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Impact of CSR on corporate financial performance: Evidence from Finnish industrial sector

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ABSTRACT:

This study aims to investigate whether there is a link between corporate social responsibility and profitability in Finnish listed companies from the industrial sector. Since sustainability reporting becomes a statutory requirement, it is important to analyse how companies' social responsibility affects various aspects of financial performance. The link between CSR and CFP is analysed through four multiple regression models, where composite ESG scores and individual dimensions are used as an independent variable along with three control variables. These are tested against two dependent variables: return on total assets (ROA) and return on equity (ROE).

The results show that ESG scores have a significant impact on ROA and ROE. The ESG score is statistically significant on ROA at the 5% significance level, while other disaggregated variables show significant links at all significance levels except governance dimension. Furthermore, it is shown that the ESG rating also has a significant negative impact on ROE at all significance levels.

KEYWORDS: corporate social responsibility, industry, profitability, finance, Return on Assets (ROA), Return on Equity (ROE), environment, social, governance

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1 Introduction

In recent decades, Corporate Social Responsibility (CSR) has evolved from a voluntary corporate practice to a central part of strategic decision-making, with the emerging concept that business success is not just about profit but also about the positive impact on society, such as social and environmental responsibility.

1.1 Background and motivation

The industrial sector, as an indispensable powerhouse of economic growth and a leading source of environmental impact, is at the forefront of sustainable transformation. Of these, the industrial sector stands out because of its indispensable role in environmental sustainability and socioeconomic development. As the world becomes increasingly concerned about sustainable development, companies are no longer just expected to earn profits but are also expected to act responsibly while considering the overall impact of their actions on stakeholders, society, and the environment. The greater emphasis on CSR brings with it a crucial question: How does financial performance get affected through socially responsible practices?

The European Union is at an interesting stage when the Corporate Sustainability Reporting Directive (CSRD) comes into force starting from the fiscal year 2023. The CSRD imposes requirements for increased transparency in corporate sustainability reporting, resulting in more comprehensive and detailed reporting than before (European Union, 2022).

The relationship between the environment (E), social responsibility (S), governance (G), and corporate profitability has been ongoing for a long time, long before sustainability issues became as debated a topic as today. A meta-analysis by Friede et al. (2015) shows that the first investigations on the subject can be traced back to the 1970s. As the concept of corporate social responsibility (CSR) has become increasingly established among both researchers and companies, the number of studies on the subject has also significantly increased (Clarkson, 1995).

The availability of more reliable and comprehensive data has improved with this development, enabling more nuanced analyses of how various sustainability aspects, not just CSR, affect corporate profitability. Profitability is often considered one of the most important factors for a company's long-term success, making this type of research particularly relevant.

Therefore, examining the relationship between sustainability and profitability is of great importance, not only to inform investors about how sustainability reporting can affect financial results but also to provide guidance to corporate management and shareholders. The results can help determine whether sustainability initiatives are strategically motivated to steer companies toward better profitability.

1.2 Research problem

Recently, companies operating in the industrial sector have faced growing expectations from stakeholders to balance profitability with social and environmental accountability, with various interest groups, both public and private, demanding that companies pay extra attention to the human, environmental, and other social impacts of their business activities.

Corporate profitability is affected by many different factors, and this thesis aims to investigate whether sustainability constitutes one of them. As sustainability reporting has become mandatory for listed companies within the European Union according to the

CSRD, it is of great importance to analyse the relationship between sustainability and profitability. This makes it particularly relevant to focus on Finnish industrial sector.

Previous studies on the relationship between sustainability and profitability have mainly been conducted in larger economic areas rather than in specific sectors, such as the industrial sector. Since sustainability reporting has become mandatory in the European Union, it is important to examine this relationship within a more specific sector with common legislation with the research question being:

”How do overall CSR and its individual dimensions affect the financial performance of Finnish industrial sector?”

1.3 Purpose of the study

This thesis explores the relationship between Corporate Social Responsibility (CSR) and corporate financial performance (CFP) within the industrial sector, focusing specifically on industrial companies operating in Finland. Nowadays, especially in Europe, CSR disclosure, together with corporate financial reporting, is becoming the norm, regulated by international regulations and national laws. Finnish industrial sector presents a compelling context for this investigation because of the country’s rigid environmental policies and a corporate landscape that has increasingly embraced sustainability as a core value. Furthermore, Finland's commitment to achieving carbon neutrality by 2035 places industrial sector under heightened scrutiny, incentivising the adoption of robust CSR practices (State Treasury, Republic of Finland, 2025).

This study investigates whether there is a relationship between CSR (measured by ESG scores and three individual pillar scores) and CFP (indicated by ROA and ROE) in Finnish industrial sector.

This study aims to address the following primary question: What is the impact of corporate social responsibility on the financial performance of industrial sector in Finland? To investigate this, this study will analyse a sample of Finnish industrial sector from 2018 to 2023, evaluate CSR performance based on ESG scores and other qualitative disclosures, and compare them to financial indicators such as return on assets (ROA) and return on equity (ROE). This research question leans on three powerful theoretical paradigms: stakeholder theory, resource-based view and legitimacy theory.

1.4 Limitations and challenges

Geographically, this thesis focuses only on industrial companies in Finland. There are a limited number of Finnish companies with available ESG scores in the industrial sector. In this thesis, the concept of corporate social responsibility is used to reflect sustainability, which is defined to encompass companies' ESG strategies, i.e., strategies within environment, social responsibility and governance. CSR is measured through ESG-scores, where a higher rating indicates a higher degree of sustainability.

The data collection is based on the Thomson Reuters Asset4 ESG database containing information about publicly listed companies globally, but the investigation is limited to Finnish industrial sector. The database offers a limited selection of available variables.

In conducting this research, a quantitative methodology will be employed, using panel data regression analysis to examine the relationship between CSR indicators and financial performance metrics. The study will also consider control variables such as company size and leverage to isolate the effect of CSR. By employing robust econometric techniques, the research seeks to provide statistically valid and reliable conclusions that can inform both academic debates and real-world practices.

The aim of this paper is to examine how corporate social responsibility (CSR) influences corporate financial performance (CFP) within Finnish industrial sector. Only a limited number of studies have specifically explored the CSR–CFP relationship in this industry (Shahbaz et al., 2020). While they find a neutral effect of CSR on CFP, they focus on diverse samples and time frames. As a result, this finding justifies future research studies to address the existing knowledge gap in the industrial sector on certain company-level and country-level.

1.5 Intended contribution

This thesis contributes to the existing literature with its empirical findings on the Finnish industrial sector, which remains a niche topic in CSR–CFP research. While much of the existing literature has been focused on international or cross-industry research, there have been few studies on the effect of CSR on corporate financial performance in one specific industry within a Nordic welfare state. Finland's honest reporting culture and active civil society present a fascinating backdrop to ascertain the economic importance of CSR.

