful findings from the topic field, they might not provide answers to the initial research questions that this thesis aims to answer to.

Nevertheless, the majority of the previous studies covered in this thesis from the field have chosen to conduct their research by exploiting the quantitative methods (see, for instance, Aksoy et al. 2020; Ducassy & Montandrou, 2015; Motta & Uchida, 2018). This is in line with the suggestions given by Al-Tuwaijri et al. (2003) and Berry and Junkus (2013), who both suggested that CSR and the possible associated other variables should be studied with quantitative methods in order to obtain less biased results. As also discussed by Lichtman (2017), the essence of the quantitative study is to test the hypotheses and aim for generalizing the results based on the testing. Therefore, using the numerical values on measuring the variables makes it logical to conduct the empirical part of this thesis with quantitative empirical methods.

Furthermore, exploiting quantitative methods in this empirical model allows, for instance, the application of a larger sample to be studied. Additionally, the qualitative data analysis and collection would require a longer time to collect, whereas the quantitative secondary data is relatively fast and easily accessible. Thus, qualitative methods could require more extensive resources to conduct on a sample of similar size, making the use of secondary quantitative data and methods more appropriate in this context.

## 4.2 Sample

This paper focuses on collecting and analysing the data of the Nordic companies. Moreover, the sample is conducted from the publicly listed companies from the Helsinki (*FIN*), Stockholm (*SWE*), Oslo (*NOR*) and Copenhagen (*DEN*) stock exchanges. The sample companies are selected based on their current country of exchange. Some previous papers have been published with samples that have also included companies from the Nordic markets (e.g., Ioannou & Serafeim, 2010). However, no studies were found where all the studied countries would have been included within the same sample or where the primary focus would have been on the northern European firms. As discussed above, the plan is also to analyse the obtained results to see whether there are differences between the sample markets.

The sample was conducted from the secondary data about the publicly listed companies, with their country of exchange being one of the above-mentioned markets. Data were accessed through the Reuters Eikon database and was filtered based on the availability of the different variables presented in the following subchapters. The search was targeted to the years 2000-2020. However, due to data availability, the final time scale of this study ended up being 2002-2020, with most of the observations taking place during the latter years.

The final sample included a total of 286 companies, of which 39 were listed in Copenhagen Stock exchange (OMX Copenhagen), 37 in Helsinki Stock Exchange (OMX Helsinki), 62 in Oslo Stock Exchange (Oslo Børs), and 148 in Stockholm Stock Exchange (OMX Stockholm). Thus, the final sample consisted relatively large representation of Swedish companies (51%). The final list of

sample firms with information about their country of exchange and operated industry are presented in Appendix 1.

To control for potential country-specific issues around sustainability, the alternative samples are also composed in order to identify possible differences between each Nordic country. Furthermore, the same regressions models are run by utilizing samples constituting only of Danish, Finnish, Norwegian and Swedish companies separately. This allows the potential results also to be compared on a cross-national level and potentially lead to findings that a larger sample might not identify. The results obtained from alternative samples will be included in the discussion in the empirical results section.

## 4.3 Variables

### 4.3.1 Independent variables

The main independent (explanatory) variable in this paper is the ownership structure, which is approached through two different ownership types. As the main interest in this Master's Thesis is to study the potential associations of especially the institutional and state ownership types to subsequent CSR performance of the company, each ownership type will be accompanied with individual regression models as stated in the following section.

Previous literature studying the ownership structures and exploiting these as a quantitative variable have rather often used a dummy variable to express the presence of a particular ownership type. For instance, Cruz et al. (2014) used family control as a dummy variable to study the family ownership's influence on social initiatives practiced within the firms. A similar method was exploited by Ducassy and Montandrou (2015), who measured the family ownership as a dummy variable, with the variable taking the value of "1" if the largest shareholder of the company was identified as a family, otherwise "0". Other studies, such as ones by Abeysekera and Fernando (2020), Fan et al. (2021) and Lamb and Butler (2016), also exploited family ownership as a dummy variable within their research papers. Moreover, the use of dummy independent variable was utilized with other ownership types too, such as with the existence of family (Abeysekera & Fernando, 2020; Cruz et al., 2014; Fan et al., 2021), state (Liu et al., 2019) or foreign ownership (Kabir & Thai, 2021).

Other quantitative measures of ownership types were exploited in the previous literature by Aksoy et al. (2020), Ducassy and Montandrou (2015) and Motta and Uchida (2018). Moreover, these scholars exploited the percentage of given ownership types held in each of their sample companies. Considering the rather interpretative nature of using dummy variables as a measure of ownership structures, this method is not applied in this thesis. Instead, the ownership data as a time-series panel data of given ownership types is applied as a percentage to best measure the potential association with company CSR performance, like

methods used by Motta and Uchida (2018) in the context of ownership structures and CSR prosperity.

The ownership percentages of both state and institutional owners were obtained from the Reuters Eikon database from the last 20 years' time scale of 2002-2021. Thomson Reuters Refinitiv Eikon offers categorized history about the companies' ownership statistics. Exploiting this to compose a quantitative measure for the independent variable in this empirical study, institutional ownership percentage is formed as a sum of Thomson Reuters identified investor profiles. The profiles that were able to identify as institutional investors included holdings of banks and trusts, hedge funds, insurance companies, mutual funds, pension funds, private equity, and venture capital (Refinitiv, n.d.). The identification was made by the institutional characteristics' definitions given, for instance, by Çelik & Isaksson (2014), Erhemjamts & Huang (2019), and Johnson & Greening (1999).

The percentage of state holdings were calculated from the two Refinitiv Eikon investor profiles of sovereign wealth funds and government agencies (Refinitiv, n.d.). The sum of these two types of investors gives the final total percentage of state-held shares for the single stock.

Once the ownership data was obtained from the database, the panel data was filtered based on the total reported ownership of the firm. As some companies represented total ownership below 30% and some above 150%, these observations were filtered out to control for biased results.

#### **4.3.2 Dependent variables**

The main dependent (response) variable in this paper is the CSR performance of each sample company. As the CSR performance can be approached from numerous perspectives, the quantitative methods measuring it are selected due to their less biased results and more comprehensive nature (Al-Tuwaijri et al., 2003; Berry & Junkus, 2013). The CSR performance will be measured with different ESG scores of each company within the research sample. Quantitative ESG scores as a measure of subsequent firm's performance on other non-financial metrics are considered to provide comprehensive, reliable, and relatively current data about the different CSR matters (Al-Tuwaijri et al., 2003; Galant & Cadez, 2017). Moreover, exploiting the quantitative data instead of qualitative data to measure the CSR performance diminishes the room to interpret the results as qualitative results might be somewhat subjective to analyse (Galant & Cadez, 2017).

This Master's Thesis applies the ESG scores as a proxy of a firm's CSR performance acquired from the Thomson Reuters Eikon database. Other studies exploiting the Thomson Reuters' ESG scores in the context of the company CSR performance associated with different ownership structures were conducted, for instance, by Ioannou and Serafeim (2010), Govindan et al. (2021) and Uyar et al. (2020). Other papers exercised their research with ESG scores also from different databases, for instance from Bloomberg (Cruz et al., 2014), KLD STATS by MSCI ESG Research (Abeysekera & Fernando, 2020; Erhemjamts & Huang, 2019), or

from CSRHub databases (Cruz et al., 2014). In this paper, the selection to use the ESG scores provided by Thomson Reuters was made based on the availability and accessibility to this exact database and the reliability of this scoring model that is supported both in academic and practical environments.

The scoring model of Thomson Reuters to its ESG scores is based on data available from 2002 to 2021 (Refinitiv, n.d.). Scores formed out of over 450 different metrics on ESG categories (Refinitiv, n.d.), this model provides accurate data that allows easy comparison of CSR performance between different companies. The data to form scoring to each category of ESG are sourced from the public data published by those companies.

To best answer the identified hypotheses determined above, the dependent variable of CSR performance is also applied with moderations of ESG scores. Similar to the methods used by, for instance, Uyar et al. (2020), separate components of environmental (E), social (S) and governance (G) scores are applied. This is done to better understand whether the companies with specific ownership structures perform better (or worse) on a particular ESG matter. For instance, Earnhart and Lizal (2006) were able to identify a negative association between state ownership and corporate performance on environmental issues. In contrast, Ioannou and Serafeim (2010) resulted with a negative association between institutional investors and social pillar in firms ESG performance. Moreover, Uyar et al. (2020) noticed a positive relationship between a more dispersed board structure and the enhanced governance structure of the firm.

Besides the ESG score and its separate components of E, S and G, the ESG controversies score will be applied. ESG controversies are the measure of the harmful exposure company has experienced due to various ESG matters (Refinitiv, n.d.). Adding ESG controversies into the equation, ESG combined includes all the separate components of ESG and the potentially harmful exposure to these matters to provide average arithmetic scoring from 0-100 to each of the sample companies. The categories and composition of the scoring model are represented in Figure 1 in a simplified manner.



**FIGURE 1:** ESG Scores by Thomson Reuters

### 4.3.3 Controlling variables

Applying several control variables in this empirical study is relevant, as has also been done in other previous studies in this field. Moreover, as company CSR is experienced as a rather multidimensional variable, it is relevant to include controlling variables in the equation. These controlling variables were selected due to their relevancy to this study and based on the previous literature's suggestions. The controlling variables in this paper include the measure of firm financial performance, company size, leverage, and industry.

As has been widely discussed in the previous literature, the association between company performance in CSR related matters and corresponding financial performance are somewhat related, although not unambiguously (Orlitzky et al., 2003). For instance, some argue that better financial performance allows companies to thrive also in corporate responsibility (Earnhart & Lizal, 2006; Lamb & Butler, 2016), whereas some are against that, stating that investing in CSR weakens the profitability of the company (see, e.g., Friedman, 1970 and empirical results by Brammer et al., 2006). Some have also argued against whether the relationship exists (e.g., Alexander & Buchholz, 1978). However, the majority of studies have concluded that these two are related in some aspects, making the financial performance a relevant variable to consider when also studying the CSR performance of the firm.

Return on assets (ROA) is applied as a controlling variable in this empirical part of this thesis as a measure of firm financial performance. Aybars et al. (2019) indicated a positive association between the ESG scores and company ROA, suggesting that this association is relevant especially to large institutions to consider. Other previous literature exploiting ROA as a controlling variable in the context of ownership structures and CSR performance were conducted, for instance, by Abeysekera and Fernando (2020), Bose et al. (2017), Ducassy and Montandrou (2015), Fan et al. (2021), Fauzi et al. (2007), Motta and Uchida (2018) and Uyar et al. (2020). ROA is hereby defined as:

$$CFP = \text{Return on assets (ROA)} = \frac{\text{Operating Income}}{\text{Total Assets}}$$

Company Size (*SIZE*) is applied as a second controlling variable for the regression equations. Firm size has been commonly used as a control variable in the previous literature (see, for instance, Abeysekera & Fernando, 2020; Bose et al., 2017; Cruz et al., 2014; Fan et al., 2021; Govindan et al., 2021; Harjoto & Rossi, 2019; Kabir & Thai, 2021; Lamb & Butler, 2016; Seckin-Halac et al., 2021). Applying company size as a controlling variable for the equation is relevant, as it is not expected to drastically change from year to year (Griffin & Mahon, 1997).

