How does CSR influence a firm’s profitability?

- A case study of Sandvik

Yingxi Jiao, Wenjun Xie

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ABSTRACT

With the increased concentration on the corporate social responsibility (CSR), firms are not only required to focus narrowly on generating profit returns for shareholders, but also asked to take responsibilities for firms’ other stakeholders, e.g. customers, employees, society etc., from social, environment and economic perspectives. Hence, nowadays, both having a decent CSR performance and adding profitability are the significant aspects for the company to achieve the sustainable success in the long term. In terms of that, this dissertation aims to explore the CSR-profitability relationship, namely, to explore how does CSR influence the firm’s profitability. After reviewing related literature, and choosing the single-case research method, collecting and handling quantitative and qualitative data analysis, findings are: (1) the CSR-profitability relationship in the case company is not clear in last five years; (2) the prior finding shows ambivalent view and inconsistency with the positive mediating process, a process used to define the CSR-profitability association, of the case company. After discussion of the findings, this study concludes that: (1) the CSR-profitability relationship cannot be clearly defined due to the complex mediating process and direct or indirect effects from tangible/intangible mediating factors; (2) generally, it is not likely to measure the financial impacts from the whole CSR performance, but, the financial impacts can be measured project by project; (3) those intangible resources that related to the CSR cannot be measured; (4) the inconsistent result from the finding may due to some other reasons, e.g. the problem of depending on accounting-based approach to measure the financial impacts from CSR, influence from specific financial crisis, lacking comprehensive measurement system of CSR etc.

Key words: Corporate Social Responsibility (CSR), profitability, CSR-profitability relationship.
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1 Introduction

1.1 Background

From the neo-classical economic point of view, put forward by Friedman (2009), a well-known researcher in CSR area, the only one social responsibility for a business is to utilize its resources and activities to increase companies’ profit (ibid.). It suggests that the social responsibility of a firm is maximizing the profits, and the overall aim of business managers is to maximize the profit return in order to satisfy the expectations from firm’s shareholders, people who own the firm (Friedman, 1970, cited in Kolstad, 2007; Kolstad, 2007; Pava & Krausz, 1996). Those common investors of a firm hope to get higher-level cash returns and a solid corporate financial performance with lower risks.

However, the increased attention on the Corporate Social Responsibility (CSR) across firms and industries requires a firm not only concentrating on adding profit, but also focusing on its social responsibilities so that to meet the expectations of various stakeholders, e.g. customers, suppliers and employees (Ruf et al., 2001; Kolstad, 2007; McWilliams & Siegel, 2000; Gatewood & Carroll, 1991; Freeman, 1999). Thus, nowadays, firms need to behave in a more ethical way, with broadly considering different goals except merely considering profit maximization (Orlitzky et al., 2003; Verschoor, 1998). Whereas, most often, the investment in CSR cuts a firm’s bottom line of making profit because firms cannot always get returns from their social activities (Kolstad, 2007).

Nevertheless, what type of relationship exists between CSR and firm’s profitability? Do those CSR initiatives influence the firm’s profitability in positive, negative or even neutral way? It is an interesting topic since this question somehow puzzles companies who implement CSR and want to have a balance between its CSR performance and financial performance. Despite the great interest, this is also a controversial topic since there is a number of empirical studies based on different variables from different scholars show different results and opinions on it. Some scholars claim that there is a positive relationship between the CSR and profitability while others’ studies show that CSR has a negative relationship with making a profit or no relationship.

However, majority of empirical researches merely focus on measuring the relationship between corporate social responsibility (CSR) and profitability/financial performance in order to identify whether the association is positive or negative. Only a few of researches pay more attention to the internal connection to explain how the relationship between CSR and profitability emerges. The process of explaining the how question is regarded as a mediating process according to Surroca et al. (2009) and Peloza (2009). In that mediating process, both intangible resources, e.g. innovation, brand value, customer loyalty etc., and tangible resources, e.g. costs for energy use and water consumption etc., have impacts on the relationship, and help to define the relationship between CSR and profitability. Hence, it is
also significant and necessary to analyze and deepen the understanding about how does CSR influence the profitability, in order to explain the causality in the relationship between CSR and firm’s profitability.

Understanding the financial effects of a company’s CSR initiatives helps to define the relationship between CSR and profitability. Therefore, in this dissertation, the authors are going not only to identify the relationship between the CSR and profitability, but also to focus on exploring and explaining the causal financial effects from CSR in the case company, Sandvik.

1.2 Research purpose

The overall aim of this dissertation is to gain an understanding of how CSR has impacts on the firm’s profitability, with a view to referencing a case company, Sandvik. The following research objectives have been identified of paramount importance in helping to achieve the aforementioned purpose.

- Review the corporate social performance of the case company.
- Evaluate the relationship between CSR and profitability through the case study.
- Explore how CSR influence a firm’s profitability in general.
2 Methodology

2.1 Case study

The empirical study of this dissertation focuses on an in-depth study of exploring how does CSR have impacts on the firm’s profitability according to the overall research purpose and objectives. Thus, the main idea of this research is to explain the causality between CSR and profitability through, firstly, defining the CSR-profitability relationship and then exploring the reasons behind the relationship or exist between these two variables.

There are many research strategies, e.g. survey, experimental research, historical research etc. (Biggam, 2011), provided for authors to choose. However, the research strategy used in this dissertation is a case study, because (1) Historical research focuses on the events that occurred in the past or the non-contemporary phenomenon, but this dissertation focuses on the contemporary event; (2) Survey is not appropriate since it is used when the author needs the representative views in a particular type of population; (3) Experimental research is also not appropriate since it tends to test a hypothesis by doing some type of experiments, and it is always in the domain of science.

Case study is one of the widely used research methods by students. According to Yin (2008, p.18), case study is defined as the “empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clear evident.” Besides, a case study also is used to do some in-depth and investigative study (Biggam, 2011). This dissertation not only intends to identify the relationship between CSR and profitability, but also explain the casual relationship. The main problem, how does CSR influence the firm’s profitability, is not clearly defined, even though there are many empirical studies and researches have been done. This dissertation also is an empirical inquiry that observes CSR performance in the real-life context. Consequently, it is suitable for this dissertation to use a case study method to have a deep interpretation and exploration for the case company.

In addition, since case study can be divided into a single case study and multiple case studies (i.e. more than one case), this dissertation used the single-case design. By means of the single case approach, the authors hope to identify and explore CSR-profitability relationship intensely to a single case.

Based on the views from Yin (2008), single-case study and multiple-case study are suitable for using under different conditions and considerations (Yin, 2008, p.52, p.60):

"The single-case design is eminently justifiable under certain conditions – where the case represents (a) a critical test of existing theory, (b) a rare or unique circumstance, or (c) a
representative or typical case, or where the case serves a (d) revelatory or (e) longitudinal purpose.

...use of multiple-case studies should follow a replication, not a sampling logic, and an investigator must choose each case carefully...

In most research, multiple-case seems to be preferred over a single case study. However, from the authors’ view, it is suitable to focus on one case and analyze it in detail. Just like focus strategy, barely concentrate on one target and master it in a flexible way (Yin, 2008). Moreover, compared with multiple-case design, single-case requires less extensive recourse and time. In addition, by the definition mentioned above, some specific situations, e.g. the critical case, rare case etc., can only be used in a single case study. Because of the specific subject analysis that probably influenced by some corporate characteristics and outside factors that will be mentioned in the theory section, e.g. industry type, company size etc., and the time limitation, a single-case design is more suitable than the multiple-case in this dissertation.

After deciding the case study strategy, the next step is to design or choose the case unit. Before that, it is necessary to make sure the case is relevant to the objectives and problems in the dissertation (Yin, 2008). In this empirical study, the Swedish global large company, Sandvik AB is chosen as the case company or the case unit because (1) Sandvik is a global successful company who works on CSR for a very long time. As a result, the data and information related to the research subjects are more completed and structure-collected than other companies who do not implement CSR; (2) The company located around Gävle city where the authors had a study visit to the company before, and it is convenient for the authors to have more chance to meet with the company.

However, adopting a case study research cannot avoid some criticisms and limitations, which should be addressed. First of all, the case study provides little basis for the scientific generalization, which is achieved through continuously repeating those case studies (Yin, 2008). In this dissertation, the case study lacks the generalization that to apply the result findings and analysis on other companies in the same situation. Nevertheless, the authors want to deepen the knowledge understanding about the CSR-profitability relationship. The case study strengthens the aim of the research. Secondly, case study is criticized for lacking rigor because case study allows some suspicious evidence and views to influence the findings. For example, in this study, choose of the measurement metrics for measuring the financial impacts from CSR activities can influence the outcome results. Thirdly, the case study, especially the single-case design, bears the fear of “putting all your eggs in one basket” (Yin, 2008, p.61), which means, in general, the criticism is the uniqueness or artifactual conditions about the case (Yin, 2008).
2.2 Data collection

After deciding to apply the case study strategy in this dissertation, some quantitative data and qualitative information related to the research objectives are collected, through reviewing the company’s reports and generating a telephone interview with the case company.

2.2.1 Collecting quantitative data

This dissertation is going to analyze the relationship between CSR and firm’s profitability, and it is required to collect some quantitative data about the firm’s financial performance and CSR performance. Those data was mainly collected from the company’s official reports because reviewing the firm’s annual reports and other corporate documents are the main method to have a content analysis to firm’s overall performance (McGuire et al., 1988; Cochran & Wood, 1984). However, such types of documents often have more publication value than the information value, so that the actual firm’s performance may be uncertain (McGuire et al., 1988).