1.6 Structure of the thesis

The remainder of this thesis is structured in the following way: in the second chapter, corporate social responsibility is presented; in the third chapter, theoretical background is introduced. Literature review follows next. In the fifth chapter, data is included. In the sixth chapter, hypotheses are proposed together with methodology. In the seventh chapter, dependent and independent variables are provided. In the eighth chapter, the expected results are analysed. In the final chapter, conclusions are elaborated.

2 Corporate social responsibility

In this chapter, corporate social responsibility as a phenomenon is discussed. Key concepts such as CSR, sustainability, and ESG are defined. Furthermore, different dimensions of corporate social responsibility are presented. Finally, it is discussed how Finland government is trying to shift the focus on CSR and sustainability in country-specific context.

2.1 Conceptual research on CSR

Interest in CSR has been increasing for the past two decades, as evidenced by academic researches dedicating to corporate social responsibility. Carroll (1979) gives us definition of CSR by laying out 4 social responsibility categories, such as discretionary, ethical, legal and economic responsibilities. Each responsbility is not exlusive from each other, but just one part of the total responsibility of business.

In this study, the terms “CSR” and “sustainability” have similar meaning. However, they differentiate with each other by scope and focus. CSR put more emphasis on voluntary corporate ethics. According to Christensen et al.(2021), they define CSR as corporate activities and policies that assess, manage, and govern a firm’s responsibilities for and its impacts on society and the environment. CSR sets the goal of enhance social welfare, or making business practices more sustainable. This definition aligns with McWilliams and Siegel’s view in 2001, they point out that CSR goes beyond compliance with the law, and it exceeds basic adherence to contractual obligations.

CSR has further on attracted more attention from scholars. Aguinis & Glavas (2012) have conducted a comprehensive literature review on corporate social responsibility, focusing on predictors of CSR–CFP relationship. They find that firms engage in CSR primarily for expected financial outcomes, secondly on the normative grounds by doing the right things. Corporate social responsibility addresses the interests of various stakeholders and supports sustainable development over time. Their findings also summarise that CSR plays a role in reducing potential threats and can even transform risks into opportunities for competitive edge. According to the paper by Derwall et al., CSR is by nature costly at the outset, and a large extent of its economic value, is often difficult to quantify and most probably to materialise slowly (Derwall et al., 2011).

In the context of the industrial sector, it is known that the industrial sector is not free from social, political, and economic influence. Industrial sector is now facing mounting expectations from regulators, consumers, investors, and environmental groups to operate sustainably. Creating a future industrial system that supports human well-being while being equitable and environmentally responsible calls for an inclusive transition process. It's essential to recognise that multiple stakeholders, each with their own priorities, influence how the course of this transition is shaped (Nora et al., 2023).

2.1.1 Environmental dimension

CSR reporting is important for demonstrating that the company is not only an economic entity but is also a good corporate citizen (Tregidga et al., 2014; Dube & Maroun, 2017). Industrial sector have primarily centered their corporate social responsibility efforts on environmental concerns, largely because their operations significantly affect the climate, making them one of the largest contributors to carbon dioxide emissions. According to a statistical report by the Statista (2024) which gathers data of global fossil carbon dioxide emissions from 1970 to 2023, it reports that, by sector, the power industry is the largest contributor to global fossil carbon dioxide emissions by far. This is directly caused by high population growth and the increase in people’s standard of living.

The issues arise where the natural resources are limited. Environmental challenges stem from excessive resource consumption, excessive emissions, pollution, and degeneration of biodiversity et cetera. To address these issues, industrial sector must adopt socially responsible strategies that enables the efficient use of natural resources, reducing waste, implementing cleaner production methods, and strengthening dialogue with all stakeholders.

With growing public attention toward corporate social responsibility, companies need to act responsibly or cause significant harm to their reputation which, in turn, will result in financial losses. As studied by Flammer (2013), she examines the shareholders' sensitivity to corporations' environmental footprint and concludes that companies that demonstrate environmental responsibility experience a significant rise in their stock prices, while those engaging in environmentally irresponsible activities suffer significant declines in market value.

2.1.2 Social dimension

The social dimension of CSR, encompassing corporates societal duties such as employee welfare and community engagement has emerged as a critical factor influencing corporate financial performance. There is a growing awareness among stakeholders regarding how businesses behave themselves in terms of social responsibility and ethical practices. The social dimension of CSR can be defined as "a construct that emphasises a company's responsibilities to multiple stakeholders, such as employees and the community at large, in addition to its traditional responsibilities to economic shareholders" (Turban & Greening, 1996).

In the industrial sector, where environmental footprints and societal contribution are of vital importance, companies are increasingly evaluated not only by their profitability but also by their social responsibility. Study shows that investors are increasingly using socially responsible investing (SRI) screens to select investing in firms according to their environmental and social preferences, because some investors worry that negative social performance taints companies and eventually those who invest in them (Chatterji et al., 2009).

2.1.3 Governance dimension

In recent years, corporate governance efforts have significantly intensified. According to Jo & Harjoto (2011), their study shows that effective corporate governance not only help restrain managerial self-interest and uphold shareholder value, but also balance the priorities of various stakeholders and mitigating conflicts of interest between shareholders and non-investing stakeholders. They go on to define that 'CSR is an extension of firms' efforts to foster effective corporate governance, ensuring firms' sustainability via sound business practices that promote accountability and transparency.'

CSR continues to have financial performance impact via corporate governance aspects as it is closely related to the financial factors such as shareholder rights, financial transparency, ethical business practices and accountability. In Bhagat & Bolton's (2019) paper, they study the relationship between corporate governance and performance from an econometric viewpoint and conclude that manager stock ownership is most consistently and positively related to future corporate performance, given manager's strong interest in long-term corporate performance.

2.2 Sustainability

The definition of sustainability has been widely discussed, but not able to be adequately defined. According to KPMG (2013), the use of the term sustainability by companies is increasing. While CSR tends to be defined slightly more normatively, sustainability focuses on the long-term outcomes and future impact (Christensen et al., 2021). From an economic perspective, sustainability refers to avoiding major crises and securing oneself against fluctuations and uncertainties.

On the other hand, from a socioeconomic perspective, it is assumed that the socioeconomic sustainability thus refers to the efficient use of resources and such distribution of them so that the opportunities of future generations are not limited. For example, if we exceed the limit of the available natural resource today, it will lead to future generations no longer having access to consume that resource. From a socioeconomic point of view, this would therefore not be sustainable consumption (Costanza & Patten, 1995). According to a study by Derwall et al, the scholars find the evidence acknowledging different segments of socially responsible investing. For companies to combine both ethical and financial goals, they should value both return and social responsibility (Derwall et al., 2011).

In Europe, sustainability reporting has mandatory regulations since 2023, with forthcoming Corporate Sustainability Reporting Directive (CSRD) expanding disclosure scope and guidelines (European Union, 2019). The study reveals European performance in sustainability is higher, with lower CO2 intensity of GDP and better SDG index ratings. Over the past decade, increased pressure from different sectors, such as investors and financial analysts, to switch to transparent ESG reporting has become an important driving force, is reinforced by new legislation. Therefore, it can be stated that sustainable business today is not solely due to sustainability reasons but also as a result of growing business opportunities (Dinh, et al., 2023).