Some scholars also support the idea that the size of the corporation might influence the CSR performance of the firm (Grewatsch & Kleindienst, 2015). For instance, as Dam and Scholtens (2012) proposed, that companies larger in size might have enhanced abilities to practice better performance on CSR metrics compared to their smaller peers. Similar notations were made, for instance, by

Uyar et al. (2020), suggesting that larger firms also benefit from the investments made for CSR related initiatives. Moreover, companies larger in size are more exposed to external pressures in CSR matters due to their more significant number of different relevant stakeholder groups (Kabir & Thai, 2021). This is also found to influence the number of initiatives companies take to answer the various prevailing sustainability issues, which in turn results in better performance on these matters (Kabir & Thai, 2021).

However, opposing views can also be obtained from the previous literature (see, for instance, Bose et al., 2017). Dam and Scholtens (2012) also acknowledged an opposing point of view towards company size and its relation to CSR performance. For instance, they suggested that bigger companies might also be in threat to more significant exposure to different CSR related issues. Similar notations were given, for example, by Waddock and Graves (1997), proposing that larger exposure to sustainability threats also accelerates conversation around these issues. Moreover, bigger companies with a higher amount of assets have also the power to more severe sustainability-related issues, and thus can also be considered to be at risk to act irresponsibly.

Most of the previous studies have measured the size of the company by using the natural logarithm of total assets (Abeysekera & Fernando, 2020; Bose et al., 2017; Govindan et al., 2021; Kabir & Thai, 2020) as a proxy for the company size. In this Master's Thesis, the same method to measure the size of the company (*SIZE*) with the natural logarithm of its total assets is applied:

$$SIZE = \text{Natural log}(\text{total assets})$$

The third controlling variable in the regression equation is the firm's leverage. This variable was used as a proxy for companies' financial position in various previous research (see, for instance: Abeysekera & Fernando, 2020; Aksoy et al., 2020; Bose et al., 2017; Ducassy & Montandrou, 2015; Govindan et al., 2021; Harjoto & Rossi, 2019; Kabir & Thai, 2021; Motta & Uchida, 2018; Seckin-Halac et al., 2021).

The firm's debt is seen to influence the company's performance on CSR matters, as a higher leveraged position might reduce the amount that managers would be able to invest in various CSR matters (Kabir & Thai, 2021; Motta & Uchida, 2018). Moreover, higher leverage is associated with a lower willingness on the risk that the managers are willing to take (Ducassy & Montandrou, 2015). Therefore, it is reasonable to control these in the regression equations. Leverage is measured as a ratio of firm total liabilities to subsequent firms' total assets:

$$LEVERAGE = \frac{\text{Total Liabilities}}{\text{Total Shareholder Equity}}$$

Different industries have indicated differing levels of disclosing non-financial information or practising initiatives to answer these issues. For instance, Bose and Biswas (2017) noted that the companies from the banking industry were



found to engage more in environmental and social reporting than subsequent companies from other industries. Moreover, it can be expected that companies operating in a specific industry are subject to more severe environmental or social issues (Grewatsch & Kleindienst, 2015; Ioannou & Serafeim, 2010). Therefore, the industry-related characteristics might influence the companies' abilities to practice responsible business activities (Griffin & Mahon, 1997).

It should also be noted that stakeholders' demands on various sustainability issues are found to alter, which has been explained with industry-specific characteristics (Grewatsch & Kleindienst, 2015). On the other hand, companies operating within an industry that would suffer from negative consequences, for instance of climate change, might risk their future survival in case they do not engage in different CSR activities.

The industry is applied as a controlling variable to control the potential idiosyncratic CSR issues that might be specified to a specific industry. On the other hand, companies that might be more inclined towards the different CSR risks might also exhibit biased results with their CSR performance in case these responsible activities would accelerate more significant impact than when executed within some other industry (Garcia et al., 2017).

In the previous literature, the industry has been applied as a controlling variable, for instance, by Aksoy et al. (2020), Cai et al. (2012), Garcia et al. (2017), Harjoto and Rossi (2019), Kabir and Thai (2021) and Lamb and Butler (2016). In this paper, the industry as a control variable is applied as a dummy variable, depending on how sensitive the industry where the firm operates is for the potential negative externalities caused by the operations. Following the method used by, for instance, Cai et al. (2012) and Garcia et al. (2017), sample companies are grouped based on Thomson Reuters Business Classification (TRBC) Economic Sectors and their sensitivity to related CSR matters. If the company operates either within consumer cyclicals, consumer non-cyclicals, energy, utilities, basic materials, or industrials sectors, it is considered to operate within the industry that is more sensitive to sustainability-related issues. Industries identified as non-sensitive ones include telecommunication services, technology, financials, and healthcare. If the company operates within the industry that meets the above-mentioned criteria of sensitive industry, the variable takes the value "1". Subsequently, if the criterion of the sensitive industry is not being met, the variable takes the value "0".

Within the final sample, 55% of the companies met the above-defined criterion of sustainability-sensitive industries (159 companies from the total sample of 286). When looking more into detail, companies from Finland and Norway included a larger presence of sensitive-industry companies, with both having approximately 70% of companies being characterised as such. The higher presence of companies from the sustainability sensitive industries could be explained due to these countries relatively high number of industrial firms. Respectively, sensitive-industry firms within the Swedish and Danish samples represented a lower number, with percentages of 46% (Sweden) and 54% (Denmark) from the total samples. A more specific grouping of sensitive and non-sensitive industries is represented in Appendix 1.

## 4.4 Regression Models

In this Master's Thesis, the association between the firm's ownership structures to respective performance on corporate social responsibility metrics is investigated by exploiting the firm and time fixed effects panel regressions. A similar method has been used in previous literature from the field by Govindan et al. (2021), who exploited the fixed effects regression analysis to study the drivers of company CSR performance at the firm level. Other studies that used fixed effects regressions on their panel data were by Harjoto and Rossi (2019), who identified a positive association between board religiosity and subsequent CSR performance among Italian listed companies.

The fixed effects regression models are applied to each identified hypothesis to test potential relationships. All the regressions that are represented below are applied independently with both measures of firm ownership structures. Moreover, the regressions that numbered (1.1), (1.2), (1.3), (1.4), (1.5), (1.6), (1.7), (1.8), (1.9) and (1.10) (represented further in Table 3) are applied with the percentage of institutional ownership of the firm. Correspondingly, regressions numbered as (2.1), (2.2), (2.3), (2.4), (2.5), (2.6), (2.7), (2.8), (2.9) and (2.10) (as represented further in Table 4), are applied with state ownership percentage as a variable representing the independent variable of firm ownership. A more detailed explanation of all the variables and their method of measures are discussed in the following subchapters.

The first regression equation is applied to answer the research question about the potential association of firm ownership structure to firm overall performance on CSR metrics. Regression numbers (1.1) (with institutional ownership) and (2.1) (with state ownership) express the obtained results from this regression.

$$Y_t^i = \beta_1 \text{Ownership}_t^i + \beta_2 \text{Size}_t^i + \beta_3 \text{Leverage}_t^i + \beta_4 \text{ROA}_t^i + \alpha_i + \delta_t + \varepsilon_{i,t}$$

where,

$Y_t^i$  = [ESG<sub>t</sub><sup>i</sup>] - CSR performance measured with ESG score of firm *i* at time *t*

$\text{Ownership}_t^i$  - Percent of shares of firm *i* held by institution or state at time *t*

$\text{Size}_t^i$  - Firm *i* size as the natural logarithm of total assets at time *t*

$\text{Leverage}_t^i$  - Firm *i* financial position measured with its leverage at time *t*

$\text{ROA}_t^i$  - Firm *i* performance measured as return on assets at time *t*

*i* - Firm

*t* - Year

$\alpha_i$  - Firm *i* fixed effects

$\delta_t$  - Year *t* fixed effects

$\varepsilon_{i,t}$  - Error term

The second regression equation aims to answer the research question of whether the specific ownership structures behind the firm are explicitly

associated with some components of firm CSR performance. Moreover, the scoring of firm performance in environmental, social and governance pillars are applied separately as the dependent variable  $Y_t^i$  in the following regression equation. The results obtained from this regression are expressed under the numbers (1.2), (1.3), (1.4) for institutional ownership, and numbers (2.2), (2.3), (2.4) for state ownership.

$$Y_t^i = \beta_1 \text{Ownership}_t^i + \beta_2 \text{Size}_t^i + \beta_3 \text{Leverage}_t^i + \beta_4 \text{ROA}_t^i + a_i + \delta_t + \varepsilon_{i,t}$$

where,

$$Y_t^i = [\text{ESGComp}_t^i] - \text{CSR performance measured with different components of ESG score (ENV; SOC; GOV) of firm } i \text{ at time } t$$

The potential controversies in firm CSR related activities are applied in the third equation model. This regression aims to identify whether there is an association between firm ownership structures and the firm exposure to negative publicity around the different CSR matters. Detailed results of this regression are presented under the numbers (1.5) (institutional ownership) and (2.5) (state ownership).

$$Y_t^i = \beta_1 \text{Ownership}_t^i + \beta_2 \text{Size}_t^i + \beta_3 \text{Leverage}_t^i + \beta_4 \text{ROA}_t^i + a_i + \delta_t + \varepsilon_{i,t}$$

where,

$$Y_t^i = [\text{ESGComb}_t^i] - \text{CSR performance measured with combined score of firm ESG and ESG controversies firm } i \text{ at time } t$$

The final regression model is built to identify whether industry-specific characteristics are able to modify the potential relationship between company ownership structures and corresponding performance on CSR indicators. Therefore, a three-way interaction with corporate sustainability-sensitive industries is applied in this regression. The numbers (1.6) – (1.10) and (2.6) – (2.10) express the obtained results for institutional and state ownership correspondingly.

$$Y_t^i = \beta_1 \text{Ownership}_t^i + \beta_2 \text{Ownership}_t^i \times \text{SensitiveIndustry}_t^i + \beta_3 \text{SensitiveIndustry}_t^i + \beta_4 \text{Size}_t^i + \beta_5 \text{Leverage}_t^i + \beta_6 \text{ROA}_t^i + a_i + \delta_t + \varepsilon_{i,t}$$

where,

$Y_t^i = [ESG; ESGComp; ESGComb_t^i]$  - CSR performance measured with different variations of ESG of firm  $i$  at time  $t$

$SensitiveIndustry^i$  - Dummy variable, taking the value of "1" in case firm  $i$  belongs to sensitive industry, otherwise "0"

$Ownership_t^i \times SensitiveIndustry_t^i$  - Interactive dummy variable, taking the value of  $Ownership$  at time  $t$  in case firm  $i$  belongs to sensitive industry, otherwise "0"

## 4.5 Robustness Tests & Limitations

This study contains some limitations relevant to consider when carrying out empirical methods and interpreting the potential results. To assess the robustness of the models mentioned above, several tests were run to ensure that models bear the minimal number of biases.

The fixed-effects model is commonly used in the previous literature when analysing the panel data. This allows the variables to be examined only on firm and year fixed variables. Contrarily, the random-effects model would not allow this, as the variables might also correlate beyond these fixed variables, thus increase the omitted variable biases. Hausman test (1978) is used to support the selection of using the method of fixed effects over the random-effects model. Moreover, the obtained result from the Hausman test (1978) for the p-value is below the set limit of 0.05 ( $p = 0.001993$ ). Thus, applying the fixed effects regression model to this panel data over the random-effects model is justified. Furthermore, the outliers, i.e., the extreme values below 1<sup>st</sup> percentile and above 99<sup>th</sup> percentiles were winsorized from the final data set. Excluding the extreme values from the data set allows the data to be handled with less biased results.