First of all, the statistical data about the key CSR initiatives were collected. Due to reason that, some data that indicates the CSR performance, e.g. amount of energy use, produced waste etc., in the sustainability reports before 2008 were measured in a different unit, this research only collected those data from year 2008 till 2012. Apart from that, as a result of lacking statistical data on the one hand, and environment, health and safety (EHS) is also emphasized by Peloza’s (2009) research and Sandvik itself on the other, this dissertation chose the EHS as the main performance indicator for measuring the CSR performance in the Group, so as to define the statistical relationship between CSR and profitability.

Following, according to Weetman (2006), some quantitative data, e.g. net income, revenue, shareholder’s equity etc., that used to measuring the financial performance of Sandvik are collected from company’s annual reports from the year 2008 till 2012. Before that, it is should be stated clearly that why choose to collect such data. There are three measures can be used to measure the final financial performance from the CSR performance in a company, market-based approach, accounting-based approach and perceptual approach. They will be described in the section 3.6. As a result of the methodological problem for measuring the financial impacts or profitability of CSR, the authors of this dissertation decided to choose the accounting-based method to measure the profitability of Sandvik. Since every approach has different advantages and disadvantages for the method itself, see the section 3.6, it was hard for authors have a choice based on that. Therefore, the reasons for choosing were mainly based on the data availability and the feasibility of the approach: (1) the data and information, e.g. mutual fund returns, used in the market-based result are not allowed to be published to authors; (2) if use the perceptual approach, the accurate reputation ranking of the case company, Sandvik, cannot be found; (3) the data used in the accounting-based approach is clearly stated in the annual report of Sandvik. After deciding the method for measuring the
financial performance of the Group, the detail calculating process and results are respectively presented in Appendix 1 and section 4.4.1.

2.2.2 Collecting qualitative data - Interview

When applying the case study research, it is the nature that this dissertation is a qualitative research. Except reviewing the annual report and sustainability report of Sandvik in order to gain an overview of its CSR performance, interview, one of the most essential sources of case study (Yin, 2008), is mainly used as the technique of collecting qualitative data to explain the causality and relationship between CSR and profitability from the Group’s point of view.

The qualitative data is collected from the semi-structured interview, which outlines fundamental questions of the audience in advance, and interviewers hope to elicit meaningful information from the respondent (Gubrium & Holstein, 2002). A good case study interview not only require that the interviewers follow the line of their inquiry, but also simultaneously put the friendly questions in the interview (Yin, 2008). Therefore, there are two tasks should be prepared well for interviewers before the interview beginning, in order to have a smooth interview (Gubrium & Holstein, 2002). The first is to persuade the interviewee to agree to be interviewed. After a few times email-contact with the head of CSR in Sandvik, Christina Båge-Friborg, we got permission to take 30 minutes phone interview. The second task is to collect information about the case or case company and prepare the questions list that related to the research problems in advance. Through reading about Sandvik's sustainable reports, annual reports and other information, an introduction of the Group, an overview of its CSR work are taken in mind and stated in the finding part.

Moreover, according to Yin (2008), a focused case study interview, in which the interviewee will only be interviewed for a short time, e.g. one hour, the interviewers are supposed to prepare a careful-worded question list so that they can follow that and still make the interview open-ended. Specially noted in this dissertation, since the core financial information is the commercial secret for the company, and it is normally not allowed to express it to the outside, so those questions relate to the financial performance are sensitive question to be asked. So that, interviewer did not pretend to expand more financial questions in depth and pay more attention to Sandvik CSR performance instead. Consequently, five interview questions that mainly focus on financial impacts of those CSR initiatives, e.g. environment, health, and safety, were generated after going through the case. The full list of the interview questions is presented in the Appendix 2. Furthermore, due to time limitation during the interview, interview questions were clearly defined and sent to the interviewee, the head of the CSR of Sandvik, by the e-mail in advance. As a result, the time would be saved since both interviewer and interviewee are ready for the interview.

Nevertheless, some pros and cons of interview or telephone interview also need to be addressed in the whole research process. Interview is target-focused and insightful through directly focusing on the case study or the research topic, and providing causal explanations
In this dissertation, the interview with the CSR manager helped authors exploring and finding out the courses in the relationship between CSR and profitability, in Sandvik. Additionally, by comparing with other interview forms, phone interview is cheaper, convenient and easier to administer with respondent (Gubrium & Holstein, 2002). Besides these strengths of the interview, there are also some weaknesses emerge. During a telephone interview, some limitations, e.g. bad the calling signal that cause the hearing issues, poor recall, less thoughtful responses are received, and visual clues are absent etc., which may bring response bias, are stated by Gubrium & Holstein (2002) and Yin (2008).

2.3 Data handling

In terms of the data handling, some simple statistic line charts are generated by the Microsoft Excel in the section of findings, according to the collected data. Moreover, this dissertation measures the firm’s profitability or financial performance from CSR through calculating some main factors, e.g. return on assets (ROA), return on equity (ROE) and return on sales (ROS). The calculating process is based on the literature book of financial accounting from Weetman (2006) and is approved by Peter Lindberg and Mats Ryding, the teachers from the accounting department of the University of Gävle. Moreover, the detail calculating procedure and formulas that readers can easily repeat the work is displayed in the Appendix 1.

2.4 Validity and reliability

According to Biggam (2011), validity and reliability are two aspects that researchers should take care for the study quality. It is necessary to show why the research is valid empirical research and why it can be relied (ibid.). In order to establish the validity and reliability of case study evidence, the authors strictly follow three principles: (1) Using multiple sources to establish data triangulation such as empirical interview, financial performance indication, official website report and other news clipping from mass media. (2) Creating a case study database - the way of organizing and documenting the data is from the official website. (3) Maintaining a chain of evidence - each data should be traced from the source (Yin, 2008).

Validity

Validity refers to choosing the correct and appropriate methods for the research (Biggam, 2011). The use of every approach should be suited to activities occur in the research process, from selecting the research strategy to collecting the useful data (ibid). In this dissertation, all activities - selecting the single-case-study strategy, having an interview approach to collect qualitative information, reviewing scientific literatures, collecting statistical data about the case company and choosing the accounting-based approach to measure the CSR, are supported with reasonable motivations and suitable explanations so that to make sure every approach is valid enough and the dissertation follows a correct way.
Reliability

Different from the validity, reliability is about whether the research is reliable and trusted (Biggam, 2011). This dissertation starts with reviewing relevant literature, and taking the well-known researchers' views as evidence, in order to guarantee the reliability of the critical evaluation. Moreover, a large number of official published secondary data and empirical interview provide a rich picture of Sandvik's CSR performance and help to identify the relationship between CSR and profitability. Furthermore, since there are some calculations occur in measuring the overall financial performance (return on assets (ROA), return on equity (ROE), return on sales (ROS)) of the case company, the calculating process and results are approved by two financial accounting teachers from the university in order to ensure that the calculating results are corrected and trusted.
3 Theoretical Framework

3.1 Introduction

Literature review is essential for doing an empirical study as it not only lays out what research has been done by others relevant to the research objectives, but also present the strong evidence for the in-depth critical evaluation to the research topic (Biggam, 2011). In this dissertation, the authors are going to explore how CSR has impacts on the firm’s profitability, through achieving three objectives, see the section 1.2. Based on the research objectives, four aspects are regarded as the main focuses when reading the literatures: (1) The definition of CSR; (2) The benefits or motivation to implement CSR; (3) The relationship between CSR and profitability; (4) The measurement of financial impacts from CSR.

In order accurately to present information and research results, a list of the main content and core viewpoints of every article is generated during reading the articles or books. After that, an overview of the literature is summarized as five subjects and topics: (1) CSR definition; (2) stakeholder theory; (3) motivation and impacts of implementing CSR; (4) the relationship between CSR and profitability; (5) the financial impacts from CSR. These five aspects organized the theoretical base for this dissertation.

3.2 CSR definition

Corporate social responsibility (CSR) has emerged as a global trend in recent years. It helps companies increase their social responsibility in relation to their social, economic and environmental impacts (Rainey, 2006). However, the definition of CSR is not fully stationary because different authors claim dissimilar views on it.

An official definition published by European commission (European Union, 2011) refers CSR as a voluntary activity, which combines both social and environmental concerns into business operations, and it is an interaction with firm’s stakeholders. Tuzzolino & Armandi (1981, cited in Balabanis et al., 1998) think CSR is the fulfillment of companies' internal and external self-actualization needs, which means that the company adopts CSR to improve its awareness of society needs. Following, Holme & Watts (1999, cited in Van Beurden & Gössling, 2008) define the CSR is a continuing commitment for business from the ethical and economic views, and the business should contribute to the economic development while working in an ethical way. Similarly, most authors conceptualize CSR is suitable for business companies to take their social responsibilities. Specifically, Mares (2008) highlights the human rights impacts of businesses’ CSR activities and encourage companies pursuing "win-win" situation for both profitability and social responsibility.
Nevertheless, the most representative definition should be Carroll’s construct since many articles cite his definition. Thus, Carroll’s comprehensive model is used as the basement to define the understanding of CSR in this dissertation. According to Carroll (1979), CSR is defined through four components: economic, legal, ethical and discretionary responsibility. Carroll defines them as follows: (1) Economic responsibility refers that companies are economic in nature, and they have the obligation to be productive and profitable in order to satisfy the needs from customers and societies; (2) Legal responsibility means the company should fulfill their economic responsibilities within the legal regulations and laws; (3) Ethical responsibility is the most difficult part for the business to handle because it indicates that the companies not only should follow the law, but also are required to behave with ethical values, codes and norms that derived from society; (4) Discretionary responsibility is a voluntary choice decided by companies’ leaders or managers.