2.3 ESG scores

When it comes to evaluating the level of sustainability in a company's operations or an investment, it is customary to use ESG factors. Therefore, ESG integration has become one of the primary corporate social responsibility strategies. The ESG factors (environmental, social, and governance factors) are the company's environmental responsibility, social responsibility, and corporate governance. ESG factors can have both positive and negative impacts on the company's economy (Eurosif, 2025).

For example, a financial institution focuses more on corporate governance, while an industrial company places bigger emphasis on the environmentally related factor. The industrial company's environmental responsibility refers to how the company's operations affect the environment in all respects. The ESG factor measures the company's carbon emissions, energy efficiency, waste management, etc. High levels of carbon emissions would mean that the company's ESG factor is negatively affected. (Thomson Reuters, 2025) The company's social responsibility refers partly to societal and social problems and partly to challenges concerning the workplace in question. The focus is then on how the company affects society and all stakeholders. The company can, for example, promote the surrounding community by supporting and developing local healthcare and education. By examining its own workplace and, for example, introducing rules against discrimination, working conditions are promoted. Finally, the ESG factor also evaluates working conditions throughout the production chain, meaning if a subcontractor violates human rights, it negatively impacts the company's ESG factor. Through corporate governance, the company's management and its operations are reviewed. Corporate governance focuses on whether the management takes responsibility and whether they include sustainable goals in the company's strategy. The ESG factor particularly emphasizes transparency and operations free from corruption. If, for example, the board were to overlook shareholder rights or succumb to lobbying, the ESG factor would be negative (Thomson Reuters, 2025).

In this thesis, ESG scores are used to measure a company's sustainability. ESG scores measure companies' levels within environmental responsibility, social responsibility, and corporate governance. The scores have been developed to help companies quickly and easily make CSR-related decisions.

2.4 CSR in Finland

A socially conscious country as Finland, it offers a secure and stable environment for business operations. As a member of the United Nations since 1955 and the European Union since 1995, the country's approach to corporate social responsibility is largely shaped by EU directives, governmental guidelines and broader international commitments.

According to Ministry of Economic Affairs and Employment of Finland (2025), CSR policy is founded on the principle that organizations together with their entire value chains are accountable for the effects of their actions on people, environment, and society as a whole. In Finland, the Ministry of Economic Affairs and Employment holds the primary responsibility for overseeing corporate social responsibility at the governmental level. Other ministries also play important roles in addressing CSR-related matters: the Ministry for Foreign Affairs focuses on areas such as external economic relations and development policy, the Prime Minister's Office contributes through state's ownership policy and sustainable development, and the Ministry of the Environment addresses environmental responsibility. These ministries actively collaborate and engage with stakeholders to align and coordinate their CSR initiatives.

There are 3 targets set by the State Treasury Republic of Finland (2025). As outlined in its government programme, the Finnish Government aims to achieve carbon neutrality by 2035 and transition into carbon negativity thereafter. The new Climate Change Act, which came into effect in 2022, formalizes emission reduction targets for 2030, 2040, and 2050, and sets the targets of carbon neutrality in 2035. Under European Union regulations, Finland is obliged to cut greenhouse gas emissions from sectors outside the EU Emissions Trading System (non-ETS) by 50% from 2005 levels in five years' time. In addition, the country must maintain the net sink of its land use sector, and aim for being zero net emissions by the end of this year, where emissions are offset by removals.

3 Theoretical background

The impact of CSR on CFP is of interest to many researchers, which has reached manifold conclusions. The theoretical foundation of this research is grounded in stakeholder theory, legitimacy theory, and the resource-based view (RBV), offering a multi-dimensional lens through which the CSR–CFP relationship can be understood.

3.1 Stakeholder theory

Stakeholder Theory, originally proposed by Freeman (1984), is built on the instrumental idea that if organisations want to be successful in the long run, they will address the needs and interests of all stakeholders, whether shareholders or non-shareholders of the company, being reconciled in the same direction. In this sense, stakeholders refers to internal and external individuals or groups that can affect, or be affected by, a company's objectives (Freeman, 1984). Freeman argues that by stakeholder management, corporate success can be achieved. (Freeman, 1984; Freeman et al., 2004). He further on redefines divergent stakeholder theory where it contributes to help firms achieve competitive advantages. (Freeman, 1999). The stakeholder theory has gained support and been advanced in the management literature as early as in 1995, Donaldson & Preston summarise 3 central aspects of the stakeholder theory. They point out firstly that the stakeholder theory is descriptive and it presents a business model about the corporation. They state that the stakeholder theory is also instrumental and it provides a structure for exploring the connections between stakeholder management practices and the attainment of different corporate performance objectives. Lastly, they add that the stakeholder theory is managerial constituting stakeholder management which can help predict cause-effect relationship in the broad sense (Donaldson & Preston, 1995). Their findings give us a more layered understanding of the stakeholder theory.

In modern times, the stakeholder theory evolves to provide value creation model for companies. It emphasizes reciprocal stakeholder relationships, where stakeholders not only receive value but also contribute to or co-create it through collaborative value creation process (Freudenreich et al., 2020). This also provides a theoretical reason for companies to report on sustainability-oriented aspects, as various stakeholder contributions result in various outcomes accounting for the sustainability effects (Lüdeke-Freund & Dembek, 2017).

3.2 Resource-based view

The resource-based view (RBV) refers to the importance of resources when it comes to corporate financial performance and competitiveness. This theory is a general consensus presented by Barney (1991). All assets, competencies, organisational processes, and attributes are examples of firm resources as long as they are under the control of the firm. According to Barney (1991), these can be used to create competitive advantages when the resources are utilised in a way that no other firm can replicate. Therefore, the resource-based view (RBV) offers an alternative theoretical lens for understanding the link between corporate social responsibility (CSR) and corporate financial performance. This theory examined how a company's distinct set of valuable resources can serve as the foundation for gaining a competitive edge (Wernerfelt, 1995).

The influence of the resource-based view of the firm on the management should not be overlooked. According to Freeman et al. (2020), due to the tensions in stakeholder theory, stakeholder theory and the resource-based view (RBV) may appear to conflict, they actually offer complementary perspectives in several key aspects. RBV has significantly shaped both academic and practical thinking about firms and how they gain and sustain competitive advantage, offering valuable and influential insights.

The resource-based view continues to undergo maturation. Today, a firm’s resource profile become much broader than at the profit-only times of Adam Smith. RBV is also linked with sustainability, by interpreting the term “sustainable” through the lens of strategic management, it connects with the idea of lasting competitive advantage. If a resource can be easily duplicated or susceptible to imitation, it might offer only a short-lived advantage, because competitors can eliminate or minimise the advantage by acquiring similar assets. RBV and stakeholder theory are both fundamental theories for addressing management issues. In the article of Freeman et al. (2021), they demonstrated that RBV, in its current form, is incomplete and the greater strength lies in the combination of both theories by incorporating four essential elements from stakeholder theory: incorporating normativity, recalibrating the idea of sustainability, viewing people beyond resources, and allotting more room for cooperative behaviours. The combined approach can help explain raison d’être on how firms deliver its sustainable promise (Freeman et al., 2021).