It should be noted that the sample does not give a fully comprehensive picture of the Nordic market, as no relevant data was available for the analysis. Thus, the sample size was somewhat limited, starting from over 1.600 companies from the Nordics and ending up with the final sample size of 286. Nevertheless, the relatively limited sample size does not cover the actual market and thus give a fully reliable picture of the company ESG performance and associated ownership structures. Therefore, it is necessary to pay careful attention making when drawing conclusions from the potential findings.

Further on, the final sample is composed of a varying number of observations within the 286 companies of the sample. Thus, some companies are expressing a higher presence in observations than others. This is controlled already with the fixed regressions model by not enabling the company X variables to be studied and potentially correlate with company Y variables. However, this might cause some companies to dominate the observations, potentially leading to results being more subject to some company metrics than others.

Nevertheless, companies that operated within the sustainability-sensitive industries represented a larger number in observations (1,304 from the total of

2,142) compared to those not characterised as sensitive-industry firms. Thus, the sample can be said to represent the results that are more inclined to industries that face more significant exposure to sustainability-related threats. Therefore, the models might not present the results that could give results that could have been applied to larger scales.

Considering the multidimensional nature of corporate social responsibility, the firm performance in these matters is not fully unbiased. While the firm performance on CSR is measured with quantitative indicators in this empirical part, the rather complex nature leaves some room for interpretation. As the regulation on disclosing non-financial activities is obligated, the actual reporting is still in the hands of companies. Moreover, as the ESG scoring of the firms is composed of the firm own reporting (Refinitiv, n.d.), the comparison of these might still leave some room for interpretation and thus might cause the results to be biased. However, for instance, the Refinitiv ESG scores are based on over 400 firm indicators on different environmental, social and governance pillars (Refinitiv, n.d.). Thus, the use of ESG scores as a proxy for firm CSR performance is considered relatively comprehensive.

In addition, the potential association between the firm ownership structures and the subsequent performance on CSR related metrics is not unequivocal. This is controlled with multiple different controlling variables mentioned in the previous sub-section. Albeit, it is necessary to consider the possible results with caution, as no assumptions can be made related to ownership structures being only explaining variables for the subsequent CSR performance. Nevertheless, the issue of reverse causality cannot be fully excluded. As discussed in the previous section, the better performance on CSR related aspects can also operate as a lucrative function to some types of investors (see, for instance, Aksoy et al., 2020; Harjoto et al., 2017), thus better (or worse) performance on CSR can also have some influence on the company ownership structures.

## 5 RESULTS AND DISCUSSION

### 5.1 Descriptive Statistics & Correlation Coefficients

Table 1 below represents the descriptive statistics for each independent, dependent, and controlling variable that was identified in the previous chapter. Different indicators of firm CSR score (ESG, ENV, SOC, GOV, ESGComb and ESGCont) all vary in the scale from 0-100, with the lower score indicating a lower performance on these indicators and correspondingly the higher score indicating better performance on these matters. The mean ESG score for the sample is 50.21, with a standard deviation of 19.77. All the different components of ESG, ergo the environmental, social and governance pillars, represent relatively similar values throughout the sample, with the environmental pillar indicating a slightly weaker trend compared to the other two.

The sample includes companies with 0% of institutional and state ownership presence, whereas both of these maximum values indicate an ownership level around 85%. However, the mean and median values of state ownership percentages indicate a relatively low presence in general within the sample, with the mean value being 5.62 with a standard deviation of 13.22. Institutional ownership appears with higher numbers, with the mean institutional ownership percentage being 22.94 with a standard deviation of 13.34. This could indicate that institutional ownership appears with higher proportions in the Nordic companies within this sample, whereas state ownership appears less frequently and in lower ownership stakes.

**TABLE 1:** Descriptive Statistics Table

	min.	max.	mean	median	st.deviation
ESG	1.31	92.14	50.21	51.63	19.77
ENV	0.00	96.05	46.42	50.41	27.73
SOC	0.47	96.41	53.07	54.74	23.25
GOV	1.35	97.37	48.82	48.42	22.12
ESGComb	1.31	91.96	48.94	50.32	19.15
ESGCont	1.43	100.00	92.89	100.00	19.74
LEVERAGE	-5.17	61.58	0.24	0.14	1.60
SIZE	7.80E+07	6.33E+11	3.71E+10	1.34E+10	6.35E+10
ROA	-168.08	46.13	3.86	6.06	21.65
INST	0.00	88.52	22.94	20.83	13.34
SEO	0.00	85.37	5.62	1.47	13.22

Similar to the descriptive statistics above, Table 2 below presents the correlation coefficients between each independent, dependent, and controlling variable identified earlier in the methods section. As can be obtained from Table 2, slightly

bigger correlations can be evidenced between the state ownership and ESG scores ( $r = 0.3014$ ) compared to the percentage of institutional ownership ( $r = 0.1635$ ). Moreover, the correlations occur slightly greater also among each separate component of ESG and state ownership, where state ownership was positively correlated with each of them (*ENV*  $r = 0.2526$ , *SOC*  $r = 0.2068$ , *GOV*  $r = 0.2830$ ). Institutional ownership exhibited a positive yet very weak correlation with environmental ( $r = 0.1142$ ), social ( $r = 0.1748$ ) and governance ( $r = 0.1120$ ) pillars.

The controlling variables show that company financial performance measured with return on assets indicates a very weak though positive correlation with firm CSR performance measured with different ESG scores. The correlation with ROA was slightly weaker for governance score with  $r = 0.0767$ , whereas the environmental and social scores also revealed very weak correlations with  $r = 0.1242$  and  $r = 0.1143$  correspondingly.

As mentioned, leverage is seen to potentially affect the firm abilities to practice CSR activities. Supporting this notation, the correlation matrix indicates a negative (although very weak) correlation with each ESG indicator. Both the social and the overall ESG scores indicate a slight positive ( $r = 0.0096$  and  $r = 0.0015$  correspondingly). However, these correlations occur in such low values that no further conclusions can be made based on these.

The company size measured with firm total assets indicate a weak positive association with state ownership ( $r = 0.2225$ ), whereas interestingly, the correlation with institutional ownership exhibits a weak negative ( $r = -0.0166$ ). For the company CSR performance indicators, size indicates a positive correlation of  $r = 0.3288$ . This is in line with what was discussed earlier, with previous literature suggesting that companies greater in size having better abilities to invest in CSR.

From the statistical perspective, the bias of multicollinearity can be excluded, as the independent variables of institutional ownership and state ownership percentages did not exhibit the correlation that would exceed the value of  $r = 0.90$ . Besides the ESG scores and their understandably more significant associations with each other (ESG score correlating with over 0.8 with environmental, social, and ESG combined scores), no other variables seem to indicate greater associations. Therefore, no accusations of different variables associations with each other are drawn based on the results obtained here.

**TABLE 2:** Correlation Matrix of Variables

	ESG	ENV	SOC	GOV	ESGComb	ESGCont	SIZE	LEV.	ROA	INST	SEO
ESG		0.8643	0.8871	0.6192	0.9660	-0.1920	0.3288	0.0015	0.1327	0.1635	0.3014
ENV	0.8643		0.7318	0.3073	0.8313	-0.1757	0.2601	-0.0190	0.1242	0.1142	0.2526
SOC	0.8871	0.7318		0.3256	0.8618	-0.1467	0.3138	0.0096	0.1143	0.1748	0.2068
GOV	0.6192	0.3073	0.3256		0.5935	-0.1485	0.2101	-0.0016	0.0767	0.1120	0.2830
ESGComb	0.9660	0.8313	0.8618	0.5935		0.0257	0.3036	0.0000	0.1363	0.1850	0.2465
ESGCont	-0.1920	-0.1757	-0.1467	-0.1485	0.0257		-0.1335	-0.0230	0.0043	0.1035	-0.2289
SIZE	0.3288	0.2601	0.3138	0.2101	0.3036	-0.1335		-0.0045	0.1013	-0.0166	0.2225
LEV.	0.0015	-0.0190	0.0096	-0.0016	0.0000	-0.0230	-0.0045		-0.1467	0.0033	-0.0164
ROA	0.1327	0.1242	0.1143	0.0767	0.1363	0.0043	0.1013	-0.1467		-0.0523	-0.0246
INST	0.1635	0.1142	0.1748	0.1120	0.1850	0.1035	-0.0166	0.0033	-0.0523		-0.2080
SEO	0.3014	0.2526	0.2068	0.2830	0.2465	-0.2289	0.2225	-0.0164	-0.0246	-0.2080	

## 5.2 Results from Regression Equations

This sub-section presents the obtained results from the regression equations defined in the previous section. The first part of this sub-section will introduce the findings acquired with institutional ownership as the proxy of firm ownership structure as an independent variable. Then, the results with state ownership will be discussed in sub-section 5.2.2. Finally, the alternative sample results are represented with suggestions for future research.

Each results table (Tables 3 and 4 for the total sample with institutional and state ownership correspondingly as an independent variable, and tables 5 – 12 for the alternative samples) includes the given variables' beta coefficient on each regression model stated. Below this value, the obtained value of t-statistics is represented in parentheses. Depending on the significance of the obtained result, the star symbols are included alongside the beta coefficient to illustrate the significance of the p-value. The description of the star symbols according to p-values are described in the bottom margin of each regression result table.

Both results tables with institutional and state ownership as independent variables include the total observations of 2,142 from the defined sample. The obtained values for R2 are represented in each table. The R2 in both Table 3 and implies approximate values of 0.8 on each regression, meaning that approximately 80% of variations on either institutional or state ownership were able to explain the variations on the dependent variables of CSR scores.

The findings obtained with the controlling variable of company size (measured with the natural logarithm of firm total assets) implied the most significant results in regression models. Moreover, based on these findings, a one percent increase in the value of company total assets could be associated with approximately a 3.87 percentage point increase in company ESG score. These findings are in line with what the previous studies about the CSR performance have indicated. For instance, the company size was associated with higher scoring on ESG indicators by Dam and Scholtens (2012) and Stanwick and Stanwick (1998). Supporting these findings, the sample represents similar results indicating that companies larger in size with better financial performance perform better on corporate responsibility indicators, which might originate from, e.g., the higher number of assets that the company is able to put for CSR.

## 5.3 Results with Institutional Ownership

Table 3 represents the regression results obtained with models (1.1) – (1.10) incorporating institutional ownership percentage as a proxy for ownership structure and thus independent variable in these equations.

Regression model 1 (represented as regression (1.1) in Table 3) aiming to identify the potential relationship between the firm overall performance on CSR metrics (measured as ESG score) suggested a weak positive association with



institutional ownership. These findings are similar to the ones obtained by Graves and Waddock (1994), evidencing a positive yet insignificant association between institutional ownership and company CSR performance.

The findings obtained from regression (1.1) and the results from regressions (1.2), (1.3), and (1.4) indicate similar results. This comes out as expected, as the ESG score is composed of the CSR indicators utilized in the regressions (1.2) – (1.4). However, these three regressions each represent a separate component of ESG, thus environmental (1.2), social (1.3) and governance (1.4) scores. Both social and governance scores are associated with a slight positive relationship with institutional ownership. Interestingly, the findings within the Nordic sample indicate a slight negative association with a higher level of institutional ownership and company performance on the environmental pillar. Similar findings were also obtained by Dam and Scholtens (2012), identifying negative yet insignificant results between institutional ownership and firm performance on CSR. Nevertheless, like in the first regression model, the association between institutional ownership and the subsequent performance in environmental, social, or corporate governance matters appears statistically insignificant, thus no further statements can be drawn from this.