3.3 Stakeholder theory

Meeting the needs of stakeholders is a key factor for companies to launch their CSR strategy. Strengthening the relationship between the company and stakeholder is suggested as a source of competitive advantage to the company (Andriof et al., 2002, cited in Morsing & Schultz, 2006). Expectations of internal and external stakeholders also are significant factors to consider making a trade-off between costs and benefits. Therefore, stakeholder theory provides a good framework to understand, investigate, and analyze the relationship between CSR and profitability (Ruf et al., 2001; Gatewood & Carroll, 1991). Furthermore, it is necessary for the company to meet and balance the needs of those who have direct or indirect effects on the company’s business, also to understand firm’s stakeholders rather than only to focus on generating shareholder’s value, in order to achieve sustainable success in the complex business environment (Harrison & Freeman, 1999).

According to Mitchell et al. (1997), stakeholders are those who have the power to affect the company, have the legitimacy relationship with the company and have the urgency of stakeholder's claim on the firm, as well. In terms of the stakeholder theory, although several definitions can be found in most literatures (Mitchell et al., 1997; Harrison & Freeman, 1999; Freeman, 1999; Morsing & Schultz, 2006; Ruf et al., 2001), Freeman's (1984) definition is the most widely cited in many literatures. Freeman (1984) states that if a company analyses and understands the relationships between its business and individual or groups who can be affected by it, and then the company has a better way to tackle with business effectively. General stakeholder groups that identified by most companies are customer, employee, shareholder, local community and supplier. Besides, other stakeholder groups also can be identified depending on companies’ dissimilar business situations (Figure 1) (ibid.).
Different stakeholder group has diverse expectations on the company. However, companies cannot meet all the expectations at the same time (Harrison & Freeman, 1999) because of interest conflicts (Rainey, 2006), e.g. maximizing shareholders’ interest often against maximizing customers’ benefits. Hence, companies often select some of them to concentrate and pay more attention to (ibid.).

3.4 Motivation and impacts of implementing CSR

Rainey (2006) concludes that social, political, environmental and economic forces are motivations for the company to implement CSR. Social forces, from market, customer and stakeholders, are direct forces for most company to make strategic decision of performing social responsibility. Political forces from national or international laws and regulations require the company to implement CSR strategy. Environmental forces require companies to be responsible for their environmental impacts, and take their responsibility to reduce the pollution, air emission, produced waste etc. Economic force is another crucial factor to connect the social responsibility with the firm’s profitability (ibid.). Especially, other researchers sustain and also strengthen the meaning of the economic driving factor. Aguinis & Glavas (2012) and Carroll (1979) deem that the primary reason that firms engage in CSR is to gain an expected financial outcome, and CSR is regarded as a valuable investment in the long-term perspective. Aupperle et al. (1985) believes that firm’s profitability is closely connected with CSR, and it is necessary correlate a firm’s concern for society with its financial performance. Hawkins (2006) also holds the view that the CSR is more than a social regulatory compliance, and the profitability of CSR derives from the realization that CSR is not only a simply sustainability work, but also an approach that can add profit to the business.
Apart from these, globalization also could be an indirect motivation for implementing CSR strategies. Under the globalization, company should increase their comparative competence, and the bigger the company is the more responsibilities the company should take (Rainey, 2006).

Moreover, from Lynes & Andrachuk’s (2008) point of view, there are 7 motivations to incent company to bear it social responsibilities. They are: (1) to achieve the long-term financial strategy; (2) to be eco-efficiency and reduce the firm’s environmental impacts; (3) to increase the firm’s competitive advantage; (4) to be a opportune citizenship; (5) to enhance the corporate image; (6) to meet pressures and requirements from the stakeholders; (7) to avoid or delay regulatory burden.

Most of these aforementioned incentives are achieved after implementing CSR strategies. According to Aras & Crowther (2010), Pava (2008), McGuire et al. (1988) and Kotler (2008), a decent CSR performance brings several positive impacts for the company:

- Creating the profitability.
- Enhancing firms’ image, brand value and reputation.
- Increasing the firm’s sales and the market share.
- Reducing costs, e.g. maintaining cost, operating costs etc.
- Increasing appeal to investors and financial analysts.
- Providing better relationships with communities and governments.
- Improving awareness with laws, regulations and environmental conscious etc.
- Improving the equity between employee and company.
- Motivating employees and increasing their loyalty.
- Improving the customer’s goodwill.
- Lowering firms’ financial risk.
- Leading to higher productivity due to efficiency.
- Consequently lowering recruitment and training costs.
- Reducing environment costs, through using energy in an efficient way, reducing waste, saving resources, and encouraging eco-innovation of products etc.
- Closing relationships with stakeholders and shareholders.
- Enhancing the ethical dialogues between the company and society by ways of focusing on the employee’s health and safety, respecting human rights, communicating with NGOs, investing in infrastructure, engaging in charity career etc.

According to the above, profitability is the prime motivation as well as a significant benefit for companies in the process of implementing CSR strategies (Hawkins, 2006). It is proved that most of other optimistic impacts have direct or indirect positive impacts on the firm’s profitability at different degree (ibid.). On one side, costs reducing in energy saving, waste, maintenance, operating etc. have direct impacts on the firm’s profitability. On the other side, some intangible assets, e.g. relationship with government, customer loyalty, employees’ encourage etc., influence profitability indirectly. CSR helps company to build long-term relationships with customers, employees, investors and suppliers, and boost sustainable
culture. There is no doubt it also can improve companies’ reputation and enhance their brand name, which causes sale increase and growth of customer number. After that, a powerful sustainable environment will help to attract and retain excellent staff and provide safe working condition for all employees. The increase of employee’s satisfaction and loyalty has the effect on the productivity and then influences the firm’s profitability (ibid.).

3.5 The relationship between CSR and profitability

The relationship between CSR and profitability, or firm’s financial performance, has been discussing for many years. Many empirical studies carried out by different researchers show diverse findings. Since most articles do not determine the difference between profitability and financial performance of a company specifically, in this dissertation, the profitability of the company not only narrowly means the net profit, but also refers to a positive financial performance of the company from a holistic point of view.

Moreover, the relationship between CSR and profitability is a two-way association (Figure 2). Researchers not only study how a firm’s CSR influence the financial impacts, but also focus on how financial performance has impacts on CSR. However, in this mutual association, some researchers generated more detail research and pointed that, the causality between CSR and profitability is actually unequal (Scholtens, 2008; Ruf et al., 2001). According to the researches from Scholtens (2008) and Peloza (2009), it is proved that profitability has much more positive impacts on CSR than CSR has on profitability. Nevertheless, this thesis is going to analyze the CSR-profitability relationship, viz., the financial impacts from CSR performance.

3.5.1 CSR-profitability relationship

Positive relationship

Majority of empirical researches indicate that CSR has positive impacts on the firm’s profitability (Aguinis & Glavas, 2012; Kolstad, 2007; Orlitzky, 2001; Peloza, 2009; Scholtens, 2008; Stanwick, P. & Stanwick, S., 1998; Orlitzky et al., 2003; Pava & Krausz, 1996; Van & Gössling, 2008; Saleh et al., 2011; Griffin & Mahon, 1997). According to Pava & Krausz’s
research, which is based on analyzing 53 firms that are identified as social-responsible and 21 empirical studies, firms who implement a good CSR performance also has a strong, or even better, financial performance than other firms who do not have CSR in the long term. Moskowitz (1972, cited in Aupperleet al., 1985) also argues that social responsibility is a smart investment for the company even though there is no adequate evidence to prove its direct relation with capital markets. Moreover, Ruf et al. (2001) believe that the improvement of firm’s CSR has both immediate and continuing positive financial impacts on the corporation. The strongest positive relation between social responsibility and profitability occurs in the year 3 after implementing the CSR (ibid.).

Furthermore, a good performance of CSR brings improved reputation and market opportunities to the company (Pava & Krausz, 1996). Especially in the food industry, since customers are more willing to purchase products from those companies who advertise products related to their social responsibilities. E.g. food producers show they take care of nature environment, animals and children (ibid.).

Additionally, Balabanis et al. (1998), McGuire et al. (1988) and Barnett (2007) argue that a firm who performs higher-level social responsibility may get less labor problem, face fewer financial risks from banker, investor and government, and reduce costs from monitoring, because of the advantage that the company improves its relationship with its stakeholders on the basis of mutual trust. It is also supported by Verschoor (1998) that companies who commit to behavior ethically in their annual reports or emphasize complying with code of conduct, have better financial performance than others who do not.

In particular, environmental initiatives, e.g. energy consumption, waste reduction etc., and social initiatives, e.g. care for the employee’s safety and health etc., are associated with positive financial performance (Peloza, 2009). In contrast, Balabanis et al. (1998) concluded the environment protection activities have high costs thus they may be negatively related to profitability.

**Negative relationship**

However, Kolstad (2007) argues that firm’s CSR performance cannot always go together with profitability, since the author believes that implementing CSR with a promoting-profit aim in mind is narrow and unethical. Though a broad number of firms still pursue making a profit in their ethical CSR work, and stakeholders in a firm are not willing to forfeit profit to increase social responsibility performance (Pava & Krausz, 1996). CSR requires a firm realizing its social responsibilities and then carrying out them, no matter whether they can lead adding profit or not for the corporation. However, it does not mean that there is no potential room for maximizing profit in ethics since Kolstad (2007) suggests that a company should have conditional consideration for maximizing profit and profit can be gained through fulfilling other duties. CSR and profitability can only go together in a systematical way (ibid.). Moreover, some researchers also think CSR is only an investment for the company and it will bring less contribution on profitability (Rainey, 2006). Some added costs, such as establishing
environmental technology, maintaining plants and training employee, strengthen the financial burden for the company and bring economic disadvantages (Balabanis et al., 1998).