3.3 Legitimacy theory

It is Suchman's article in 1995 that give us the broader definition of the legitimacy theory. Legitimacy is a generalised assumption that an organisation’s actions resonate with socially constructed value systems and are, as a result, regarded as desirable or appropriate. Legitimacy weighs heavily on cognitive legitimacy, pragmatic legitimacy and moral legitimacy. (Suchman, 1995). Historically, companies were considered legitimate if they achieved a reasonable financial return relative to the level of invested financial capital (Patten, 1992).

In line with the legitimacy theory, when companies report on CSR matters widely regarded as significant within relevant industry or reporting framework, they signal alignment with societal norms that prioritise CSR-related transparency (Suchman, 1995; Tregidga et al., 2014).

Although this thesis mainly focuses on publicly listed companies, it is relevant to mention that even small and medium-sized enterprises may also voluntarily engage in sustainable, social and environmental practices, suggested by Crossley, et al.(2021). This suggestion is echoed in Suchman's assumption in 1995, that organisations may engage in social and environmental practices in order to pursue various outcomes, such as gaining, maintaining, or restoring their legitimacy, securing the support of the key stakeholders (Suchman, 1995).

4 Literature review

This chapter presents previous studies and their results. The previous studies have largely investigated the global markets. Only a few studies have been conducted with a focus on other markets in general and the Finnish market in particular.

4.1 Previous main studies

Numerous studies have explored the CSR–CFP relationship across industries due to the growing interest of stakeholder theory and concern in societal and environmental issues.

The stakeholder, RBV and legitimacy theories provide strong grounds for the assumption that corporate social activities can have a significant impact on a company's financial performance. This has led many scholars to explore whether companies can do well by doing 'the right thing' and achieve 'win-win' situation where they can make more profit and at the same time make the world a better place. According to Flack & Heblich (2007), in order for a business to reach higher financial performance, it should clearly identify its stakeholders and make decisions that tailor for the need of its key stakeholders. Therefore, engaging in CSR activities could improve the CFP.

The growing increase in CSR awareness has fuelled substantial amount of academic research on the financial consequences of CSR. Albeit the relationship between CSR and CFP has been intensively empirically studied, there is still considerable ambiguity remaining, as outcomes vary depending on the research method.

The majority of the empirical studies find supporting evidence for a significantly positive relationship between CSR and CFP (Cavaco & Crifo, 2014; Martínez-Ferrero & Frías-Aceituno, 2015; Simpson & Kohers, 2002; Velte, 2017). Although there are studies indicating no statistically siginificant correlation between the two (Aupperle et al., 1985; Belu & Manescu, 2013).

Orlitzky et al. (2003) conducts a meta-analysis of 52 case studies showing a positive link between CSR and CFP. Their findings also reveal that this link is stronger with accounting-based measures than with market-based measures. Later on, Friede et al. (2015) aggregate evidence from more than two thousands empirical studies and conduct one of the most comprehensive meta-analyses. The majority of the studies has found that environmental, social, and governance factors are of non-negative relationship with corporate financial performance, with most findings leaning toward positive effects.

4.2 Research gap

While numerous studies have explored the relationship between corporate social responsibility and corporate financial performance, Finnish industrial sector remains relatively underrepresented in empirical research. Existing literature often focuses on global or cross-industry analyses, which may not capture the unique regulatory, environmental, and stakeholder dynamics present in the Finnish industrial sector.

Research conducted by different scholars reveals that there is no single answer regarding the relationship between corporate social responsibility and corporate financial performance. Moreover, when narrowing the focus to the Finnish industrial sector, it becomes evident that the existing body of literature is limited in examining how CSR affects the financial performance of the Finnish industrial sector. As Velte (2022) points out in his meta-analyses that the majority of studies primarily use CSR performance as main proxy, with financial outcomes often viewed as the primary result, and variations of CSR measurement considered as explanatory factors. Additional corporate governance aspects are needed to enrich the determinants, such as the role of sustainability expertise on boards and CSR reporting.

While some research explores CSR disclosure and ESG scores, there remains little agreement on which specific CSR components, whether environmental, social, or governance, have the greatest effect on financial performance within the Finnish industrial sector. There's also a notable lack of long-term data and firm-level case analysis, which hampers insight into how CSR strategies contribute to lasting financial gains. This thesis seeks to bridge these gaps by presenting evidence tailored to the Finnish industrial sector, leveraging solid financial metrics and CSR indicators. Further investigation is essential, particularly into Finnish industrial sector, to better understand how its CSR practices influence corporate financial performance. Upcoming research should also explore further links to innovation, stakeholder engagement, improved risk management, and the pursuit of sustainability.

5 Data

The literature review shows that there is still a research gap in the relationship between CSR and CFP in the Finnish industrial sector. Here's a detailed account of the collection of financial data. Furthermore, whether the results are affected by corporate social responsibility is discussed before the descriptive statistics are presented. The thesis will continue by introducing the research design and the collection of the data sample.

5.1 Data collection

In this paper, LSEG database offered by University of Vaasa is utilized for master's dissertations. The LSEG database (formerly Refinitiv) collects data from public and private companies globally. In this dissertation, both CSR and Financial data have been collected from Thomson Reuters Refinitiv (LSEG).

As noted already in chapter 1.3, the investigation will be limited to the Finnish industrial sector. The industrial sector in finland includes 25 publicly listed companies of various sizes. The data is taken from the years 2018-2023, meaning a six-year period is investigated.

The period from 2018 to 2023 was selected for this thesis due to its significance in the development of contemporary sustainability practices and reporting obligations. During this period, there was a marked surge in the global regulatory developments, such as the introduction of the Sustainable Finance Disclosure Regulation (European Union, 2019) and the increased emphasis on climate-related financial reporting. Additionally, the COVID-19 pandemic in Finland from 2020 to 2022 heightened the awareness of governance and social issues, pushing the Finnish industrial sector to rethink its CSR strategies. This period also overlaps with the rise in ESG data availability and investor interest, creating an opportunity for exploring corporate social responsibility.

The data is in the form of panel data. A correlation matrix will be conducted to assess the risk of multicollinearity.

5.2 Data sample

Closely following the previous studies, which have used regression analysis as the research method to investigate the relationship, similar regression analysis will also be used in this thesis (Makridou et al., 2024). In order to apply the ordinary least square regression method, it's essential that each data point used to construct the study's variables is consistently available across all firm-year observations. Consequently, some firms which do not fulfill the requirement have to be excluded from the analysis. This leads to some companies being represented for shorter duration of the study period, while some are included throughout the entire span from 2018 to 2023. After collecting and refining the dataframe, the final sample consists of 901 distinct firm-year observations.