**TABLE 3:** Results from Regressions (1.1) - (1.10)

Regression	Dependent variable									
	ESG (1.1)	ENV (1.2)	SOC (1.3)	GOV (1.4)	ESGComb (1.5)	ESG (1.6)	ENV (1.7)	SOC (1.8)	GOV (1.9)	ESGComb (1.10)
INST	0.031 (0.053)	-0.02 (0.079)	0.071 (0.077)	0.047 (0.074)	0.048 (0.054)	-0.088 (0.081)	0.01 (0.137)	-0.105 (0.096)	-0.061 (0.132)	-0.084 (0.081)
SIZE	3.871*** (1.263)	4.280*** (1.603)	3.744** (1.692)	3.456* (1.804)	3.993*** (1.273)	4.181*** (1.271)	4.200** (1.643)	4.206** (1.679)	3.738** (1.754)	4.339*** (1.254)
LEVERAGE	1.166 (3.011)	0.15 (3.323)	1.042 (3.147)	1.387 (4.039)	1.332 (2.852)	1.257 (3.037)	0.126 (3.333)	1.177 (3.137)	1.469 (4.134)	1.433 (2.859)
ROA	0.052 (3.894)	-3.527 (6.814)	6.18 (5.085)	-3.44 (6.344)	0.649 (4.183)	0.289 (3.890)	-3.588 (6.808)	6.534 (5.061)	-3.225 (6.391)	0.913 (4.181)
INST:Industry						0.196* (0.106)	-0.05 (0.168)	0.292** (0.142)	0.178 (0.159)	0.218** (0.104)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142
R2	0.843	0.846	0.807	0.685	0.789	0.844	0.846	0.808	0.686	0.79
Adjusted R2	0.816	0.82	0.775	0.633	0.754	0.817	0.82	0.776	0.633	0.755

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Regression 5 was made to identify whether ESG controversies are associated with firm ownership structures. In the case of institutional ownership, regression (1.5) evidenced a weak positive association on these matters too, suggesting that institutional ownership helped explain the better performance on tackling the negative publicity around the CSR related questions, albeit the findings obtained remained statistically insignificant.

Finally, regressions (1.6.) – (1.10) all represent the results from previously discussed regression models in a similar order, but with industry sensitivity applied as an alternative controlling variable. As discussed above, a three-way interaction with the industry's sensitivity to different CSR issues is studied to control potential biases around the industry-specific characteristics that might influence the company's performance on these matters.

Applying the industry interaction with the model, the results indicate that the overall CSR performance of the firm measured as ESG score associated with institutional ownership among the non-sensitive industry firms is moderated from a slightly positive relationship to a weak negative, yet insignificant. Interestingly, the sensitive-industry firms evidence a somewhat positive and statistically significant association with institutional ownership and firm ESG score. This finding is aligned with the notations given by Choi and Sias (2009), suggesting that investors could be expected to demand more corporate responsibility initiatives, especially from companies that carry specific, e.g., industry-specific characteristics that bore more risks in corporate sustainability.

Interestingly, a similar change of main terms on CSR indicators is to be also exhibited with separate components of ESG in regressions (1.7), (1.8), and (1.9). The results indicate that companies operating within a sustainability-sensitive industry (thus within consumer cyclicals, consumer non-cyclicals, energy, utilities, basic materials, or industrials sectors) were performing better on social and governance pillars when associated with institutional ownership, whereas this association was found negative (albeit insignificant) among the non-sensitive industry firms. The findings with especially the social performance pillar evidenced with statistically significant results. These imply that an increase of one percent of institutional ownership can be associated with 0.29 percentage point higher performance on social performance among the sensitive industry firms.

Both environmental (regression 1.7) and governance scores (regression 1.9) imply statistically insignificant results also when incorporating the three-way interaction with industry sensitivity. However, like results obtained from regression (1.8) with company performance on social scores, the main term on the environmental score in regression (1.7) implied an opposite term for the association. Moreover, the results suggested a slight positive association between institutional ownership and environmental performance among the non-sensitive industry firms. In contrast, the sensitive-industry firms were experiencing a weakening effect of institutional ownership on their environmental performance.

Furthermore, the regression (1.9) suggested a weak negative result on institutional ownership and governance scores within the non-sensitive industries. In contrast, the industry's sensitivity to sustainability issues was able to modify this relationship to exist as slightly positive. However, as mentioned, both these regressions implied only statistically insignificant findings with environmental and governance scores as a proxy for firm CSR. Thus, no further associations can be drawn from these findings.

ESG combined score implied statistically significant results in regression (1.10). Following these findings, ESG controversies could be associated positively with a higher proportion of institutional ownership among sensitive-industry firms. Additionally, this relationship was evidenced as weak negative yet insignificant among the non-sensitive industry firms. These results could imply that institutional investors are generally more interested in how sensitive industry firms are exposed to negative publicity around the sustainability-related issues. Thus, the institutional ownership could therefore strengthen the firm performance on these matters, as investors could demand the higher engagement of companies to avoid this type of exposure.

## 5.4 Results with State Ownership

The results that were obtained for the regression models with state ownership percentage as a proxy of the independent variable are represented below in Table 4. Scrutinizing the results obtained from the first regression (2.1), there is a positive yet insignificant association between the state proprietorship and subsequent ESG performance of the firm. However, the results imply a positive association with each different component of ESG, albeit the significant results can be obtained only from regression (2.2) with the dependent variable of the firm environmental score. The results imply that state ownership within the Nordic stock listed companies is associated with improved performance on environmental aspects. Furthermore, when state ownership is one percent higher in these companies, the environmental performance could also be expected to improve by 0.46 percentage points. The obtained p-value on this association is below 0.01, also indicating statistically very significant findings. This finding is aligned with what was previously empirically evidenced by Liu et al. (2019) and Earnhart and Lizal (2006). Furthermore, this finding could result from state ownership pressuring companies to fulfil the governmental objectives, especially on environmental matters, for instance, to more aggressively engaging in, e.g., cutting the emissions caused in their operations.

Social and governance scores as a proxy for firm performance in CSR also imply a positive association in regressions (2.2) and (2.3) with state ownership. However, these results are above the p-value of 0.1, thus are not considered to offer statistically significant findings and cannot hence be considered to provide findings with appropriate to make further conclusions. As discussed, the ESG Combined score is composed of separate components of ESG and is also applied with the potential ESG controversies applicable for the company. Similar to findings with social and governance pillar scores, the regression (2.5) implies positive yet insignificant findings with ESG combined scores.

As noted by Earnhart and Lizal (2006), state ownership was found to be more frequently associated with better CSR performance within the companies operating within the industries that bore more significant threats in sustainability matters. Contrarily to their findings, the results from regressions (2.6) – (2.10)

implied no significant findings when applying the industry sensitivity into the equation. Furthermore, state ownership cannot be significantly associated with better (or worse) performance on ESG nor its separate components of environmental, social, or governance within the full Nordics sample.

**TABLE 4:** Results from Regressions (2.1) - (2.10)

Regression	Dependent variable									
	ESG (2.1)	ENV (2.2)	SOC (2.3)	GOV (2.4)	ESGComb (2.5)	ESG (2.6)	ENV (2.7)	SOC (2.8)	GOV (2.9)	ESGComb (2.10)
SEO	0.306 (0.189)	0.466*** (0.174)	0.251 (0.229)	0.182 (0.210)	0.261 (0.182)	0.316 (0.364)	0.352 (0.337)	0.524 (0.335)	0.169 (0.399)	0.318 (0.315)
SIZE	3.673*** (1.239)	3.774** (1.557)	3.722** (1.627)	3.424* (1.818)	3.890*** (1.256)	3.677*** (1.251)	3.729** (1.560)	3.831** (1.623)	3.419* (1.834)	3.913*** (1.266)
LEVERAGE	0.908 (2.731)	-0.131 (3.069)	0.751 (2.911)	1.184 (3.863)	1.074 (2.606)	0.901 (2.660)	-0.058 (3.074)	0.575 (2.738)	1.193 (3.822)	1.038 (2.519)
ROA	0.155 (3.910)	-3.167 (6.848)	6.125 (4.917)	-3.465 (6.401)	0.671 (4.187)	0.145 (3.924)	-3.052 (6.826)	5.847 (4.870)	-3.452 (6.396)	0.614 (4.202)
SEO:Industry						-0.019 (0.396)	0.207 (0.380)	-0.498 (0.438)	0.023 (0.444)	-0.104 (0.369)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142	2,142
R2	0.844	0.847	0.807	0.686	0.79	0.844	0.847	0.808	0.686	0.79
Adjusted R2	0.817	0.822	0.775	0.633	0.754	0.817	0.822	0.775	0.633	0.754

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

However, whereas state ownership was generally associated with a positive impact on CSR performance, industry sensitivity slightly modifies this relationship. Moreover, the general positive association with social and governance pillars turns negative in sensitive-industry firms. This could imply that state presence in company ownership structure could negatively affect the company's willingness to invest, especially in social and governance issues over other CSR categories. Also, as state ownership is previously linked with the company's abilities to exploit aggressive competition, the SEOs might thus lack interest and incentives for investing in CSR (Earnhart & Lizal, 2006; Leong & Yang, 2020).

After applying the three-way interaction with industry sensitivity, the results imply a change also in the main term for the ESG combined score. Further on, companies from sensitive industries with a higher proportion of state ownership were more likely to associate with poorer ESG combined scores, implying that these companies were more subject to negative publicity on CSR related issues. This relationship exhibited a slight positive among the non-sensitive industry firms. However, both sensitive and non-sensitive industry firms occurred with insignificant results and cannot thus be used for further assumptions.

## 5.5 Alternative Sample Results with Institutional Ownership

As mentioned above, the regressions were also run with alternative samples to test and identify the potential country-specific findings and compare these to one another. The total number of observations with Danish companies equalled 355, thus representing nearly a sixth (16 per cent) of the total sample. Correspondingly, Finnish observations totalled 389 (18 per cent of the total sample observations), Swedish 958 (45 per cent), and Norwegian 440 (20 per cent).

Table 5 represents the obtained regression results for regressions (1.1) – (1.10) with a sample constituting of only Danish companies with institutional ownership as an independent variable. Subsequently, Table 6 represents the obtained results with the Finnish sample, Table 7 for the Swedish sample, and Table 8 for the Norwegian sample.

As obtained from the first regression (1.10) in Table 5, Danish companies were found to positively associate institutional ownership with ESG scores more significantly. This association was higher both in significance and in correlation compared to the findings obtained from the main sample. Moreover, the 1 percentage increase of institutional ownership could be associated with a 0.25 percentage point increase in firm overall ESG score within the Danish sample.