**Unclear or neutral relationship**

Differ from aforementioned views, the study from Aupperle et al. (1985) concludes that there is no statistically significant relationship between CSR and profitability. Some scholars believe that there is no definitive consensus in this relationship research due to its complexity and subjectivity (Orlitzky et al., 2003; Griffin & Mahon, 1997; Aguinis & Glavas, 2012; Hammond & Slocum, 1996; Lin et al., 2009; Morsing & Schultz, 2006; Sun, 2012) and there is no clear pattern could be identified in this relationship (Brammer & Millington, 2008). McWilliams and Siegel (2000) also replenish that many empirical studies may omit the financial impacts from R&D investment in a company, and if considering that, the effect of the CSR on profit is changed from positive to neutral. Surroca et al. (2009) also point there is only an indirect association relies on the relationship between CSR and profitability through mediating some intangible resources, e.g. innovation, reputation, human capital and culture. When CSR cannot develop these aspects in its performance, neutral or negative relation emerges then (ibid.).

3.5.2 Profitability-CSR relationship

Many researchers cite that CSR and profitability are inter-connected in a positive way, namely they organize a “virtuous circle” (Orlitzky et al., 2003), which means a better social performance leads a better financial performance, and better financial performance also facilities a better CSR (Sun, 2012; Orlitzky et al., 2003; Waddock & Graves, 1997).

Profit can be a cause for CSR since only those firms with a robust economic health, more often larger companies, show a better CSR performance, and are more willing to invest in CSR through considering their social responsibilities in a broad view (Beliveau et al., 1994) e.g. considering environment impacts, customer relations and health of employees etc. (Sun, 2012). Furthermore, some researchers point that rather than analyzing the subsequent financial performance, firms should pay more attention to the prior financial performances since they are more important in indicating firm’s corporate social performance (McGuire et al., 1988; Scholtens, 2008). That is to say, firm’s financial performance or profitability has more impacts on CSR activities than CSR has on profitability.

3.5.3 Understanding the relationship

The relationship between CSR and profitability is nonlinear and depends on lots of factors (Porter & Kramer, 2006), such as type of industry (Griffin & Mahon, 1997; Waddock & Graves, 1997; Porter & Kramer, 2006; Beliveau et al., 1994), discipline of researchers (Peloza, 2009), firm’s size (Stanwick, P. & Stanwick, S., 1998; Ruf et al., 2001), economic health, environmental performance (Stanwick, P. & Stanwick, S., 1998). However, Orlitzky’s (2001)
study failed to prove that the relationship between CSP and profitability is influenced by the firm’s size; both small and large company can get benefits from CSR.

What’s more, reasons why a large number of empirical studies show various opinions probably are also because: the social-investing term is vague and ill-defined (Pava & Krausz, 1996); the tests and models that explore the relationship between CSR and profit are diverse and are used under different assumptions (ibid.); different profit measurements lead to different results e.g. market-based measurement shows positive with traditional financial performance while accounting measures lags the performance (ibid.); various ways used to measure a firm’s CSR, e.g. annual report, reputational index etc. (Ruf et al., 2001); lacking of theoretical foundation; lacking of comprehensive measurement of corporate social performance (ibid.).

The most disputed and controversial factor that impedes the research about the relationship between CSR and profitability is the differences in research methodologies and measures of financial performance (Aupperle et al., 1985; Beliveau et al., 1994; Pava & Krausz, 1996, Peloza, 2009; McGuire et al., 1988). It is nearly impossible to measure CSR because it is related to both internal and external aspects of firms on different levels (Van & Gössling, 2008). There are no consistent metrics for measuring the financial impacts from CSR performance (Peloza, 2009).

Last but not the least, most previous studies only focus on the macro relationship between CSR and profitability, which means too much focus on proving the relationship result (positive, negative, neutral), but overlook the mediation and causality process between them (Peloza, 2009). Especially those mediating impacts from intangible resources, e.g. innovation, human capital, culture and reputation, are regarded to play vital roles to explain the causality between CSR and profitability (Surroca et al., 2009).

3.6 The financial impacts from CSR

In order to underline the CSR-profitability relationship clearer, it is necessary to establish a systematic measure for measuring the financial impacts from CSR (Peloza, 2009) and a structural way to see how CSR has financial impacts on the company. From Peloza’s research that focuses on collecting and reviewing CSR measurement methodology from around 159 studies, about 65% of environmental metrics and 55% of the social metrics show a similarly positive association with the firm’s financial performance. However, the findings are not statistically significant, but suggest that the environment and social aspects are more likely positively related with the firm’s profitability. In addition, about total 36 unique measurements for measuring the financial impacts of CSR are found by Peloza (ibid.). Those measure metrics are collected into three distinct stages: Mediating metrics, Intermediate Outcome metrics and End State Outcome metrics (Figure 3) (ibid.).
In the CSP metrics, where CSP stands for Corporate Social Performance and it is a way to make CSR applicable and put it into practice (Van & Gössling, 2008), the main CSR initiatives or activities that related to environmental and social perspectives, e.g. recycling, philanthropy etc., are displayed in this stage. Mediating metrics are essential for assessing the relationship between firms’ corporate social responsibility and profitability because they are the mediating factors to demonstrate the causality between firms’ CSR and profitability. Intermediate outcome metrics are far less common used than end state metrics. End state metrics, which include accounting-based (ROA, ROS, ROE) approach, market-based (share price) approach and perceptual approach (management surveys), are the most common measures for researchers to use to measure the corporate social performance (CSP) (Peloza, 2009; Blomgren, 2011; Choi et al., 2010; McGuire et al., 1988). End state metrics are important measures because they provide the finality of the business and they can be judged solely at the initiative level (Peloza, 2009). However, each stage or metric has various pros and cons should be considered in this dissertation (Table 1, 2 and 3) (Peloza, 2009).
## Mediating Metrics

<table>
<thead>
<tr>
<th>Category</th>
<th>Metrics Included</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input/output approach</td>
<td>• Energy consumption</td>
<td>1. Simplest measure the cost saving from initiatives like pollution control</td>
<td>1. The metric should be based on the assumption that the financial benefits of CSP do not change, namely, the price for manage waste and energy do not change</td>
</tr>
<tr>
<td></td>
<td>• Waste reduction</td>
<td>2. Simply involves calculating savings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. It is straightforward process because there is a ready market for pricing such outcome (e.g. the price of energy etc.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Data is available</td>
<td></td>
</tr>
<tr>
<td>Employee</td>
<td>• Employee retention</td>
<td>1,2,3 as above</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Satisfaction</td>
<td>4. The most common mediation process</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>• Cultural shifts</td>
<td>1,2,3 as above</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Improved interdepartmental</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reputation</td>
<td>• Customer loyalty</td>
<td>1,2,3 as above</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Purchase intention</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Regulators</td>
<td>(Note: the reputation here concerns the reputation and brand of the company in the eyes of customer and regulators, and it differs from that mentioned in End State metrics.)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. The Mediating metrics (Source: Peloza, 2009)

## Intermediate Outcome Metrics

<table>
<thead>
<tr>
<th>Category</th>
<th>Metrics Included</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost-based approaches</td>
<td>• Reduced energy expense</td>
<td>• Several companies translate energy conservation and waste reduction to direct cost saving</td>
<td>• Firms may only focus on the cost saving while overlooking the costs increase of CSP</td>
</tr>
<tr>
<td></td>
<td>• Operational efficiencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Changes in risk profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue-based approaches</td>
<td>• Customer loyalty</td>
<td>• Companies can get revenue-generating benefits (e.g. develop competitive advantage)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• New markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Competitive advantage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrative approaches</td>
<td>• Cash flow</td>
<td>• More holistic perspective</td>
<td>No clear interpretation to link cash flow and net profit to company’s corporate social performance</td>
</tr>
<tr>
<td></td>
<td>• Net profit</td>
<td>• Integrate cost approach and revenue approach into one</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Long-term view</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. The Intermediate Outcome metrics (Source: Peloza, 2009)
## End State Outcome Metrics

<table>
<thead>
<tr>
<th>Category</th>
<th>Metrics included</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Market-based approaches (Most common in use) | ● Share price  
● Mutual fund returns | ● Easy for the firm to monitor over time  
● It is standard for the firm to compare with competitors  
● Share price is readily available  
● Capture the entire CSP value  
● Compared with accounting-based approach, less susceptible to differential accounting procedures and evaluates from investor’s point of view rather than focus on previous performance (McGuire et al., 1988) | ● A single stakeholder group may drive share price  
● Sole concentration on investors’ evaluation is not sufficient |
| Accounting-based Approaches (Widely in use) | ● Return on assets (ROA)  
● Return on equity (ROE)  
● Return on sales (ROS) | ● Essentially measure how efficient a firm uses assets to generate value  
● ROE is less immediate than the effects on ROA and ROS (Blomgren, 2011)  
● Compared with market-based approach, Accounting-based measures, particularly ROA, proved to be better predictor of CSR (McGuire et al., 1988)  
● It can be calculated if the relevant data is available in company’s annual report | ● May misrepresent the financial impacts for CSP in the short term  
● Tap only on the firm’s past performance (McGuire et al., 1988) |
| Perceptual Approaches | ● Fortune magazine rankings  
● Business Week ranking  
● Internal management surveys | ● Provide both internal and external perspectives  
● Corporate Reputation Index is valid measurement to measure the overall CSP (Stanwick, P. & Stanwick, S., 1998) | ● It is proved not very useful  
● Heavily influenced by other factors (e.g. share price)  
● Too subjective (McGuire et al., 1988) |

*Table 3. End State Outcome metrics (Source: Peloza, 2009)*
Because of the comprehension of Peloza’s study, this dissertation is going to apply his idea and integrated information to measure the financial impacts from CSR in order to identify the relationship between CSR and profitability in the case company, Sandvik. However, since this model not only provides the guidance for measuring the financial impacts from CSR initiatives or activities, but also offers a view and inspiration of explaining the causality relationship between CSR and profitability. Thus, this dissertation does not absolutely plan to follow the whole structure, and the model that used in the discussion section is modified in order to let readers understand the CSR-profitability relationship in an easier way. In the modified model, the main activities of CSR in the case company will be similarly stated in the first stage, as described in the model of Peloza; the mediating metric and intermediate outcome metric are integrated in one process, which is called the mediating process. The mediating process consists of many mediating factors, e.g. innovation, costs saving etc., that have financial impacts on the firm’s profitability and are used to explain and help to define the relationship between CSR and profitability; at last, the final profitability performance from CSR of the company is measured based on the End State Outcome metrics.
4 Findings of the case study

The overall purpose in this dissertation is to explore how does CSR have impacts on the firm’s profitability in the case company, Sandvik. The findings in this dissertation are organized as described in below sections.