5.3 Descriptive statistics

The descriptive statistics for the dataframe are examined and displayed in table 2 and all the variables are used in this master thesis.

Table 1. Descriptive statistics

	Mean	Median	Std. Dev.	Min	Max
ROA	4.52	5.97	21.59	-41.87	18.54
ROE(%)	0.49	12.14	59,40	-1117.92	111.32
ESG_Score	57.79	56.29	6.34	10.43	89.78
EPS	58.65	57.36	25.44	1.45	92.66
SPS	61.91	60.23	22.12	8.87	94.65
GPS	50.65	50.69	23.65	7.12	96.24
Company Size	13.84	13.33	1.68	10,84	16,89
Leverage	0.26	0.23	0.14	0.01	0.8

According to the descriptive statistics, the variable ROA has a median of 5.97 and an average of 4.52. The standard deviation of 21.59, although it is smaller than for the other dependent variable, it is still relatively large. It could also mean that there are observations with relatively high and low scores, which contribute to the standard deviation. This means that there may be extreme values. The variable has a maximum value of 18.54 and minimum value of -41.87, which indicates that there are extreme values within the sample.

The second dependent variable ROE has a mean of 0.49 and a median of 12.14. There is a clear difference between the mean and median with approximately 12, which may indicate that the variable is not normally distributed. The standard deviation of 59,40 indicates either large differences in the sample or that extreme values increase the standard deviation. ROE has a maximum value of 111.32 and a minimum value of -1117.92. Both minimum and maximum value seem extreme, since the maximum value is very large compared to the median and mean. According to the table, one can only see the highest and lowest values, so it requires closer scrutiny to see if there are several observations with extreme values.

The independent variable ESG score has a mean of 57.79 and a median of 56.29. Although the difference is about 1.5, it is not as worrisome as for the dependent variables because the scale is different. ESG scores are only given on a scale from 0-100, which reduces the risk of outliers. The standard deviation of 6.34 may mean that there is variation between the observations' ESG scores. The maximum value of 89.78 and the minimum value of 10.43 indicate that there is likely variation within the sample.

The leverage ratio has a mean of 0.26 and a median of 0.23. The difference between the mean and the median is relatively small, and the standard deviation (0.14) for the debt ratio variable appears better than for the dependent variables. When looking at the maximum value (0.8) and the minimum value (0.01), one can assume that the values are normally distributed within the sample.

The mean (13.84) and median (13.33) of the logarithmized company size are very close to each other. This may indicate that the variable is evenly normally distributed. The difference between the maximum values (16,89) and minimum values (10,84) is about 6.05, which is good. When taking the natural logarithm of a value between 1 and 0, the values become negative.

6 Methodology

In this chapter, the empirical part of the study is discussed. Firstly, the research design is presented. Then the hypothesis are introduced. In the same section, relevant regression equations are addressed. Finally, the diagnostics discuss possible problems that may affect the results.

6.1 Research design

Based on the review of previous research concerning meta-analyses and studies finding both positive and negative correlations, an understanding is reached about how to conduct similar investigation. A quantitative study method will be carried out through regression analyses, as this method has been used in previous studies and has proven effective in identifying correlations between variables (Friede et al., 2015; Velte, 2022). Through this method, data analysis is performed and conclusions are concluded about ESG's impact on corporate profitability.

6.2 Hypothesis development

Since several studies have found correlations between CSR and CFP, I assume there is a correlation between the two (Cavaco & Crifo, 2014; Martínez-Ferrero & Frías-Aceituno, 2015; Simpson & Kohers, 2002; Velte, 2017). This relationship may manifest in various directions, including positive, non-negative, negative, or statistically non-significant outcomes. Based on these findings, the following hypotheses are formulated:

H_0: Corporate social responsibility has a statistically significant impact on the return on assets.
H_1: Corporate social responsibility has a statistically significant impact on return on equity.
$H_{2,a}$: CSR's Environmental dimension is positively associated with Return on Assets.
$H_{2,b}$: CSR's social dimension is positively associated with Return on Assets.
$H_{2,c}$: CSR's governance dimension is positively associated with Return on Assets.

These hypotheses align with prior findings and allow to test both aggregate and dimension-specific CSR effects.

6.3 Regression models

The financial performance indicators differ between the two primary model groups: the first group uses return on assets (ROA) as the dependent variable, while the second group relies on the return on equity (ROE).

$$(1)\ ROA_{i,t}, = \alpha + \beta_1\ ESG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Year_{i,t} + \varepsilon_{i,t}$$

In model (1), $ROA_{(i,t)}$ serves as the outcome variable, with coefficients β_1 through β_7 representing the effects of various predictors. The main explanatory variable in this model is $ESG_{(i,t)}$, which captures the overall environmental, socia, and governance (ESG) score. The error term is denoted by $\varepsilon_{(i,t)}$.

$$(2)\ ROE_{i,t}, = \alpha + \beta_1\ ESG_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leverage_{i,t} + \beta_4 Year_{i,t} + \varepsilon_{i,t}$$

Model (2) shifts focus to another accounting-based financial performance, using $ROE_{(i,t)}$. The structure and control variables remain consistent with model (1). In model (3) and model (4), the total ESG score is again broken down into its individual components—$ENV_{(i,t)}$, $SOC_{(i,t)}$, and $GOV_{(i,t)}$—to explore their separate effects on accounting-based outcomes.

(3) $ROA_{i,t}, = \alpha + \beta_1 \; EPS_{i,t} + \beta_2 SPS_{i,t} + \beta_3 GPS_{i,t} + \beta_4 Size_{i,t} + \beta_5 Leverage_{i,t} + \beta_4 Year_{i,t} + \varepsilon_{i,t}$

(4) $ROE_{i,t}, = \alpha + \beta_1 \; EPS_{i,t} + \beta_2 SPS_{i,t} + \beta_3 GPS_{i,t} + \beta_4 Size_{i,t} + \beta_5 Leverage_{i,t} + \beta_6 Year_{i,t} + \varepsilon_{i,t}$

Model (3) and model (4) replace $ESG_{(i,t)}$ with $EPS_{(i,t)}$, $SPS_{(i,t)}$, and $GPS_{(i,t)}$ respectively, to isolate the impact of each ESG component. Overall, models (1) through (4) investigate the impact of corporate social responsibility (CSR) on accounting-based financial metrics.

7 Dependent and independent variables

Since it is desired to explore the relationship between CSR and CFP, the goal is to test if ESG is a factor that affects profitability. Therefore various profitability measures are used as dependent variables in the study. Data for dependent variables has been retrieved from LSEG.

7.1 CSR measurement

Researchers in past decades have sought to identify links between CSP and CFP, but quantifying this relationship is not a simple process. Earlier studies on CSR have been able to utilise content analysis methods in analysing corporate sustainability reporting (Jang & Ardichvili, 2020). However, according to Liao et al. (2017), there is no such systematic content analysis approach exists for analyzing CSR communication among international contractors.