**TABLE 5:** Results for Regressions (1.1) - (1.10) with Danish sample

Regression	Dependent variable									
	ESG (1.1)	ENV (1.2)	SOC (1.3)	GOV (1.4)	ESGComb (1.5)	ESG (1.6)	ENV (1.7)	SOC (1.8)	GOV (1.9)	ESGComb (1.10)
INST	0.248* (0.132)	0.375** (0.152)	0.1 (0.166)	0.305* (0.170)	0.247* (0.130)	-0.01 (0.414)	0.009 (0.449)	-0.043 (0.256)	-0.194 (0.570)	-0.097 (0.403)
SIZE	4.873*** (1.232)	2.326 (2.573)	6.780* (3.574)	3.713 (3.773)	5.721*** (1.438)	5.088*** (1.303)	2.63 (2.445)	6.900* (3.615)	4.128 (3.827)	6.007*** (1.469)
LEVERAGE	0.447 (4.924)	9.129 (11.014)	-7.926 (7.044)	3.743 (8.154)	0.264 (4.894)	0.577 (5.115)	9.313 (11.707)	-7.854 (6.872)	3.994 (8.186)	0.436 (5.071)
ROA	-3.179 (8.201)	-6.914 (13.130)	3.37 (5.113)	-5.331 (15.602)	-5.237 (8.834)	-3.648 (7.835)	-7.58 (12.763)	3.109 (5.220)	-6.238 (14.812)	-5.862 (8.407)
INST:Industry						0.292 (0.434)	0.414 (0.500)	0.163 (0.274)	0.565 (0.602)	0.389 (0.421)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	355	355	355	355	355	355	355	355	355	355
R2	0.834	0.864	0.837	0.665	0.806	0.835	0.865	0.837	0.668	0.808
Adjusted R2	0.8	0.837	0.804	0.597	0.766	0.801	0.837	0.804	0.599	0.768

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The Finnish companies did not perform as well as their Danish counterparts. Moreover, Table 6 shows the results obtained from regression (1.1) with the Finnish sample, that institutional ownership was slightly negatively albeit insignificantly associated with firm overall ESG scores. Furthermore, both Swedish and Norwegian samples resulted in a positive association between these variables in Tables 7 and 8 from regression (1.1), however, they both evidenced with statistically insignificant results.

Danish companies also evidenced a more evident positive association between institutional ownership and each separate component of ESG scores compared to the main sample findings and other alternative sample countries' results. Furthermore, the Danish companies seem to benefit from the institutional presence on their ownership structures, especially on environmental and governance scores, as both of these pillars evidenced positive and significant results. Neither Finnish nor Norwegian samples exhibit any statistically significant results from regressions (1.2) – (1.5). Swedish companies, on the other hand, revealed a statistically significant positive association between institutional ownership and the social pillar performance of the firm.

**TABLE 6:** Results for Regressions (1.1.) - (1.10) with Finnish sample

Regression	Dependent variable									
	ESG (1.1)	ENV (1.2)	SOC (1.3)	GOV (1.4)	ESGComb (1.5)	ESG (1.6)	ENV (1.7)	SOC (1.8)	GOV (1.9)	ESGComb (1.10)
INST	-0.019 (0.146)	-0.228 (0.265)	-0.02 (0.214)	0.351 (0.277)	-0.051 (0.115)	-0.276* (0.151)	0.779*** (0.235)	-0.069 (0.187)	-0.527* (0.283)	-0.259 (0.161)
SIZE	5.775** (2.835)	12.164*** (3.317)	0.905 (3.514)	6.206** (2.777)	5.666** (2.223)	5.509* (2.895)	13.205*** (2.854)	0.854 (3.529)	5.298 (3.288)	5.451** (2.328)
LEVERAGE	33.236 (23.537)	27.969 (17.853)	38.701** (18.325)	5.906 (35.667)	32.796 (22.876)	32.298 (22.752)	31.645 (19.764)	38.520** (18.144)	2.701 (33.435)	32.035 (22.175)
ROA	-15.177 (15.850)	-17.09 (24.001)	-9.321 (18.442)	-16.923 (21.360)	-9.875 (16.083)	-15.391 (15.606)	-16.254 (24.621)	-9.362 (18.448)	-17.652 (20.849)	-10.048 (15.934)
INST:Industry						0.31 (0.219)	-1.216*** (0.288)	0.06 (0.283)	1.060*** (0.295)	0.252 (0.194)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	389	389	389	389	389	389	389	389	389	389
R2	0.838	0.83	0.838	0.672	0.779	0.839	0.838	0.838	0.681	0.78
Adjusted R2	0.809	0.8	0.809	0.615	0.741	0.81	0.809	0.809	0.623	0.741

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

No significant results were obtained for the Danish companies when incorporating the sensitive industry term in regressions (1.6) – (1.10). Whereas Finnish and Norwegian samples did not result in significant findings on the previous regressions, more exciting findings could be obtained from the regressions with an industry interaction term. Moreover, institutional ownership seemed to negatively affect non-sensitive companies' overall ESG performance.

Interestingly, the non-sensitive firms were significantly benefitting from the institutional presence when looking from the environmental perspective. A one percent increase of institutional ownership among non-sensitive firms could potentially result in a 0.78 percentage point increase in their environmental pillar scores. Contrarily, this association was perceived as negative among the sustainability-sensitive industry firms, as institutional ownership was associated with a statistically significant negative correlation. This finding is rather interesting, as it is controversial for what was discussed earlier about the investors' willingness to balance their sustainability-related risks in their portfolios (Berry & Junkus, 2013; Clark & Hebb, 2005). This could imply that institutional investors are looking for greener investment targets to their portfolios among the Finnish companies. However, as they are not willing to risk their returns (Berry & Junkus, 2013; Orlitzky et al., 2003), the initiatives taken to enhance CSR among the companies could be seen to threaten their financial gains among the sustainability-sensitive industries.

**TABLE 7:** Results for Regressions (1.1) - (1.10) with Swedish sample

Regression	Dependent variable									
	ESG (1.1)	ENV (1.2)	SOC (1.3)	GOV (1.4)	ESGComb (1.5)	ESG (1.6)	ENV (1.7)	SOC (1.8)	GOV (1.9)	ESGComb (1.10)
INST	0.064 (0.073)	-0.007 (0.100)	0.192* (0.106)	-0.035 (0.099)	0.073 (0.079)	0.036 (0.094)	0.146 (0.120)	0.043 (0.104)	-0.042 (0.158)	0.015 (0.098)
SIZE	3.057 (2.001)	3.979* (2.224)	3.418 (2.314)	1.351 (3.725)	3.837* (2.164)	3.185 (1.995)	3.284 (2.184)	4.095* (2.234)	1.382 (3.725)	4.101* (2.106)
LEVERAGE	-6.871*** (2.281)	-5.021 (3.476)	-8.762*** (2.757)	-2.575 (2.426)	-4.694** (2.289)	-6.947*** (2.255)	-4.609 (3.672)	-9.163*** (2.620)	-2.594 (2.502)	-4.851** (2.274)
ROA	0.725 (5.679)	-2.201 (11.238)	3.148 (6.999)	0.982 (6.901)	2.176 (6.345)	0.632 (5.648)	-1.695 (11.185)	2.655 (6.859)	0.959 (6.832)	1.983 (6.346)
INST:Industry						0.055 (0.133)	-0.297* (0.171)	0.289* (0.163)	0.013 (0.210)	0.113 (0.139)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	958	958	958	958	958	958	958	958	958	958
R2	0.857	0.853	0.814	0.684	0.806	0.857	0.854	0.815	0.684	0.806
Adjusted R2	0.826	0.822	0.774	0.617	0.764	0.826	0.823	0.775	0.616	0.764

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Finnish companies evidenced controversial findings with their governance scores as a proxy of CSR performance. Further on, companies within the sensitive industries evidenced a strong positive association with institutional ownership in statistically significant results. Rather interestingly, both Norwegian and Swedish companies' samples associated higher institutional ownership with better subsequent performance on social pillar scores among the sensitive industry firms. The findings with Norwegian firms also suggested a statistically significant correlation with overall ESG scoring. Following the suggestions given

by (Clark & Hebb, 2005; Pelozo et al., 2012), this could indicate that among Swedish and Norwegian firms, institutional investors are with higher demands on corporate responsibility, especially on sustainability-sensitive industry firms, as not acknowledging these risks might potentially harm their future returns.

**TABLE 8:** Results for Regressions (1.1) - (1.10) with Norwegian sample

Regression	Dependent variable									
	ESG (1.1)	ENV (1.2)	SOC (1.3)	GOV (1.4)	ESGComb (1.5)	ESG (1.6)	ENV (1.7)	SOC (1.8)	GOV (1.9)	ESGComb (1.10)
INST	0.004 (0.127)	-0.112 (0.166)	0.009 (0.175)	0.068 (0.145)	0.021 (0.129)	-0.233 (0.176)	-0.358 (0.284)	-0.367* (0.198)	0.094 (0.263)	-0.189 (0.174)
SIZE	3.038 (1.952)	3.244 (2.768)	2.788 (2.789)	5.092** (2.181)	2.763 (1.936)	3.621* (1.991)	3.851 (3.000)	3.717 (2.682)	5.029** (2.080)	3.280* (1.887)
LEVERAGE	0.692 (2.051)	-7.400** (3.237)	1.009 (3.131)	7.506** (3.040)	0.397 (2.070)	1.403 (2.167)	-6.660** (3.310)	2.142 (3.405)	7.429** (3.121)	1.028 (2.090)
ROA	5.565 (8.854)	1.728 (12.677)	5.675 (12.405)	5.896 (11.529)	6.78 (8.444)	9.136 (9.049)	5.444 (11.600)	11.367 (12.337)	5.51 (12.789)	9.949 (8.487)
INST:Industry						0.421** (0.205)	0.439 (0.335)	0.672** (0.289)	-0.046 (0.292)	0.374* (0.212)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	440	440	440	440	440	440	440	440	440	440
R2	0.854	0.853	0.811	0.778	0.786	0.859	0.855	0.819	0.778	0.789
Adjusted R2	0.821	0.818	0.767	0.727	0.736	0.825	0.821	0.776	0.726	0.74

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## 5.6 Alternative Sample Results with State Ownership

Tables 9 – 12 present the regression equations obtained with each alternative sample with state ownership as an independent variable in regressions (2.1) – (2.10).

Danish sample with state ownership did not result in any significant associations to company CSR performance. Instead, each association remained positive yet insignificant with both overall ESG score as well as its different components as dependent variables. Similar results could also be obtained with Norwegian companies. Interestingly, both Finnish and Swedish companies' samples showed a statistically significant positive association between state ownership and firm performance on environmental matters. Whereas the Swedish sample also resulted in significant findings in overall ESG score, the Finnish sample evidenced significant findings only with the environmental pillar.

Moreover, a percentage increase in state ownership could be associated with a 0.31 percentage point increase in ESG scores and a 0.44 percentage point increase in environmental scores among Swedish companies. In contrast, among Finnish companies, the environmental score increase was 0.45 percentage points.



Thus, the Finnish and Swedish companies had a somewhat similar association between their state ownership and environmental performance.

**TABLE 9:** Results for Regressions (2.1) - (2.10) with Danish Sample

Regression	Dependent variable									
	ESG (2.1)	ENV (2.2)	SOC (2.3)	GOV (2.4)	ESGComb (2.5)	ESG (2.6)	ENV (2.7)	SOC (2.8)	GOV (2.9)	ESGComb (2.10)
SEO	0.574 (0.529)	0.055 (0.726)	0.752 (0.847)	0.519 (0.706)	0.669 (0.434)	-0.198 (0.915)	-0.996 (1.332)	1.441** (0.643)	-1.534 (1.304)	-0.179 (0.846)
SIZE	4.665*** (1.555)	2.77 (3.531)	6.210* (3.191)	3.631 (3.784)	5.421*** (1.787)	5.245*** (1.496)	3.559 (3.571)	5.693* (3.271)	5.172 (3.551)	6.058*** (1.767)
LEVERAGE	-3.358 (5.534)	2.908 (10.742)	-9.157 (7.233)	-1.041 (8.588)	-3.455 (5.424)	-3.3 (5.071)	2.988 (9.916)	-9.209 (7.111)	-0.885 (7.598)	-3.39 (4.996)
ROA	-3.735 (7.968)	-8.561 (12.834)	3.662 (4.752)	-6.199 (14.885)	-5.69 (8.513)	-5.125 (7.161)	-10.451 (12.253)	4.902 (4.399)	-9.891 (12.695)	-7.215 (7.736)
SEO:Industry						1.87 (1.423)	2.543 (2.231)	-1.667 (1.370)	4.967*** (1.547)	2.052 (1.507)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	355	355	355	355	355	355	355	355	355	355
R2	0.83	0.858	0.838	0.66	0.801	0.834	0.862	0.839	0.679	0.806
Adjusted R2	0.795	0.829	0.804	0.591	0.761	0.799	0.833	0.806	0.612	0.766

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Somewhat expectedly, the ESG Combined score incorporating the controversies around the ESG issues in regression (2.5) did not result in any significant results in any of the alternative samples either. Like the results obtained with the main sample, the alternative samples with Swedish, Danish, and Norwegian companies resulted in a slight positive yet insignificant correlation between state ownership percentage and the firm performance on ESG combined score. The Finnish sample was the only one evidencing a negative association between these two. Thus, Finnish companies with state ownership might be more frequently exposed to negative publicity on CSR related matters. However, the correlation was relatively low and with insignificant results.