First of all, a brief company introduction, stakeholders' identification and an introduction of CSR performance of Sandvik Group are described and reviewed. After that, according to those collected quantitative data, the study focus on defining the relationship between CSR and profitability in the Group, through generating some line charts, and matching the result of data from firm’s CSR performance and profitability. In this process, the environment, health and safety (EHS) are regarded as the main CSR performance so that the main EHS indicators, e.g. energy use, water consumption, emission of carbon dioxide, injury number of employees etc., are compared for five years with the firm’s financial performance. Following, the study presents how CSR influence the firm’s profitability based on the qualitative information that mainly collected from the telephone interview with Christina Båge-Friborg, the head of CSR in Sandvik. This how question is clarified and explained through some real examples from the Group. At last, a list of empirical findings from an overall point of view is summarized.

4.1 A brief introduction to Sandvik

Sandvik Group is a high-technology engineering company founded in 1862 by Göran Fredrik Göransson. By following the business concept that developing products and services to increase the customers’ productivity and profitability, the Group plays a leading role in working with five core businesses: mining, machining solutions, material technology, construction and Sandvik venture. To date, the Group has about 49,000 employees, sales of approximately 99 billion SEK, and operations in more than 130 countries (Sandvik, 2013a). The customers of Sandvik are from the aerospace industry, chemicals and oil, to electronics and medical technology industries etc.

In order to achieve the long-term profit growth, Sandvik does business in a high ethical level through integrating its business with sustainable development from economic, environmental and social perspectives. Therefore, under the global business environment, Sandvik tries to establish the balance between its financial, environmental and social responsibilities in order to achieve the long-term success by creating sustainable efforts and values for shareholders and other stakeholders (Sandvik, 2013a).
4.2 Stakeholders in Sandvik

The CSR initiatives are launched according to the expectations from different stakeholders, e.g. internal shareholder, customers etc. Consequently, defining the significant stakeholder groups is necessary for starting CSR projects and getting the idea of what the company should take care of in its sustainable works.

In 2008, Sandvik has identified three main stakeholder groups: shareholders, customer and employees. In 2012, Sandvik expanded the stakeholder groups by adding two new groups: suppliers and society at large (Sandvik, 2009a, 2013a). Key aspects about CSR in Sandvik are communicated with stakeholder through the firm’s annual reports, sustainability reports and official website (Sandvik, 2013a). Each stakeholder group is equally significant for Sandvik because “without them, Sandvik will not have business” (Båge-Friborg, 2013).

However, these five key stakeholder groups have unalike demands and needs to Sandvik (Sandvik, 2013a):

- **Shareholders:** For shareholders of Sandvik, they not only expect reputable financial performance with high profit return, but also anticipate ethical governance of company’s business activities with minimum risks. The relationship with shareholders is conducted through the board and the annual meeting (Sandvik, 2009a).

- **Customers:** Customers of Sandvik anticipate economical products with high safety and quality and expect minimum negative impacts in the product life cycle. As well as, they need transparency of company’s operation and activities. In addition, customers pay more attention to the environment protection and work place safety. They require also the group to respect international regulations, and respect to human rights.

- **Employees:** Employee is the vital basement for Sandvik to achieve sustainable success. They need a healthy and safety work environment, and equal treatment in terms of salary,
opportunity and human rights etc.

- Suppliers: Suppliers need common interests and require increased revenue hand in hand with the Group.

- Society: Sandvik is required to have a high involvement with the neighboring communities through sponsoring events and organizing projects.

To sum up, five distinctive stakeholders that propose different needs are classified from the eyes of Sandvik. Therefore, CSR strategies and initiatives, e.g. environment, health, safety, anti-corruption, human right, employees, suppliers, community involvement etc., are generated and launched to meet those needs. The following section will describe the detail of how Sandvik work with these initiatives.

4.3 How does Sandvik work with CSR

As a global company who has 150 years history, Sandvik Group is the leading and pioneer Swedish company who has been taking care of social activities for over one hundred years (Bella, 19 April 2013). However, the idea of the CSR came to Sandvik about ten years ago when the Group works on CSR from a teaching point of view, the head of CSR, Christina Båge-Friborg (2013) says. She also emphasizes that the concept of CSR is in the culture and the DNA of the company for a long time (Båge-Friborg, 2013).

In terms of the reason why Sandvik persists working on corporate social responsibility (CSR), the president and CEO of Sandvik Group, Olof Faxander points in the firm’s sustainability report: “we are convinced that companies with a serious approach to CSR will be the most profitable in the future” (Sandvik, 2013a, p3). What’s more, the head of CSR (Båge-Friborg, 2013) in the Group also stresses that the initial motivation for the Group working with CSR is the business. It is from the business perspective and linked with business because business is about satisfying customers, keeping employees and attracting talents. Working with CSR is to make sure that Sandvik is a sustainable company from economic, environmental and social point of views, and CSR indeed has impacts on the firm’s profitability through different ways (ibid.).

Even though, the first consolidated Sustainability Report of Sandvik was published in this year (Sandvik, 2013a). However, in 1998, the annual report of Sandvik firstly has contained a chapter focusing on the environmental aspect (Sandvik, 2012b). In that chapter, Sandvik gave a caution of the environmental training program within the Group and introduced the international environmental management system ISO 14001. From then onwards, sustainability report has presented the Group’s ambitions and evaluations with regard to its economic, environmental and social responsibilities (ibid.).

According to the expectations and needs from Sandvik’s stakeholders, the Group defines five important CSR initiatives or strategies from different perspectives: environment, health and
safety (EHS), anti-corruption, employees, suppliers; and community involvement. The detail of each activity is stated below.

- **Environment, health and safety**

Environmental and social considerations are significantly essential for Sandvik. In recent years, increasing emphasis has been placed on providing an account of corporate strategies and objectives with regard to the environment, health, and safety (Sandvik, 2013b). Sandvik aims to provide customers recyclable products with less environmental effects and tries to create added value for their customers by improving the firm’s competitiveness, productivity and profitability. Sandvik also helps customers decrease the negative environment footprint. That is to say, the Group strives to minimize the negative environmental effects and provide safe and healthy work environment for their employees (ibid.). In 2012, the Group established the Environment, Health and Safety (EHS) council in order to ensure the entire of Group move forward to the vision of “zero Harm” (ibid.).

**Environment**

As a result of the heavy industry type and other operational characteristics in the business of Sandvik, environment protection is the paramount aspect for the Group to handle from the raw material to the final products (Sandvik, 2013a). According to Sustainability Report (2013a) of Sandvik, four key direct environmental factors are identified: (1) consumption and use of energy, water and raw material; (2) generation of air/water emission and waste, which are caused by company’s use of fossil fuels in conjunction with production, heating and transportation processes; (3) old industrial sites and waste landfill; (4) environmental liabilities in conjunction with company acquisitions. Among these aspects, some of them are chose to be the main indicators of environmental performance in Sandvik from the year 2008 till 2012 (Table 4).

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<tbody>
<tr>
<td>Water consumption (Thousand m$^3$)</td>
<td>8,400</td>
<td>8,400</td>
<td>8,900</td>
<td>7,100</td>
<td>6,600</td>
</tr>
<tr>
<td>Energy use (TJ)</td>
<td>8,900</td>
<td>9,100</td>
<td>9,100</td>
<td>7,500</td>
<td>8,900</td>
</tr>
<tr>
<td>Raw material consumption (Thousand metric ton)</td>
<td>318</td>
<td>352</td>
<td>359</td>
<td>252</td>
<td>350</td>
</tr>
<tr>
<td>Carbon dioxide emissions (Thousand metric tons)</td>
<td>523</td>
<td>538</td>
<td>559</td>
<td>479</td>
<td>566</td>
</tr>
<tr>
<td>Produced waste (Thousand metric tons)</td>
<td>352</td>
<td>433</td>
<td>417</td>
<td>280</td>
<td>166</td>
</tr>
</tbody>
</table>

*Table 4. Main indicators of Sandvik’s environmental performance (Source: Sandvik, 2013a)*

Except those aforementioned direct environmental effects, some indirect environmental impacts that occur in parts of the value chain which are not owned by Sandvik’s own production, e.g. impacts in the supplier stage, distribution stage, customer user stage etc. also are vital to consider for the whole Group. However, the study in this dissertation will not focus on these indirect impacts since analyzing them is not the purpose.
Health and safety

Safety always goes to the priority that Sandvik should take care of because the Group does not want injured employees (Båge-Friborg, 2013). Thus, the Group endeavors to put efforts on reducing the frequency of injuries, illness and incidents and improving the health and well-being of employees. Employees also give a high evaluation rate to the company’s work related to health and safety. According to the internal employee survey generated by Sandvik itself, employees in Sandvik are loyal to the company, and they pretty enjoy their work even though there are some negative impacts on their health in the working process (Sandvik, 2013a).