Asset4 database comprises four pillar categories, which are corporate governance, economic, environmental, and social. The corporate social responsibility can be measured by various ways. In this thesis CSR is measured by using the three pillar scores, i.e. environment pillar score, social pillar score, governance pillar score as quantified indicators of CSR. After it is examined on these pillars, then these pillars are replaced with the overall ESG scores.

Figure 1. ESG categories in LSEG database

Source: Thomson Reuters. (n.d.)

Firstly, the environment pillar score is a measure of how the company has performed in managing its natural resources and ecological impacts. It can show emissions management, industrial efficiency, waste reduction, and water consumption by a company and how motivated they are to reduce the consumption of resources and reduce emissions. The environmental pillar is divided into three, as in emission, innovation and resource use. Secondly, the social pillar score reflects the performance of an organisation in managing relations with stakeholder, ranging from employees and customers to suppliers and the broader community. It assesses four main areas including workforce, human rights issues, and activities in community and product responsibility. Thirdly, the governance pillar score is an indicator of a company's governance practices. The governance pillar has five categories such as board functions, board structure, compensation policy, vision & strategy, and shareholder rights (Reuters, n.d.).

ESG scores are used as the only independent variable for this thesis. The study tests which variables have a significant effect on corporate financial performance, therefore tests ESG scores and other control variables against CFP. As previously mentioned in chapter 5, ESG scores have been collected from Thomson Reuters Refinitiv (LSEG).

7.2 CFP measurement

The growing interest in the relationship between CSR and CFP is evident. Galant & Cades (2017) identify the most used indicators of CFP divided into three categories: accounting-based, market-based and combined indicators (Table 2). According to the authors, accounting-based metrics rely rather on past performance and may not be suitable for comparing companies across different industries. Meanwhile, market-based metrics often take systemic risk factors into account as part of their assessment.

(5) Return on Assets (ROA) = $\frac{Net\ Income}{Total\ Assets}$

ROA indicator is one of the most useful indicators to evaluate a firm's financial strength and resource efficiency (Adamkaite et al., 2023). This ratio is important for management to assess the performance of corporate assets against planned business objectives and market competitors. This thesis focuses on using the return on asstes (ROA) as a measure of profitability, as it is considered a more suitable measure for comparing companies of different sizes and structures. ROA measures how effectively the company can use its assets to generate profit.

(6) Return on Equity (ROE) = $\frac{Net\ Income}{Total\ Equity}$

Regarding ROE, the authors state that this ratio is one of the indicators that shareholders prefer to measure the success of their companies (Adamkaite et al., 2023). It shows the rate of return a company can generate out of the total equity of shareholders' investments. The higher the ratio signals the better economic position, as the position of business owners strengthens.

Table 2. Commonly used indicators for CFP assessment

Source: Galant & Cades (2017), p. 685.

Accounting-based	Market-based	Accounting- and market- based
ROA-return on assets	Stock returns	Tobin's Q
ROE-return on equity	Market value of a company	MVA (market value added)
ROCE-return on capital employed	Change in stock returns	
ROS-return on sales		
Net operating income		
Net income		

7.3 Control variables

This paper uses two different control variables. Leverage ratio, total debt in relation to total assets, and logarithmic company size are used as quantitative variables. Data for the control variables has been obtained from LSEG.

(7) Size = Natural logarithm of Total Assets

When analysing the relationship between CSR and CFP, it is important to include control variables to mitigate the issues of endogenity. Prior empirical studies frequently include company size and risk as standard control factors. (Franco et al. 2020). The authors explain that a large company will naturally have more financial and human resources to spend on CSR activities.

In this study, the size of the company is calculated as the natural logarithm of the total assets. This variable is used to check if there is a correlation between the company size and its profitability. The reason for logarithmic transformation is to obtain a more normally distributed distribution and make it easier to interpret the results.

(8) Leverage = $\frac{Total\ Debt}{Total\ Assets}$

When it comes to measuring risk, the most commonly used indicator is leverage. Risk or Leverage ratio is measured by the ratio of total debt to total assets. Adamkaite et al. (2023) stated that leverage reflects management's tolerance for risk, which influences its attitudes toward corporate social performance. Although additional control variables were considered, they were ultimately excluded from the final model specification. Industry classification, for instance, is omitted since the sample consisted exclusively of Finnish industrial sector. Therefore, the final regression models include firm size and financial risk.

8 Expected results

In this chapter, descriptive statistics is presented to get an understanding of the data. In case of major deviations, it is also mentioned so that it is taken into account during analysis in the results of the regression analyses. After this, a correlation matrix is made to see if there is a risk of multicollinearity. In chapter 8.2, the regression analyses are presented and finally, the results will be summarised.

8.1 Correlation analysis

Subsequently, the correlation between each and every variable is examined and reported in table 3.

Table 3. Correlation matrix

	ESG	**EPS**	**SPS**	**GPS**	**ROA**	**ROE**	**Leverage**	**Size**
ESG	1							
EPS	0,0125	1						
SPS	-0,0850	0,779	1					
GPS	-0,0891	0,611	0,655	1				
ROA	0,1072	0,065	0,102	0,070	1			
ROE	0,1033	-0,012	-0,022	-0,054	0,437	1		
Leverage	0,0071	-0,233	-0,218	-0,064	-0,462	-0,405	1	
Size	-0,0308	0,750	0,677	0,576	0,159	-0,020	-0,271	1

The correlation analysis reveals several noteworthy patterns. The highest correlation, 0.779, is between environment pillar score and social pillar score. Following by 0,750, the second highest correlation between the company size variable and the environment pillar score. Nearly all are positively correlated with ROA, but with ROE it reveals the opposite direction to a large extent.

From table 3, we can see that the levrage ratio has a negative correlation with both dependent variables. The risk variable has a weak negative correlation with all other variables except ESG score. The independent variable ESG-score has a positive but weak correlation with ROA, similar with ROE. The company size variable has a positive correlation with most of the variables except ROE, ESG scores and leverage.

8.2 Regression analysis

The results of model (1) & (2), the aggregated regression analysis of the impact of the ESG score on the profitability are presented in this section. The weighted least squares test of regression models is conducted with dependent variables ROA and ROE in Pyhthon and the results are presented in Table 4 and 5.

Table 4. Aggregated regression 1

Dependent variable: ROA

Model 1	**Coefficients**	**P value**
Constant	1631.1779	$p < 0.0001$***
ESG	-0.0783	$p = 0.0386$**
Company Size	1.2189	$p = 0.0288$**
Leverage	-21.3248	$p < 0.0001$***
Year	-0.8085	$p < 0.0001$***
R^2	0.6857	

Note:

***Significant levels at 1%.

**Significant level at 5%.

*Significant level at 10%.