Incorporating the sensitive industry term, Danish companies evidence a negative association in both environmental and governance pillars within the non-sensitive industry operating firms and state ownership. Furthermore, the association in social terms is positive and statistically significant, suggesting that state presence as a shareholder in Danish companies has a strengthening effect on companies' social pillar within the industries that are not sensitive to various sustainability-related issues. Furthermore, the companies that operate within a sustainability sensitive industry benefit from the state ownership with a statistically significant increase in their governance pillar score. With state

ownership increasing by 1 percent, the governance score can be expected to increase by nearly five percentage points.

**TABLE 10:** Results for Regressions (2.1) - (2.10) with Finnish Sample

Regression	Dependent variable									
	ESG (2.1)	ENV (2.2)	SOC (2.3)	GOV (2.4)	ESGComb (2.5)	ESG (2.6)	ENV (2.7)	SOC (2.8)	GOV (2.9)	ESGComb (2.10)
SEO	0.153 (0.145)	0.450*** (0.145)	-0.082 (0.167)	0.352 (0.230)	-0.002 (0.165)	0.3 (0.377)	0.687* (0.380)	0.345 (0.260)	0.38 (0.537)	0.211 (0.349)
SIZE	5.486* (2.808)	10.996*** (3.440)	1.005 (3.454)	6.280** (3.086)	5.574** (2.162)	5.822* (2.883)	11.542*** (3.095)	1.986 (3.504)	6.344* (3.573)	6.063** (2.285)
LEVERAGE	31.276 (21.559)	23.284 (14.976)	39.942** (17.449)	-1.055 (35.231)	33.136 (21.188)	29.053 (21.946)	19.679 (17.015)	33.456* (17.560)	-1.478 (35.595)	29.906 (20.508)
ROA	-15.368 (15.743)	-18.519 (23.041)	-9.373 (18.224)	-15.344 (21.334)	-10.134 (15.986)	-16.758 (15.665)	-20.774 (23.287)	-13.428 (17.523)	-15.608 (21.015)	-12.154 (15.507)
SEO:Industry						-0.239 -0.493	-0.388 -0.395	-0.697* -0.39	-0.045 -0.66	-0.347 -0.411
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	389	389	389	389	389	389	389	389	389	389
R2	0.838	0.832	0.838	0.671	0.779	0.839	0.832	0.84	0.671	0.78
Adjusted R2	0.81	0.802	0.809	0.613	0.74	0.81	0.802	0.812	0.612	0.741

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Norwegian firms also exhibited a strengthening effect of state ownership on their governance scores. However, this association was only present among the non-sensitive industry firms. Furthermore, state ownership had a somewhat weakening effect on sensitive-industry firms' success in governance matters, suggesting a negative and statistically significant association between these two.

The Finnish state ownership was positively associated with firm environmental scores among the non-sensitive industry firms. In contrast, the industry interaction term modified the state ownership's association to environmental scores by appearing as negative within the companies that operated within an industry characterized as sustainability sensitive. Rather interestingly, state ownership had a weakening effect on firm performance on the social aspect when operating within a sustainability-sensitive industry. Moreover, this association was found positive yet insignificant among the non-sensitive industry firms.

Among the Swedish companies, no significant findings were obtained from the regressions (2.6) – (2.10) with industry interaction term and firm ownership structure.

TABLE 11: Results for Regressions (2.1) - (2.10) with Swedish Sample

Regression	Dependent variable									
	ESG (2.1)	ENV (2.2)	SOC (2.3)	GOV (2.4)	ESGComb (2.5)	ESG (2.6)	ENV (2.7)	SOC (2.8)	GOV (2.9)	ESGComb (2.10)
SEO	0.309* (0.164)	0.444** (0.185)	0.33 (0.336)	0.032 (0.261)	0.283 (0.196)	0.321 (0.259)	0.445 (0.445)	0.421 (0.453)	0.553 (0.741)	0.358 (0.298)
SIZE	2.979 (2.035)	3.510* (2.115)	3.783 (2.344)	1.192 (3.815)	3.818* (2.225)	2.981 (2.031)	3.510* (2.099)	3.79 (2.333)	1.238 (3.771)	3.825* (2.216)
LEVERAGE	-6.524*** (2.356)	-4.82 (3.593)	-8.018*** (2.745)	-2.664 (2.396)	-4.333* (2.495)	-6.522*** (2.369)	-4.82 (3.607)	-7.998*** (2.800)	-2.545 (2.380)	-4.315* (2.505)
ROA	0.726 (5.674)	-1.998 (11.266)	2.896 (6.804)	1.067 (6.845)	2.147 (6.342)	0.715 (5.782)	-1.999 (11.339)	2.823 (6.865)	0.648 (6.960)	2.087 (6.438)
SEO:Industry						-0.018 (0.354)	-0.001 (0.548)	-0.132 (0.713)	-0.758 (0.875)	-0.109 (0.430)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	958	958	958	958	958	958	958	958	958	958
R2	0.857	0.854	0.811	0.684	0.806	0.857	0.854	0.811	0.685	0.806
Adjusted R2	0.826	0.822	0.771	0.617	0.764	0.826	0.822	0.771	0.617	0.764

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

TABLE 12: Results for Regressions (2.1) - (2.10) with Norwegian Sample

Regression	Dependent variable									
	ESG (2.1)	ENV (2.2)	SOC (2.3)	GOV (2.4)	ESGComb (2.5)	ESG (2.6)	ENV (2.7)	SOC (2.8)	GOV (2.9)	ESGComb (2.10)
SEO	0.275 (0.360)	0.151 (0.435)	0.337 (0.398)	0.14 (0.511)	0.36 (0.405)	0.526 (0.577)	0.059 (0.504)	0.461 (0.597)	1.018* (0.574)	0.589 (0.648)
SIZE	3.106 (2.127)	2.679 (2.874)	2.895 (3.017)	5.475** (2.149)	2.934 (2.163)	3.08 (2.114)	2.688 (2.880)	2.883 (3.022)	5.385*** (2.002)	2.911 (2.153)
LEVERAGE	0.758 (1.994)	-7.190** (3.166)	1.083 (3.033)	7.439** (3.083)	0.46 (2.031)	0.538 (2.129)	-7.110** (3.247)	0.975 (3.149)	6.670** (3.050)	0.26 (2.172)
ROA	6.026 (8.921)	2.539 (12.662)	6.219 (12.194)	5.81 (11.726)	7.309 (8.497)	5.642 (9.088)	2.679 (12.685)	6.03 (12.323)	4.471 (11.547)	6.96 (8.575)
SEO:Industry						-0.677 (0.766)	0.247 (0.850)	-0.332 (0.891)	-2.360*** (0.639)	-0.615 (0.825)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	440	440	440	440	440	440	440	440	440	440
R2	0.855	0.852	0.811	0.778	0.787	0.856	0.852	0.812	0.786	0.787
Adjusted R2	0.821	0.818	0.768	0.726	0.737	0.822	0.817	0.767	0.735	0.737

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

## 5.7 Discussion

The main results of this thesis implied a generally positive yet insignificant association between institutional ownership and firm performance on corporate social responsibility metrics. This finding is in line with earlier findings obtained by, e.g., Graves and Waddock (1994), who were not able to identify a significant association between institutionally held shares and firm CSR performance. Furthermore, Danish companies' institutional ownership was positively associated with ESG, environmental and governance scores, whereas Swedish companies evidenced the positive association with social pillars. Thus, in light of these results, accepting the first hypothesis about the positive association between institutional investors and enhanced CSR performance is partly possible, yet not unambiguous.

Significant associations with institutional ownership were obtained between the sensitive-industry firms and their overall performance on ESG scores. Further on, the firms operating within sustainable-sensitive industries were found to improve, especially their performance on the social pillar when institutional ownership was experienced with a higher presence in these companies. These companies also evidenced a lower probability to suffer from negative media exposure on CSR related matters. Mindful of these findings, the second hypothesis about the strengthening impact of institutional presence to company CSR performance can be partially accepted. Furthermore, the institutional ownership was only associated with significant findings only with social pillar metrics. Thus, the overall ESG performance enhancement was not empirically evidenced. Also, samples evidenced mixed results with environmental pillar, hence the evidence is not fully supporting the second hypothesis.

The Nordic companies were found to perform better in environmental matters when having a higher presence of state ownership. This association was also evidenced statistically significant, supporting the earlier findings by Earnhart and Lizal (2006) and Liu et al. (2019). Other components of ESG did not result in significant findings with state ownership on the general sample. The third hypothesis about the positive association of state ownership to company CSR performance can be partially accepted. The obtained results did not imply statistically significant results for all the different components of ESG, albeit the main term remained positive throughout the model.

Applying the sensitive industry variable, social performance was negatively associated with state ownership, although this relationship was also found insignificant among some samples. Furthermore, the results with industry interaction term were rather mixed between the different samples. Thus, the fourth and final hypothesis about the strengthening effect of state ownership on company CSR performance cannot be accepted, as it did not result with findings possible to make conclusions.

## 6 CONCLUSIONS

The issue of corporate social responsibility plays an increasing role in the investor's decision-making process. Thus, it can be expected that companies have higher incentives to start practicing socially responsible initiatives within their business operations. The previous literature has also discussed that in case a company does not take the prevailing sustainability matters into account, they are both risking their investor's returns (Berry & Junkus, 2013) and thus their own survival in the long term (Fernando et al., 2019; Lamb & Butler, 2016).

Although it is difficult to evaluate the source for better success in corporate social responsibility (Griffin & Mahon, 1997), it is relevant to discuss whether it could attract certain types of shareholders and whether these shareholders could be seen to potentially strengthen or weaken this performance. Therefore, it was of interest in this Master's Thesis to discuss how institutional or state presence in firms' ownership structure is associated with subsequent CSR performance or whether these two variables are linked at all.

The general sample results imply that institutional ownership was positively yet insignificantly associated with firm CSR performance. Furthermore, among the companies that operated within sustainability sensitive industries, thus either within consumer cyclicals, consumer non-cyclicals, energy, utilities, basic materials, or industrials sectors, were evidencing a slightly better performance on their overall ESG scores as well as their social pillar scores when associated with higher institutional ownership. These companies also succeeded better on ESG combined score, suggesting that sensitive industry firms were less often associated with negative media exposure on CSR if they had a higher number of institutional investors.

For state ownership, the general sample evidenced a rather positive association. Although most of the associations with CSR indicators appeared insignificant, the higher state ownership was statistically very significantly associated with better firm performance on environmental matters.