The main indicators for health & safety are the Number of Lost Time Injuries (LTI) and the Lost Time Injury Frequency Rate (LTIFR) (Table 5).

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<tbody>
<tr>
<td>Number of Lost Time Injuries (LTI) 1)</td>
<td>422</td>
<td>392</td>
<td>459</td>
<td>425</td>
<td>717</td>
</tr>
<tr>
<td>Lost Time Injury Frequency Rate (LTIFR) 2)</td>
<td>4.3</td>
<td>4.6</td>
<td>5.6</td>
<td>5.0</td>
<td>8.1</td>
</tr>
</tbody>
</table>

1) Work-related injury (own employees) resulting in minimum one day’s absence from work.
2) Lost Time Injury Frequency Rate is defined as the number of Lost Assumption: Employees are assumed to work 2,000 hours a year.

Table 5. Health & safety indicators in Sandvik (Source: Sandvik, 2013a)

- Anti-corruption

Sandvik continually works to combat corruption, such as the bribery and unfair competition, through (1) adopting new global anti-corruption polices; (2) continually monitoring via Transparency International website; (3) renewing its risk assessment finding of higher risk jurisdictions, which will help Group to understand the corruption issues better; (4) establishing a department for researching overseas corruption legislation and compliance; (5) updating and strengthened the Group policies to establish a permanent ethical culture. Moreover, all employees also are encouraged following the Code of Conduct and keeping away from the corruption risks (Sandvik, 2013a).

- Employees

The Group not only focuses on generating healthy and secure working environment with fewer injuries and equal human rights, but also offers stimulating development opportunities for talents and deploys different strategies to attract and retain the best employees (Sandvik, 2013a). Thus, Sandvik empowers employees with more freedom and responsibilities for their work and tries to establish an equal environment for all of employees who are in different genders, diverse religions and different nationalities (ibid.).
• **Suppliers**

The regular dialogue between Sandvik and suppliers is based on Supplier Code of Conduct established by Sandvik. The code is to ensure suppliers’ work condition, product’s quality and business ethics that encouraged by Sandvik. From 2008, Sandvik has continued strictly working to evaluate its suppliers. If the supplier ranks in a high-risk level, then professional internal and external auditors will examine suppliers. According to deviation data, the common problem for the Group is that suppliers are not aware of basic legal requirement in their home countries. As a result, Sandvik expands training program for both suppliers and their employees (Sandvik, 2013a).

• **Community involvement**

Sandvik strives to be a good social citizen in the eyes of both local communities and a global region. On one side, the Group encourages all employees to participate in social activities such as planting trees, blood donation, and children’s education project, supporting poor area and so on. On the other side, the Group contributes to global sustainable development in its business through concerning on employees’ health, facilitating advanced technology, minimizing environmental impacts, actively working on charity program and supporting HIV/AIDS program (Sandvik, 2013a).

4.4 **The quantitative data of CSR-profitability relationship in Sandvik**

After getting an overview about the Group’s CSR performance, this section is going to define the relationship between CSR and profitability in Sandvik. In order to identify the relationship and make the relationship easier to observe, some line charts are created based on the statistical data, which collected from the company annual reports and sustainability reports.

First of all, the chart of company’s profitability performance will be displayed according to the evaluation of financial performance by using the accounting-based approach. Next, the charts of main CSR performances also will be presented. Environment, health and safety (EHS) were regarded as the main indicators for CSR performance in Sandvik because (1) the data relevant to other CSR initiatives, e.g. anti-corruption, create diversity of working environment etc., are not available; (2) environment has significant influence on the firm’s activities and has direct impacts on the firm’s profitability; (3) environment initiatives and social initiatives are supported by Peloza’s research that both of them are more likely positive association with the profitability. Finally, a chart-comparison result between financial performance and CSR performance is generated.

Thus, this section is about presenting the findings from the statistical point of view. Due to the reason that analyzing the statistical correlation relationship among several variables is too
complex, and it is not very meaningful to define the exact correlation between CSR and profitability in this study, the authors only chooses the visual comparison to match the results.

4.4.1 The data for financial performance

The study in this dissertation chooses accounting-based approach as the End-State metric to measure the final financial impacts from CSR performance, namely, the profitability in Sandvik. According to Peloza (2009), the accounting-based metric includes calculating the results of ROA, ROE and ROS, and these three financial indicators are used to measure the profitability from CSR. The calculating results and the chart of the tendency of the profitability in last five years are illustrated in Table 6 and Figure 5. Moreover, the reasons of choosing the accounting-based measurement have been stated in the section 2.2.1, and the detail calculating process and formulas are stated in Appendix 1.

Please note that, there are few calculating results are slightly different with the results published in the firm’s annual report. Even though, the calculating processes of ROA, ROE and ROS are approved by financial teachers from the university, it is a tricky problem and cannot be explained from the accounting point of view. However, it was little impact on the study result since this dissertation only want to see the trends from an overall situation.

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<tbody>
<tr>
<td>Return On Assets (ROA) (%)</td>
<td>7.8</td>
<td>5.9</td>
<td>7.7</td>
<td>-2.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Return On Equity (ROE) (%)</td>
<td>22.3</td>
<td>17.3</td>
<td>20.5</td>
<td>-8.6</td>
<td>21.3</td>
</tr>
<tr>
<td>Return On Sales (ROS) (%)</td>
<td>8.22</td>
<td>6.22</td>
<td>8.4</td>
<td>-3.6</td>
<td>8.5</td>
</tr>
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</table>

Table 6. Profitability performance of Sandvik 2008-2012

Figure 5. The data of financial impacts of CSR performance for Sandvik from 2008 to 2012
Since all these three indicators, namely, ROA, ROE and ROS, measure the overall financial performance of a company. Thus, in general point of view, the profitability of Sandvik is clearly in ups and falls during the last five years. Compared with 2008, under the big influence of the global financial crisis, the profitability in 2009 went down, and financial performance was quite low, and the ROE has the largest fall-down in the year 2009. However, in 2010, the Groups recovered from the crisis and the profitability reached a high level. After a small drop in the year 2011, the profitability performance reached a new high level in 2012. Separately looking, the trends of ROA and ROS are almost overlapped together.

4.4.2 The data for main CSR performance

Based on the collected data for environment, health and safety (EHS) that mentioned in the section 4.3, three figures (Figure 6,7 and 8) are generated to show the data for the CSR performance of Sandvik in last five years. Moreover, because of the diverse measurable units, those EHS indicators are graphed in different figures.

![Figure 6. The data of energy use and water consumption from 2008 to 2012](image1)

![Figure 7. The data of raw material consumption, carbon dioxide emission from 2008 to 2012](image2)
Regarding Peloza’s (2009) research as a basement, the decrease of energy/water consumption, reduction of produced wastes, diminish of the number of injury etc. can directly be transferred as the costs saving for the company when analyzing the financial impacts from CSR. In addition, companies also can get revenue benefits from increasing customer loyalty, creating new market etc., which are relevant to company’s CSR initiatives. As a result, those main CSR indicators from the EHS are feasible to see their financial influence on the firm’s profitability. For example, the increased use of energy leads to an increased cost for the company, so that it can decrease the profitability and negatively influence the profitability, vice versa. Moreover, when defining the overall financial impacts from all indicators’ point of view in a year, the precise impacts from each main indicator are left out. Which means that the actual financial impact (the amount of money of increase or decrease) from each indicator is regarded as the same. Otherwise, it is impossible to see the overall influence on the profitability from those CSR initiatives because the accurate financial impacts of each CSR indicator are not available to researchers.

The above figures show that, compared with the year 2008, the indicators of water consumption and produced wastes are increased in a smaller degree in 2009. These increases are attributable to acquisitions of a production process. However, other main environmental indicators, e.g. energy use, consumption of raw material, carbon dioxide emissions, and the main health & safety indicators, namely, the injury number and frequency rate, are diminished in the year 2009. That is because the Group faced a difficult economic situation, the global financial crisis occurred in the end of 2008, and the sales and production are deceased in 2009. Despite that, some other reasons for the decrease are: (1) about 78% of metal raw materials are derived from scrap and Sandvik continued to use recycling materials from cemented carbide products; (2) as energy-efficiency programs intensified the energy management, the energy use and CO₂ emission are declined moderately; (3) due to a series of actions to ensure employees' health and safety, the injury number and frequency rate are diminished in Sandvik. In this year, cost of the main CSR performance is supposed to lower than 2008, so that the reduced costs should have positive impacts on the profitability.
After the tough year 2009, all main CSR indicators are increased to some degree in 2010, e.g. the energy use increase from 7500 TJ to 9100TJ, the water consumption is increased from 7100 to 8900 thousand m$^3$ etc. That is because the Group recovered from the financial crisis, and the sales volume increased compared with the year 2009. Hence, more costs spent on CSR initiatives of environment, health and safety in this year, which predict that CSR performance has the negative impacts on the profitability, and the profitability should be decreased.

In 2011, almost all indicators are decreased or nearly unchanged except the produced waste increased slightly. Compared with 2011, besides the increased LTI and unchanged water consumption, the other indicators are decreased in the year 2012. These decreases in both year 2011 and 2012 are attributed to those endeavors of improving the CSR performance through continually focusing on employees’ health and safety, environmental protection, energy efficiency, disciplined training in production, risk identification etc. However, the produced waste in 2011 and LTI in 2012 are increased since sales volume rises. Thus, in both years, the total costs for CSR are supposed to be lower than in last year, which predicts a positive influence on the profitability of the Group and the profitability should be increased.

### 4.4.3 Comparison of results

Before comparing the results presented in prior section, Table 7 and 8 are set up to present the trends of the financial performance/profitability and all environment, health and safety (EHS) indicators, in order to help to understand the compared results in the Table 9.