Table 5. Aggregated regression 2

Dependent variable: ROE

Model 2	**Coefficients**	**P value**
Constant	1292.9022	$p = 0.3102$
ESG	-0.2697	$p = 0.0051$***
Company Size	4.9040	$p = 0.0002$***
Leverage	-42.2357	$p = 0.0166$**
Year	-0.6567	$p = 0.2959$
R^2	0.2577	

Note:

***Significant levels at 1%.

**Significant level at 5%.

*Significant level at 10%.

Table 6. Disaggregated regression 1

Dependent variable: ROA

Model 3	**Coefficients**	**P value**
Constant	1869.0706	p = 0.0007***
EPS	-0.6787	p < 0.0001***
SPS	0.4713	p < 0.0001***
GPS	-0.0139	p = 0.2794
Company Size	5.4062	p < 0.0001***
Leverage	9.7679	p = 0.0901*
Year	-0.9574	p = 0.0005***
R^2	0.9999	

Note:

***Significant levels at 1%.

**Significant level at 5%.

*Significant level at 10%.

Table 7. Disaggregated regression 2

Dependent variable: ROE

Model 4	**Coefficients**	**P value**
Constant	-320.3565	p = 0.8197
EPS	-0.2671	p = 0.0047***
SPS	0.1927	p = 0.1337
GPS	-0.1474	p = 0.0320**
Company Size	5.1861	p = 0.0008***
Leverage	-5.9661	p = 0.8108
Year	0.1343	p = 0.8462
R^2	0.2499	

Note:

***Significant levels at 1%.

**Significant level at 5%.

*Significant level at 10%.

In this study, two different regression analyses are used to test the relationship between profitability and other variables. The dependent variables ROA and ROE are analysed in relation to the ESG score and three control variables. Control variables are included in the model because they may have a potential impact on profitability and thus need to be controlled for to identify the effect of the ESG score.

The intercept coefficient value is 1631.1779, and it is statistically significant at all 10%, 5%, and 1% significance levels. When all variables are zero, the model gives a value of 1631.1779. Since the research object is restricted within Finnish industrial sector, it can be concluded that the effect on ROA within the Finnish industrial sector when all other variables are held constant is that ROA increases by 1631.1779%.

ESG scores have a negative statistically significant impact on ROA. However, the variable is significant only at the 5% level. Even though the coefficient is small (-0.0783), it is still statistically significant. According to the model (1), this means that if ESG scores were to increase by one percentage, ROA would decrease by -0.0783%. It makes sense when company uses its limited resoucse on improving ESG scores, leaving less resources available to improve its profitablity.

Leverage ratio has a negative and statistically significant impact on ROA. The variable is statistically significant at all significance levels. The leverage ratio's p-value is smaller than most of variables, indicating it is very reliable within the model. The model (1) shows that a risk ratio of 1 already decreases ROA by 21.3248%. According to the model, the higher the leverage ratio, the smaller the ROA. The magnitude seems large in the model, and it may be due to a high amount of debt compared to equity, indicating that companies may have difficulties generating profit because their core business does not generate enough capital for the leverage ratio not to increase significantly. Loss reduces equity, which increases the debt-to-equity ratio as the proportion of foreign capital remains constant. The model shows that the smaller the proportion of debt compared to equity, the lesser the negative effect on ROA.

The company size variable indicates that when the logarithm of company size increases by 1, ROA increases by 1.2189%. According to the model (1), larger companies appear to have a higher ROA. The variable is also statistically significant at 5% significance levels. The variable company size has the relatively small p-value among the quantitative variables, meaning it is meaningful. According to the model, companies with larger total assets have had a higher average ROA. The coefficient of determination R^2 is relatively high 0.6857, which means that the independent variables explain 68.57% of the variation in ROA.

When examining the disaggregated regression analysis for ROA, all variables are statistically significant except governance pillar score. Leverage ratio is only statistically significant at 10%. Environment pillar score continues to have negative impact on profitability meanwhile social pillar score have positive one. It is worth mentioning that the magnitude of leverage impact on profitability has largely reduced to 9,7679 compared with aggregated version and it turns out to have a positive impact instead. The R square for disaggregated version shows that the regression explains the model (3) rather well.

The intercept for aggregated regression analysis 2 shows that the coefficient is statistically significant at none of the significance level. The independent variable ESG score is significant at all significance levels. According to the model (2), the ESG score negatively impacts ROE. The analysis shows that the greater the ESG score, the greater the negative effect. Generally, one could conclude that according to the model (2), higher ESG scores decrease a company's market value.

The leverage ratio has a statistically significant negative effect on ROE. The variable is statistically significant at 5% significance levels. If the leverage ratio is 1, ROE decreases by -42.2357% according to the model (2). This seems logical since higher debts are usually associated with higher risk, which can be reflected in market value.

The company size variable has a positive and significant impact on ROE at all significance levels. According to the model (2), the larger the company, the higher the market value.

The determination coefficient is 25.77%, which means that independent and control variables can explain 25.77% of the change in ROE. With a larger number of variables, the determination coefficient could be increased, potentially providing more reliable results and better explaining what affects ROE.

In the disaggregated regression analysis for ROE, majority of the variables is found to be statistically significant, with the exception of the social pillar score, two control variables leverage and year. The only significant control variable is company size at all significant levels. The environmental pillar score continues to exert a negative influence on profitability at 1% level, as well as the governance pillar score at 5% level. The R-squared value 24.99% for the disaggregated model (4) indicates that the regression could include more variables what could explain the data more thoroughly.

8.3 Summary of the results

ESG scores show a significant negative correlation with ROA at the 5% significance level and a significant negative correlation with ROE at all significance levels. ESG scores have a stronger impact on ROE when looking at the p-value. When looking closely at individual pillar scores, only environment pillar score stays as negative influencer at all significant levels on both ROA and ROE.

The company size variable has a positive impact on both dependent variables on all models, indicating that larger companies seem to be more profitable. Similarly, the leverage ratio has a significantly negative impact on both dependent variables when examining ESG scores as a whole, indicating higher ESG scores decrease a company's market value substantially. However, risk ratio is either unsignificant or marginly significant at 1% level when testing each pillar scores individually. However, the determination coefficient is quite low for both models testing on ROE, meaning that more variables should be included to obtain more reliable results, a better model, and better understand which factors affect the dependent variables.

9 Conclusion

This chapter details the empirical findings from the study examining the link between corporate social responsibility (CSR) and corporate financial performance (CFP) in the Finnish industrial sector.

9.1 Discussion of the findings

The results in chapter 8 answer the research question of whether there is an impact of corporate social responsibility on corporate financial performance in Finnish industrial sector. Regression analyses conducted in chapter 8 show that there is a significant negative correlation between ESG scores and ROA at the 5% significance level. At the same time, a significant negative correlation is found between ESG scores and ROE at all significance levels. Although the magnitude of the ESG scores coefficient was relatively small, significant correlations were still found. This means that the null hypothesis can be rejected for both ROA and ROE, confirming that there is a correlation between ESG and profitability.