When looking into the results obtained with alternative samples, differing results were acquired. Danish companies with a higher presence of institutional ownership performed better on an overall metric of their CSR performance. More specifically, Danish companies benefitted from institutional ownership, especially on their environmental and governance score pillars. State ownership, on the other hand, did not evident as significantly among Danish companies. However, state ownership was positively associated among Danish companies only with better social pillar scoring among the companies that operated within industries not characterised to belong to a sustainability-sensitive industry. Furthermore, companies within the sensitive industries evidenced better performance on their governance scores when associated with a higher percentage of state ownership.

The Finnish sample did not result in significant findings with institutional ownership and firm CSR performance of the company in general. However,

Finnish companies seemed to positively associate a higher presence of institutional ownership with firm performance on environmental matters among the non-sustainability-sensitive industries. In contrast, the sensitive-industry peers evidenced a statistically significant negative association with institutional ownership. Interestingly, the results implied opposite results with firm governance scores, suggesting that sensitive industry firms outperformed their non-sensitive industry peers on these matters, whereas governance score was affected negatively by institutional ownership among the non-sensitive industry firms. On the other hand, Finnish state ownership is evidenced to have a strong and statistically significant association with the higher environmental performance of the companies. Furthermore, this association could be evidenced, especially among the companies from non-sensitive industries.

Among the Swedish companies, the institutional ownership was able to associate significantly only with firm social performance. This positive association was evidenced within sample companies both from sensitive and non-sensitive industries, albeit the association was evidenced with higher correlation and with statistically more significant results among the sensitive industry firms. Further on, Swedish sensitive-industry firms with higher institutional ownership percentages also slightly underperformed on environmental scores. The state ownership was evidenced with statistically significant results only with better overall ESG and environmental performance among the Swedish sample.

The institutional ownership seemed to enhance the Norwegian sensitive-industry firms' overall performance on CSR. Further on, this association was evidenced especially on social pillar scores, where sensitive industries seemed to benefit from institutional ownership, while non-sensitive industry firms negatively associated institutional ownership with social pillar performance. The state ownership was not significantly associated with any other CSR performance indicators other than governance scores. This association was only found as negative, suggesting that state ownership could explain the poorer performance of Norwegian sensitive-industry firms on governance issues. At the same time, state ownership is associated positively with governance scores among the non-sensitive industry firms.

As discussed, this study has some limitations that were not able to overcome. First, the issue of endogeneity cannot be entirely excluded, as previous good (or bad) performance on CSR could explain the enhanced (or worsened) subsequent performance. Therefore, the identified dependent variables (ESG scores as a proxy of firm CSR performance) cannot be fully explained to be a cause of variations in the independent variables (institutional or state ownership). Moreover, the multidimensional nature of CSR is found to be shaped based on multiple different variables (Griffin & Mahon, 1997), thus studying the relationship between these variables is not unambiguous.

Following the suggestions made within the previous literature and based on the results obtained in this Master's Thesis, future research of firm ownership structures and their potential association with firm CSR is still needed. A greater

need for studies conducted in the European context is needed focusing merely on institutions and states as owners, as the evidence remains mixed from the field. Although this thesis aimed to answer the research calls made, e.g., Faller & Knyphausen-Aufseß (2018), by conducting a cross-national comparison with additional samples, only a limited number of studies have focused on the potential similarities and differences, especially among the Nordic countries. Given their rather similar nature as a market, the studies conducted in this area would allow broad research avenues for the upcoming studies.

Given the time frame that this thesis covered (2002-2020), additional time-series testing would potentially bring valuable insights from the topic. Moreover, studying the company ownership structures and their association with firm CSR performance would be relevant to conduct with shorter time periods. Even within this study, the majority of the observations occurred after 2015. Therefore, it would be relevant to examine whether different results would be obtained with the given sample only for the time period occurring after 2017 when non-financial reporting became obligated for the stock listed companies. Albeit, studying the association from 2017 onward would be valuable to conduct later, as the sample might be left relatively small due to data availability if conducted by the time of completing this thesis.

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## APPENDIX 1 – List of Sample Companies

Company	Country	TRBC Economic Sector Name	Sensitive industry	Number of Observations
AAK AB (publ)	Sweden	Consumer Non-Cyclicals	Yes	2
AB SKF	Sweden	Industrials	Yes	18
AcadeMedia AB	Sweden	Academic & Educational Services	No	2
Adapteo Oyj	Sweden	Real Estate	No	1
Addtech AB	Sweden	Industrials	Yes	1
Adevinta ASA	Norway	Technology	No	2
Akastor ASA	Norway	Energy	Yes	17
Aker ASA	Norway	Energy	Yes	4
Aker BP ASA	Norway	Energy	Yes	3
Aker Solutions ASA	Norway	Energy	Yes	7
Alfa Laval AB	Sweden	Industrials	Yes	18
Alimak Group AB (publ)	Sweden	Industrials	Yes	3
ALK-Abello A/S	Denmark	Healthcare	No	3
ALM. Brand A/S	Denmark	Financials	No	3
Ambea AB (publ)	Sweden	Healthcare	No	1
Ambu A/S	Denmark	Healthcare	No	4
AP Moeller - Maersk A/S	Denmark	Industrials	Yes	19
Arjo AB (publ)	Sweden	Healthcare	No	2
Assa Abloy AB	Sweden	Consumer Cyclical	Yes	19
Atea ASA	Norway	Technology	No	3
Atlas Copco AB	Sweden	Industrials	Yes	19
Atrium Ljungberg AB	Sweden	Real Estate	No	2
Attendo AB (publ)	Sweden	Healthcare	No	3
Austevoll Seafood ASA	Norway	Consumer Non-Cyclicals	Yes	3
Avanza Bank Holding AB	Sweden	Financials	No	3
Axactor SE	Norway	Financials	No	3
Axfood AB	Sweden	Consumer Non-Cyclicals	Yes	18
B2holding ASA	Norway	Financials	No	2
Basware Oyj	Finland	Technology	No	1
Bavarian Nordic A/S	Denmark	Healthcare	No	2
Beijer Ref AB (publ)	Sweden	Industrials	Yes	6
Bergman & Beving AB	Sweden	Industrials	Yes	5
Bewi ASA	Norway	Basic Materials	Yes	1
Bilia AB	Sweden	Consumer Cyclical	Yes	3
BillerudKorsnas AB (publ)	Sweden	Basic Materials	Yes	16
BioArctic AB	Sweden	Healthcare	No	1
Biogaia AB	Sweden	Consumer Non-Cyclicals	Yes	3
Biotage AB	Sweden	Healthcare	No	3
Boliden AB	Sweden	Basic Materials	Yes	16
Bonava AB (publ)	Sweden	Real Estate	No	3
Bonheur ASA	Norway	Energy	Yes	2
Boozt AB	Sweden	Technology	No	2
Borr Drilling Ltd	Norway	Energy	Yes	3
Borregaard ASA	Norway	Basic Materials	Yes	2
Bravida Holding AB	Sweden	Industrials	Yes	3
Bufab AB (publ)	Sweden	Industrials	Yes	3
Bure Equity AB	Sweden	Financials	No	3
BW LPG Ltd	Norway	Energy	Yes	2
BW Offshore Ltd	Norway	Energy	Yes	3
Camurus AB	Sweden	Healthcare	No	2
Cargotec Corp	Finland	Industrials	Yes	15
Carlsberg A/S	Denmark	Consumer Non-Cyclicals	Yes	18
Castellum AB	Sweden	Real Estate	No	15
Catena AB	Sweden	Real Estate	No	1
Catena Media PLC	Sweden	Technology	No	3
Caverion Oyj	Finland	Industrials	Yes	3
CellaVision AB	Sweden	Healthcare	No	2
Cellink AB	Sweden	Healthcare	No	1

<b>Company</b>	<b>Country</b>	<b>TRBC Economic Sector Name</b>	<b>Sensitive industry</b>	<b>Number of Observations</b>
Chemometec A/S	Denmark	Healthcare	No	2
Chr Hansen Holding A/S	Denmark	Consumer Non-Cyclicals	Yes	11
Citycon Oyj	Finland	Real Estate	No	2
Clas Ohlson AB	Sweden	Consumer Cyclicals	Yes	4
Cloetta AB	Sweden	Consumer Non-Cyclicals	Yes	3
Coloplast A/S	Denmark	Healthcare	No	15
Coor Service Management Holding AB	Sweden	Industrials	No	1
Crayon Group Holding ASA	Norway	Technology	No	1
CTT Systems AB	Sweden	Industrials	No	4
Dampskibsselskabet Norden A/S	Denmark	Industrials	Yes	14
Demant A/S	Denmark	Healthcare	No	18
DFDS AS	Denmark	Industrials	Yes	3
Dios Fastigheter AB	Sweden	Real Estate	No	3
Dno ASA	Norway	Energy	Yes	12
Dometic Group AB (publ)	Sweden	Consumer Cyclicals	Yes	4
DSV Panalpina A/S	Denmark	Industrials	Yes	10
Duni AB	Sweden	Basic Materials	Yes	2
Dustin Group AB	Sweden	Technology	No	3
Elanders AB	Sweden	Industrials	Yes	3
Electrolux AB	Sweden	Consumer Cyclicals	No	16
Elekta AB (publ)	Sweden	Healthcare	No	18
Elisa Oyj	Finland	Technology	No	16
Elkem ASA	Norway	Basic Materials	Yes	3
Eltel AB	Sweden	Industrials	Yes	3
Embracer Group AB	Sweden	Consumer Cyclicals	Yes	1
Entra ASA	Norway	Real Estate	No	3
Epiroc AB	Sweden	Industrials	Yes	3
EQT AB	Sweden	Financials	No	1
Equinor ASA	Norway	Energy	Yes	16
Essity AB (publ)	Sweden	Consumer Non-Cyclicals	Yes	3
Europris ASA	Norway	Consumer Cyclicals	Yes	2
Evolution AB (publ)	Sweden	Consumer Cyclicals	No	3
Fabege AB	Sweden	Real Estate	No	18
Fastighets AB Balder	Sweden	Real Estate	No	5
Fingerprint Cards AB	Sweden	Technology	Yes	3
Finnair Oyj	Finland	Industrials	Yes	3
Fjordkraft Holding ASA	Norway	Utilities	Yes	2
Flsmidth & Co A/S	Denmark	Basic Materials	Yes	14
Fortnox AB	Sweden	Technology	No	1
Fortum Oyj	Finland	Utilities	Yes	15
Frontline Ltd	Norway	Energy	Yes	18
F-Secure Oyj	Finland	Technology	No	3
Gaming Innovation Group Inc	Norway	Consumer Cyclicals	No	3
Genmab A/S	Denmark	Healthcare	No	12
Getinge AB	Sweden	Healthcare	No	16
Gjensidige Forsikring ASA	Norway	Financials	No	10
GN Store Nord A/S	Denmark	Healthcare	No	14
Granges AB	Sweden	Basic Materials	Yes	3
Grieg Seafood ASA	Norway	Consumer Non-Cyclicals	Yes	2
H & M Hennes & Mauritz AB	Sweden	Consumer Cyclicals	Yes	16
H Lundbeck A/S	Denmark	Healthcare	No	19
Haldex AB	Sweden	Consumer Cyclicals	Yes	2
Hansa Biopharma AB	Sweden	Healthcare	No	2
Hexagon AB	Sweden	Technology	Yes	16
Hexagon Composites ASA	Norway	Basic Materials	Yes	2
Hexpol AB	Sweden	Basic Materials	Yes	6
HMS Networks AB	Sweden	Technology	No	1
Hoist Finance AB (publ)	Sweden	Financials	No	3
Holmen AB	Sweden	Basic Materials	Yes	16
Hufvudstaden AB	Sweden	Real Estate	No	8
Huhtamaki Oyj	Finland	Basic Materials	Yes	8
Humana AB	Sweden	Healthcare	No	2
Husqvarna AB	Sweden	Consumer Cyclicals	No	15