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<tbody>
<tr>
<td>ROA (%)</td>
<td>Strong −</td>
<td>Strong +</td>
<td>Slight −</td>
<td>Slight +</td>
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<tr>
<td>ROE (%)</td>
<td>Strong −</td>
<td>Strong +</td>
<td>Slight −</td>
<td>Slight +</td>
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<tr>
<td>ROS (%)</td>
<td>Strong −</td>
<td>Strong +</td>
<td>Slight −</td>
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Note: Increase: +; Decrease: −

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<tbody>
<tr>
<td>Energy use (TJ)</td>
<td>−</td>
<td>+</td>
<td>=</td>
<td>–</td>
<td>–</td>
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<tr>
<td>Water consumption (m$^3$)</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>=</td>
<td>=</td>
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<tr>
<td>Raw material consumption (Thousand metric ton)</td>
<td>−</td>
<td>+</td>
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<td>−</td>
<td>−</td>
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<tr>
<td>Carbon dioxide emissions (Thousand metric ton)</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>Produced waste (Thousand metric ton)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>Number of lost time injuries (LTI) (Hours)</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Lost time injury frequency rate (LTIFR) (%)</td>
<td>−</td>
<td>+</td>
<td>−</td>
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Note: Increase: +; Decrease: −; Unchanged =

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<td>Energy use (TJ)</td>
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<td>Water consumption (m$^3$)</td>
<td>+</td>
<td>+</td>
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<td>Raw material consumption (Thousand metric ton)</td>
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<td>Carbon dioxide emissions (Thousand metric ton)</td>
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<td>Produced waste (Thousand metric ton)</td>
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<tr>
<td>Number of lost time injuries (LTI) (Hours)</td>
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<tr>
<td>Lost time injury frequency rate (LTIFR) (%)</td>
<td>−</td>
<td>+</td>
<td>−</td>
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<td>−</td>
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Note: Increase: +; Decrease: −; Unchanged =
After comparing the trends of profitability from EHS indicators (Table 7) and the actual trends of profitability of CSR (Table 8) of Sandvik in last five years, the comparison results are presented in Table 9. According to the result, the study finds that the relationship between CSR and profitability is not clear to be identified. Because the data shows an negative relationship between CSR performance and firm’s profitability in certain typical years, 2009 and 2010. After that, the CSR-profitability relationship is slightly negative in 2011 and slightly positive in 2012.

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<tr>
<td></td>
<td>Strong −</td>
<td>Strong +</td>
<td>Slight −</td>
<td>Slight +</td>
<td></td>
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<tr>
<td>Trends of profitability (financial performance) that supposed to have, based on the trend of main CSR indicators</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>+</td>
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Note: Increase: +; Decrease: −

Table 9. The comparison results

In the year 2009, the profitability is located in the lowest level during the five years, even though the decrease of about 5/7 of the indicators, e.g. use of energy, use of raw material etc., predicts the costs reduced, and only 2/7 of increased indicators, e.g. water consumption and produced waste, require an increase in the cost. In this case, the total costs for the CSR performance of these main indicators should be low in 2009. However, the low level of profitability in 2009 is supposed to predict the high costs of CSR performance. Thus, the low costs of CSR in 2009 cannot explain the decrease of the profitability. CSR performance is negatively related with the firm’s profitability in this year.

In the year 2010, where the company’s financial performance reached a high level in last five years, the costs for CSR initiatives are high because all main CSR indicators increased. However, the increase is supposed to lower the profitability. Thus, in this year, the CSR performance also is negatively related to the profitability. Nevertheless, the study also finds that, although those main CSR indicators are increased, the change is not as obvious as the financial performance, compared with the year 2009.

However, the negative relationship between CSR performance and the profitability, in both year 2009 and 2010, cannot be taken into consideration because of the specific reason of the financial crisis. Because, under the situation of financial crisis, the financial impacts from big market fluctuation and sale-volume change are much bigger than the financial impacts from CSR performance. E.g. compared with the economic downturn in 2009, the sales volume increases faster than the CSR related costs increase in 2010. In this case, the cost for those CSR initiatives are so small that to have a big impacts on the profitability. Hence, it is hard to reflect the normal association between CSR and profitability during the specific time.
In 2011, the reduced cost from main CSR initiatives is supposed to predict an increased profitability. However, the actual profitability is slightly decreased compared with the last year. So that, the CSR performance is slightly negative connected with the profitability.

In 2012, the reduced costs from CSR have positive impacts on profitability. The actual profitability shows the increase compared with 2011. Hence, in 2012, CSR is slightly positive connected with the profitability.

Since the changes of the profitability are very small in the years 2011 and 2012, it is probably not enough to define the clear relationship between CSR and profitability according to the slight difference, because the financial impacts from other initiatives are not taken into consideration in this study and their impacts are unknown and uncertain. Therefore, the compared results show that the CSR-profitability relationship in Sandvik from 2008 till 2012 is not clear to be defined since the CSR in the Group sometimes shows both negative and positive association with firm’s profitability.

4.5 The qualitative data of CSR-profitability relationship in Sandvik

Since the association between CSR and profitability in Sandvik has been already defined in the prior section, this section is going to explain the causality between them from the CSR manager’s point of view. Hence this section is mainly based on the qualitative information from the telephone interview with the head of CSR in Sandvik, Christina Båge-Friborg.

Sandvik implements CSR under pressure from both internal, e.g. shareholders, profitability request etc., and external, e.g. media attack, customers etc. (Båge-Friborg, 2013). The CSR activities or initiatives in Sandvik do influence the profitability in different ways from both negative and positive point of interpretation. On the one hand, CSR requires a large amount of investment for financial, human, time resources and Research & Development (R&D); on the other, the financial impacts from CSR initiatives are expected to be positive with the firm’s CSP in a long-term perspective.

4.5.1 CSR influences profitability in a negative way

When talking about the negative financial impacts that CSR brings to the company, the biggest reason is the high investment on CSR activities or initiatives. “It does have negative impacts on the profitability especially in the environment side”, the head of CSR in Sandvik said. Båge-Friborg also mentions that she is a little bit disappointed about the Group’s environmental performance because she thinks the Group can do much better.

Every initiative that Sandvik launched has a heavy cost investment in the beginning. For example, investing solar panel to reduce the energy consumption is a big cost for buying and
installing, but the Group persists that the saving amount of the energy costs by using solar panel is more than the opening costs in the long-term perspective. That is how CSR affects the profitability from the short-time perspective when it comes to the investments.

Moreover, the costs for investing in research of environmental friendly machines and other innovations on health and safety etc. are very also high in the Group, according to Båge-Friborg. Every year, the Group invests approximately 3 billion SEK in R&D. Most investments are used in developing innovative solution to reduce energy use, save cost, improve healthy working condition, and advance the production efficiency etc. (Sandvik, 2013a).

Besides, since CSR is a too wide concept to grasp for company, especially for the global large company, like Sandvik, sometimes it is hard to communicate what CSR is and decide what the company’s priorities are. That is one of the challenges for Sandvik. In terms of communicating the CSR concept, Sandvik has general training program, e.g. face-to-face training, e-training system etc., on each subtopic for both employees and managers. However, during the interview, Båge-Friborg says that the training program does not cost too much to influence the profitability, as it is, in fact, a long-term investment for the company’s development.

4.5.2 CSR influences profitability in a positive way

Even though, the high investment costs of launching those CSR initiatives, especially in environmental aspects, exerts financial pressure on Sandvik, the CSR manager still confidentially considers that the Group always can see the financial returns over times, within one year or in a long five years, because “the return on profitability of CSR is a long-term thing”, Båge-Friborg says. However, the relationship between CSR and profitability depends on what projects the Group is doing, and the time of profit return depends on the different projects. “If we talk about renewing the energy systems, it takes five years or something, but if we talk about exchanging or buying green electricity, that is a fast decision, the company can see the profitability within a year. So it depends on what initiative we are talking about” (Båge-Friborg, 2013).

In terms of the question how CSR influence Sandvik’s profitability, Båge-Friborg (2013) says, “it is so difficult to explain the detail how CSR actually linked with profitability because CSR is linked with so many things”. However, some examples can be used to explain this question (ibid.): (1) Firm’s profitability can get benefits from environmental initiatives. Those initiatives help to reduce the energy use and the water consumption, decrease the waste, and cut the air emissions. That is the direct costs saving for the Group. The less energy the company uses, the less costs they pay. (2) CSR helps Sandvik improving or building its brand value through respecting human right, labor right, regulations etc., then more customers will buy the products so that to increase sales. That is the direct effect. (3) Sandvik works well in creating a diversity and comfortable environment for their employees. The Group tries to
attract talents from all over the world, and keep them in the Group. This saves money and increases the intangible benefits for the Group. (4) The injury number is decreased and the safety situation is improved, which means that employees feel better, and work more safety. As a result, the low amount of people getting injured, the low amount of money spending on it. Additionally, the productivity and work efficiency are improved, which leads to time saving and cost saving. (5) Every year, a large number of projects focusing on energy-efficiency can reduce the CO$_2$ emission by 319 tons. As a result, the Group can save around 150,000 SEK per year (Sandvik, 2013a).

Nevertheless, the group cannot be one hundred percent successful in CSR and get profit from CSR initiatives, but at least ninety five percent of them succeeded, Båge-Friborg (2013) says. In addition, she also emphasizes that the continuous positive association kept by the company is based on a proper management system to measure the costs and profitability for every CSR initiative, e.g. cost for waste management, costs for injuries etc. Statistics about every CSR indicator make things clear for managers to see whether the activity is going better or worse. The reason for doing this is that Sandvik must make sure that everything the group is doing is correct for the business (Båge-Friborg, 2013). However, the authors are not allowed to gain this type of commercial sensitive information due to some limitation.