Previous studies largely support the thesis results regarding the correlation between ESG scores and accounting-based measurement (Huang et al., 2020). In the Finnish context, a significant correlation between ESG scores and ROA and ROE has been identified.

The biggest surprise in the thesis results is that ESG scores have a negative impact on ROA and ROE. None of the previous studies have shown a negative correlation between these variables. Previous studies that found a positive and significant correlation generally used data from large global companies with high market value (Alareeni & Hamdan, 2020). The most significant positive correlations between ESG scores and ROA and ROE have been found in studies focusing on large companies. A possible explanation for the negative correlation in this study might be that Finnish industrial sector are on average smaller than companies in the S&P 500 or among the 5,000 largest global companies.

9.2 Practical implications

Some practical implications intended for decision-makers in the Finnish industrial sector are provided by the findings in this thesis. According to the stakeholder theory presented in chapter 3, all stakeholders should be considered for companies to become successful. Since companies with higher ESG scores can be considered more sustainable, based on the results of the survey, we can say that to achieve a higher return on total assets (ROA), the stakeholder theory should be the governing strategy used in corporate strategy when it comes to considering stakeholders. For managers, the findings in this study suggest that industrial sector may not maximise financial performance by strategically relying on ESG dimensions. The significant negative impact of corporate social responsibility on CFP indicates that investments in environmental initiatives can partly reduce profitability. Managers should critically analyse environmental initiatives that carefully incorporate with core business operations to try to avoid potential negative financial impact.

The results in chapter 8 show that ESG scores have a negative and significant impact on ROA and ROE. For investors and financial analyst, these results suggest that industrial companies that are more sustainable, i.e., have higher ESG scores, would have lower market value. Therefore, if an industrial company aims to maximise shareholder value, it may be questioned whether it is strategically advantageous to invest extensively in sustainability aspects. It shows in the findings that the importance of assessing CSR dimensions individually when evaluating Finnish industrial sector. Instead of relying on aggregated ESG scores, investors should take into consideration how companies perform across different environmental, social, and governance dimensions, with particular attention on environmental measurement due to their proven negative impact on CFP.

9.3 Suggestions for future research

After the implementation of Corporate Sustainability Reporting Directive (CSRD), significantly more ESG data will likely become available. Mandatory sustainability reporting will force companies to create a sustainability report, whether they want to or not. This is expected not only to increase the quantity of ESG scores but also their variation. An increased amount of data on CSR enables more detailed financial analyses of Finnish industrial sector. A clearer definition of how ESG scores are assigned would also improve the conditions for industry-specific analyses. This also facilitates future research on which ESG components have the greatest impact on profitability and can help answer the question of why certain correlations occur, especially when data quality improves.

When examining the impact of ESG scores on financial performance indicators like ROE and ROA in the Finnish industrial sector, this thesis has omitted the possibility of reverse causality. One might argue that financially strong companies may invest more in CSR, because companies with higher ROE or ROA may have more financial resources to allocate toward CSR strategies, resulting in higher ESG scores. In order to address reverse causality and strengthen causal inference, Granger causality tests could be conducted to determine whether past ESG scores predict future ROE or ROA. Alternatively, a longitudinal data and panel regression analysis could be performed to track ESG scores and financial metrics over time to observe time-lagged effects.

9.4 Conclusion

This thesis explores the link between corporate social responsibility (CSR) and corporate financial performance (CFP) in the Finnish industrial sector, addressing two key questions. It demonstrates that the connection between CSR and financial outcomes in the Finnish industrial sector is negative, with various CSR aspects influencing different financial performance areas to varying degrees. The observed negative relationship between ESG scores and financial outcomes challenges the assumption that CSR initiatives universally enhance corporate profitability. It is echoed in the finding by Duan et al. (2023), that excessive spending on ESG initiatives do not directly contribute to stakeholder relationships and it may lower profitability and firm value (Duan et al., 2023).

In the Finnish industrial sector context, CSR efforts might be treated as compliance-driven rather than as voluntary strategic assets, explaining the short-term financial underperformance. RBV considers CSR practices as firms unique strategic resources that can create competitive advantage. However, when the resources are limited, financial costs associated with ESG adherence, such as regulatory compliance and greenhouse gas emission reduction, which can negatively impact firm value (Ionescu et al., 2019).

This research enhances the understanding of corporate sustainability progress in the industrial sector through both theoretical insights and practical implications. The finding indicates that environmental performance have negative impacts on corporate profitability in the Finnish industrial sector. This might be counter-intuitive, but it makes sense when advancing sustainability goals, it will potentially negatively impact financial performance, especially in the industrial sector where environment footprint often costs the society a lot. As it is explained in chapter 3.3, legitimacy theory suggests that firms adopt CSR practices to maintain societal approval and regulatory compliance. In view of this, CSR strategies are not necessarily profit-driven but are strategic moves to secure legitimacy in the society (Bani-Khaled et al., 2025). The Finnish industrial sector, subject to Sustainable Finance Disclosures Regulation (SFDR) and public scrutiny, may be investing in CSR to secure its social licenses, even at the expense of financial metrics like ROA and ROE. ESG practices are often driven by legitimacy concerns, especially in sectors with high environmental impact, and may not correlate positively with firm value in the short term. In addition, legitimacy theory has been criticised for promoting practices that focus more on maintaining appearance rather than generating substantive outcomes, potentially limiting corporate long-term value creation potential (Tilling, 2004). This can help explain why the ESG scores have negative impact on corporate profitability in the Finnish industrial sector.

As the industrial sector grows and evolves, understanding the financial returns of CSR initiatives is crucial for managers, investors, and policymakers. This study lays the groundwork for more nuanced sustainability management approaches in the sector, based on the business case for strategic CSR and the need for varied approaches across environmental, social, and governance dimensions.

In conclusion, the study suggests that there may be synergies between financial performance and CSR strategies in the Finnish industrial sector, challenging the idea of trade-offs. These impacts present potential challenge for Finnish industrial sector to improve their sustainability impact and financial success while supporting social, environmental, and economic harmonious goals.

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Use of AI

When writing Python script, certain programming language is suggested by Copilot. After careful observation, the suggested python script is minimally used to help analyse the data used in this thesis.

Company list

List of Finnish publicly listed company:

UPM-KYMMENE

WARTSILA

ASPO

CONSTI

EEZY

ETTEPLAN

EXEL COMPOSITES

FINNAIR

GLASTON

HIAB CORPORATION B

HUHTAMAKI

KONE B

KONECRANES

LASSILA & TIKANOJA

LEHTO GROUP

METSA BOARD B

METSO CORPORATION

NOKIAN RENKAAT

PONSSE

RAUTE A

SCANFIL

STORA ENSO R

TALENOM

VALMET

VIKING LINE

Abbreviation

ROE: Return on Equity

ROA: Return on Assets

CSR: Corporate Social Responsibility

CFP: Corporate Financial Performance

ESG: Environmental, Social and Governance

EPS: Environment Pillar Score

SPS: Social Pillar Score

GPS: Governance Pillar Score