Company	Country	TRBC Economic Sector Name	Sensitive industry	Number of Observations
ICA Gruppen AB	Sweden	Consumer Non-Cyclicals	Yes	8
Industrivarden AB	Sweden	Financials	No	17
Indutrade AB	Sweden	Industrials	Yes	4
Instalco AB	Sweden	Industrials	Yes	2
International Petroleum Corp	Sweden	Energy	Yes	1
Intrum AB	Sweden	Financials	No	8
Investment AB Latour	Sweden	Consumer Non-Cyclicals	Yes	1
Investment Oresund AB	Sweden	Financials	No	2
Investor AB	Sweden	Financials	No	17
Inwido AB (publ)	Sweden	Consumer Cyclicals	Yes	3
Iss A/S	Denmark	Industrials	No	6
JM AB	Sweden	Consumer Cyclicals	Yes	14
John Mattson Fastighetsforetagen publ	Sweden	Real Estate	No	2
Kambi Group PLC	Sweden	Consumer Cyclicals	No	2
Karo Pharma AB	Sweden	Healthcare	No	2
Kemira Oyj	Finland	Basic Materials	Yes	11
Kesko Oyj	Finland	Consumer Non-Cyclicals	Yes	14
Kindred Group PLC	Sweden	Consumer Cyclicals	No	5
Kinnevik AB	Sweden	Financials	No	16
Klovern AB	Sweden	Real Estate	No	2
Kojamo Oyj	Finland	Real Estate	No	1
Kone Oyj	Finland	Industrials	Yes	19
Konecranes Abp	Finland	Industrials	Yes	15
Kongsberg Automotive ASA	Norway	Consumer Cyclicals	Yes	2
Kongsberg Gruppen ASA	Norway	Industrials	No	3
Kungsleden AB	Sweden	Real Estate	No	11
L E Lundbergforetagen AB (publ)	Sweden	Basic Materials	Yes	12
Lehto Group Oyj	Finland	Industrials	Yes	2
LeoVegas AB (publ)	Sweden	Consumer Cyclicals	No	2
Leroy Seafood Group ASA	Norway	Consumer Non-Cyclicals	Yes	3
Lifco AB (publ)	Sweden	Financials	No	1
Lindab International AB	Sweden	Industrials	Yes	6
Loomis AB	Sweden	Industrials	No	5
Lundin Energy AB	Sweden	Energy	Yes	17
Maersk Drilling A/S	Denmark	Energy	Yes	2
Mekonomen AB	Sweden	Consumer Cyclicals	Yes	3
Metsa Board Oyj	Finland	Basic Materials	Yes	4
Metso Outotec Corp	Finland	Industrials	Yes	10
MIPS AB	Sweden	Consumer Cyclicals	Yes	1
Modern Times Group MITG AB	Sweden	Technology	No	18
Mowi ASA	Norway	Consumer Non-Cyclicals	Yes	17
Munters Group AB	Sweden	Industrials	No	3
Musti Group Oyj	Finland	Consumer Cyclicals	Yes	1
Mycronic AB (publ)	Sweden	Technology	No	3
NCC AB	Sweden	Industrials	Yes	10
Nederman Holding AB	Sweden	Industrials	No	6
Nel ASA	Norway	Energy	Yes	1
Neles Oyj	Finland	Industrials	Yes	19
Neste Oyj	Finland	Energy	Yes	13
Netcompany Group A/S	Denmark	Technology	No	3
New Wave Group AB	Sweden	Consumer Cyclicals	Yes	2
Nibe Industrier AB	Sweden	Industrials	Yes	7
Nilfisk Holding A/S	Denmark	Industrials	Yes	3
NKT A/S	Denmark	Industrials	Yes	12
NNIT A/S	Denmark	Technology	No	3
Nobia AB	Sweden	Consumer Cyclicals	Yes	17
Nobina AB (publ)	Sweden	Industrials	Yes	4
Nokia Oyj	Finland	Technology	No	9
Nokian Tyres plc	Finland	Consumer Cyclicals	Yes	19
Nolato AB	Sweden	Basic Materials	Yes	5
Nordic Entertainment Group AB	Sweden	Consumer Cyclicals	No	1
Nordic Nanovector ASA	Norway	Healthcare	No	2
Nordic Semiconductor ASA	Norway	Technology	No	2
Norsk Hydro ASA	Norway	Basic Materials	Yes	15
Norske Skog ASA	Norway	Basic Materials	Yes	3



Company	Country	TRBC Economic Sector Name	Sensitive industry	Number of Observations
Northern Drilling Ltd	Norway	Energy	Yes	3
Norway Royal Salmon ASA	Norway	Consumer Non-Cyclicals	Yes	3
Norwegian Air Shuttle ASA	Norway	Industrials	Yes	2
Norwegian Property ASA	Norway	Real Estate	No	3
Novo Nordisk A/S	Denmark	Healthcare	No	19
Novozymes A/S	Denmark	Basic Materials	Yes	18
Nyfosa AB	Sweden	Real Estate	No	3
Ocean Yield ASA	Norway	Energy	Yes	2
Odfjell Drilling Ltd	Norway	Energy	Yes	3
Oncopeptides AB	Sweden	Healthcare	No	2
Oriola Oyj	Finland	Consumer Non-Cyclicals	Yes	12
Orion Oyj	Finland	Healthcare	No	11
Orkla ASA	Norway	Consumer Non-Cyclicals	Yes	19
Orsted A/S	Denmark	Utilities	Yes	5
Outokumpu Oyj	Finland	Basic Materials	Yes	19
Pandora A/S	Denmark	Consumer Cyclicals	Yes	9
Pandox AB	Sweden	Consumer Cyclicals	No	3
Paradox Interactive AB (publ)	Sweden	Technology	No	1
Peab AB	Sweden	Industrials	Yes	2
Per Aarsleff Holding A/S	Denmark	Industrials	Yes	1
PGS ASA	Norway	Energy	Yes	16
Ponsse Oyj	Finland	Industrials	Yes	3
Powercell Sweden AB (publ)	Sweden	Industrials	Yes	2
Probi AB	Sweden	Consumer Non-Cyclicals	Yes	2
Prosafe SE	Norway	Energy	Yes	18
Protector Forsikring ASA	Norway	Financials	No	2
Ratos AB	Sweden	Financials	No	15
RaySearch Laboratories AB (publ)	Sweden	Healthcare	No	2
REC Silicon ASA	Norway	Technology	No	15
Resurs Holding AB (publ)	Sweden	Financials	No	3
Rockwool International A/S	Denmark	Consumer Cyclicals	Yes	13
Rovio Entertainment Oyj	Finland	Technology	No	2
Royal Unibrew A/S	Denmark	Consumer Non-Cyclicals	Yes	3
Saab AB	Sweden	Industrials	No	6
Sagax AB	Sweden	Real Estate	No	2
SalMar ASA	Norway	Consumer Non-Cyclicals	Yes	4
Samhallsbyggnadsbolaget I Norden AB	Sweden	Real Estate	No	2
Sampo plc	Finland	Financials	No	18
Sandvik AB	Sweden	Industrials	Yes	19
Sanoma Oyj	Finland	Consumer Cyclicals	No	17
SAS AB	Sweden	Industrials	Yes	19
Scandi Standard AB (publ)	Sweden	Consumer Non-Cyclicals	Yes	3
Scandic Hotels Group AB	Sweden	Consumer Cyclicals	No	2
Scandinavian Tobacco Group A/S	Denmark	Consumer Non-Cyclicals	Yes	3
Scatec ASA	Norway	Utilities	Yes	3
Schibsted ASA	Norway	Consumer Cyclicals	No	19
Schouw & Co A/S	Denmark	Consumer Non-Cyclicals	Yes	3
Seadrill Ltd	Norway	Energy	Yes	15
Sectra AB	Sweden	Healthcare	No	5
Securitas AB	Sweden	Industrials	No	19
Sedana Medical AB (publ)	Sweden	Healthcare	No	2
Selvaag Bolig ASA	Norway	Real Estate	No	3
Simcorp A/S	Denmark	Technology	No	5
Sinch AB (publ)	Sweden	Technology	No	1
Skanska AB	Sweden	Industrials	Yes	16
SkiStar AB	Sweden	Consumer Cyclicals	No	3
Solar A/S	Denmark	Industrials	Yes	4
SSAB AB	Sweden	Basic Materials	Yes	16
Stillfront Group AB (publ)	Sweden	Consumer Cyclicals	Yes	2
Stolt-Nielsen Ltd	Norway	Industrials	Yes	16
Stora Enso Oyj	Finland	Basic Materials	Yes	16
Storebrand ASA	Norway	Financials	No	18
Subsea 7 SA	Norway	Energy	Yes	15
Svedbergs i Dalstorp AB	Sweden	Consumer Cyclicals	No	3
Svenska Cellulosa SCA AB	Sweden	Basic Materials	Yes	19
Sweco AB (publ)	Sweden	Industrials	Yes	2

<b>Company</b>	<b>Country</b>	<b>TRBC Economic Sector Name</b>	<b>Sensitive industry</b>	<b>Number of Observations</b>
Swedish Match AB	Sweden	Consumer Non-Cyclicals	Yes	19
Swedish Orphan Biovitrum AB (publ)	Sweden	Healthcare	No	7
Telefonaktiebolaget LM Ericsson	Sweden	Technology	No	14
Telenor ASA	Norway	Technology	No	19
Telia Company AB	Sweden	Technology	No	19
TGS ASA	Norway	Energy	Yes	17
Thule Group AB	Sweden	Consumer Cyclical	Yes	3
TietoEVERY Corp	Finland	Technology	No	16
Tobii AB	Sweden	Technology	Yes	2
Tokmanni Group Corp	Finland	Consumer Cyclical	Yes	2
Tomra Systems ASA	Norway	Industrials	No	19
Topdanmark A/S	Denmark	Financials	No	19
Torm PLC	Denmark	Energy	Yes	10
Trelleborg AB	Sweden	Industrials	Yes	19
Troax Group AB (publ)	Sweden	Industrials	Yes	3
Tryg A/S	Denmark	Financials	No	12
UPM-Kymmene Oyj	Finland	Basic Materials	Yes	14
Uponor Oyj	Finland	Consumer Cyclical	Yes	19
Valmet Oyj	Finland	Industrials	Yes	3
VBG Group AB (publ)	Sweden	Industrials	Yes	5
Veidekke ASA	Norway	Industrials	Yes	5
Vestas Wind Systems A/S	Denmark	Energy	Yes	18
Vitrolife AB	Sweden	Healthcare	No	2
Volati AB	Sweden	Consumer Non-Cyclicals	Yes	3
Wallenius Wilhelmsen ASA	Norway	Industrials	Yes	3
Wallenstam AB	Sweden	Real Estate	No	3
Wartsila Oyj Abp	Finland	Industrials	Yes	18
Wihlborgs Fastigheter AB	Sweden	Real Estate	No	15
Xvivo Perfusion AB	Sweden	Healthcare	No	1
XXL ASA	Norway	Consumer Cyclical	Yes	2
Yara International ASA	Norway	Basic Materials	Yes	17
Yit Oyj	Finland	Industrials	Yes	16
Zealand Pharma A/S	Denmark	Healthcare	No	3