4.6 Summary of case study

Sandvik is a global company who has businesses in several areas, e.g. construction, material area etc. and long history of working on social responsibilities and CSR concept. In the Group, five stakeholder groups are clearly defined, customer, employee, supplier, shareholder and the society. These stakeholders have different expectations on the Group, e.g. customers require Sandvik not only to provide high-quality products but also to protect the environment etc. According to those expectations, some aspects, e.g. environment, health and safety (EHS), anti-corruption etc., are selected by the Group in order to focus on in the process of working with CSR.

Since this dissertation is proposed to explore how CSR has financial impacts on the firm’s profitability, the authors firstly defined the relationship between CSR and profitability in the case unit, Sandvik. Therefore, the tendency of both CSR and profitability performance are compared and matched in order to see if they have positive, negative or unclear association. Accounting-based approach (ROS, ROA, ROE) is chosen to measure the financial performance of the Group. EHS is regarded as the main CSR performance with key indicators to measure the CSR performance of the Group.

After matching both the CSR performance and actual profitability performance in Sandvik, and connecting with the viewpoints about how CSR influence the Groups’ profitability from the interview, a main summary is made as below: (1) From the statistic point of view, the finding shows the relationship between CSR and profitability is not clear, and CSR performance is even strong-negatively related with the profitability in certain years, at least with the main EHS performance, of Sandvik in last five years. (2) Even though, CSR indeed
has both positive and negative impacts on the firm’s profitability through many ways, e.g. reducing energy costs, increasing brand value, invest in innovation and R&D etc. From the CSR manager’s point of view, Sandvik always can see a positive relationship between CSR initiatives and firm’s profitability in the long term. However, the profit return depends on the projects.

Therefore, the findings surprisingly show an ambivalent inconsistency between the quantitative data analysis and the qualitative information. This will be discussed in the next chapter.
5 Discussion

In this chapter, the authors are going to present the new model modified from the Peloza’s (2009) idea and discuss mediating process at first, in order to provide an overview that how the mediating process and mediating factors can influence the CSR-profitability relationship. After that, the reasons why inconsistency occurred in the finding will be discussed as well from different perspectives.

5.1 The mediating process

Based on the idea from Peloza (2009), the authors establish a new model to explain the relationship between CSR and profitability (Figure 9). Three factors, profitability, corporate social responsibility (CSR) and mediating process are located in a circulatory system. Different from the stages of financial impacts concluded by Peloza, it is no longer a chain of stages to show how to measure the financial impacts. This model focuses more on explaining the relationship between CSR and profitability.

![Figure 9: A model of relationship between CSR and profitability](image)

It is clear to see that the relationship between CSR and profitability is linked significantly with the mediating process. That is to say, CSR is completely connected with the business and profitability through the impacts from mediating process. The mediating process consists of resources and factors that used to explain this relationship. Those resources could be environmental costs, brand value, innovation, motivation, employees and so on. Therefore, whether the loop is a positive facilitation or a vicious circle depends on those mediating resources. On one hand, those mediating aspects can be used to explain the relationship...
between the profitability and the CSR. On the other hand, the mediating process has impacts on how the circle looks like.

In terms of the mediating process, it helps to explain and define the relationship between CSR and profitability, is closely related to the stakeholders’ expectations, firm’s CSR initiatives, and corporate’s profitability. However, those mediating linkages are too complex to figure out their impacts on profitability clearly since they are directly or indirectly related to all business performance in a company from intangible organizational culture to tangible costs of energy use. Thus, the authors illustrate the process that how CSR has financial impacts on profitability through the mediating process by giving some examples (Figure 10).

![CSR activities/ initiatives:](image)

**Figure 10. How does CSR influence the firm’s profitability**
Every CSR initiative can be related to several mediating factors that can cause negative/positive impacts on the profitability (Figure 10). Here, as mentioned before, the positive simply refers to increasing profitability or decreasing the cost burden of the company, vice versa. For example, reducing the use of the energy/water/raw material needs cost investment, which lags the company’s profitability in short term; it also saves costs of energy/water/raw material, which can decrease the financial burden of the company in a long term.

Moreover, those connections between CSR and mediating factor or between mediating factor and the profitability can be divided into direct connection and indirect connection. In the Figure 10, the direct and indirect connections are distinguished clearly by different colors. Those direct links are possibly to be measured as numerical data and can be easily monitored by company managers in order to see the financial impacts on the profitability. In contrast, since almost of those indirect connections are linked with intangible resources, e.g. employees’ loyalty, motivation, innovation, reputation, etc., it is a tough task to measure the financial impacts from them.

CSR indeed has intricate relationship with the firm’s profitability, and the relationship between CSR and profitability is vague defined according to above discussion. Thus, the study strengthens the viewpoint that the relationship between CSR and profitability is hard to define, because the internal relationship, namely, the mediating process, consists many direct and indirect-influence factors. Most of these factors are related to intangible resources, e.g. innovation, loyalty etc. It is quite difficult for both researchers and company to measure the financial impacts from all mediating factors in this relationship, especially from those intangible factors.

However, it is still possible for companies to measure individually the profitability from some tangible factors, e.g. energy use, water consumption. For example, as mentioned in the case of the Sandvik, the profitability from installing the solar panel can be seen and measured in long term, even though the profitability is negative in a short term because the cost of investment.

Moreover, the CSR-profitability relationship is not statistically significant and cannot be defined in a direct way because it is hard to see whether those direct effects or indirect impacts have more weight on influencing the firm’s profitability. Thus, it might be necessary to integrate both the direct and indirect impacts of CSR in order to analyze the CSR-profitability relationship. However, it is not included in this study.
5.2 The reasons for inconsistent findings

A quantitative data analysis of selected CSR activities’ performance and the financial performance of the case company shows that the relationship between CSR and profitability in the Group is non-clear. However, the head of the CSR in the Group gives several positive examples, and states that the CSR work in Sandvik is always positively related to their business profitability. Therefore, the inconsistent finding indicates that the positive mediating process failed to interpret the non-clear relationship in Sandvik (Figure 11).

Figure 11. The relationship among CSR, mediating process and the profitability

But, why does the inconsistency emerge? This section is going to analyze why the inconsistent results occur in the case of Sandvik. There are some reasons are analyzed below:

- The inconsistency is probably due to the limitation of solely choosing the accounting-based approach to measure the final profitability from CSR in the case company. According to Peloza (2009), there are three approaches to choose: market-based approach, accounting-based approach and perceptual approach (Table 3). However, in this dissertation, only the accounting-based approach is chose to used. The result is likely to be different if the authors use other measurement metrics, e.g. market-based approach, perceptual approach, since some empirical studies show the difference. E.g. Pava & Krausz (1996) point that accounting-based measurement shows CSR is negatively linked with profitability, however, the market-based approach show positive association. In addition, since the accounting-based approach (ROA, ROS and ROE) indicates the overall financial performance of the company, and it is influenced by both CSR
performance and many other factors, so that it may not be sufficient for accurately measuring the financial impacts from CSR performance, if only one approach to measure the financial impacts from CSR is used.

- The relationship between CSR and profitability might be significantly influenced by specific financial crisis, e.g. the global financial crisis occurred in 2008 and 2009. As mentioned in previous chapter, under the financial crisis year 2008 and 2009, the financial impacts on the firm’s profitability from market fluctuations and sales change are larger than the impacts from CSR performance in Sandvik. Hence, the grievous financial crisis can break the normal relationship between CSR and profitability especially when using the accounting-based measurement to measure the overall financial impacts from CSR.

- Some prior assumptions probably are restrictions for analyzing the CSR-profitability relationship and influencing the results. In this dissertation, the environment, health and safety (EHS) is selected as main indicators for defining the relationship between the Group’s CSR performance and profitability due to some reasons that mentioned before, e.g. limitation of collecting data etc. However, depending on EHS might be insufficient. Although the Group emphasizes the EHS and notes that the EHS is significantly crucial for the company, there is also a possibility that the EHS have less financial impacts than other initiatives do. So, the finding in this dissertation does not show the obvious and clear association.

- The head of the CSR says the profit return, for the firm’s CSR initiatives, is a long-term thing. However, it is hard to define the time scope. The finding in this dissertation focuses on last five years from 2008 till 2012. It shows that there is no clear relationship between CSR initiatives and profitability, which is inconsistent with the statement of the CSR manager. This inconsistency can be due to reason that, the time of profit return for CSR in Sandvik is more than five years, or the investments on the environment and other initiatives are too large to get the return within five years. So that, the financial impacts from CSR performance are not obvious and show little influence on the firm’s profitability.

- Since lacking a systematic and comprehensive method to measure both CSR performance and the financial impacts from CSR. It is indeed difficult to get clear result of this study. In this dissertation, only some main indicators relevant to environment, health and safety (EHS) are found and used. The authors claim this is one of the main issues that impede the research of CSR-profitability relationship.
5.3 Summary of discussion

Based on the findings of the case study, the authors firstly discussed that how mediating process influence the CSR-profitability relationship. Mediating process not only can explain why the positive/negative relationship emerges, but also can help to define the relationship. CSR is linked with the profitability through connecting with a number of mediating factors, e.g. increase investment, motivate employees etc. Every CSR initiative, e.g. reduce the use of energy, respect human right etc., can build one or more than one direct/indirect connections with the mediating factors. And it is still hard to figure whether the direct or indirect plays the more pivotal role in influencing the firm’s profitability. Therefore, although the mediating process is important to define the CSR-profitability relationship, it is too complex to explain the relationship clearly.

The complexity of the mediating process provides an evidence of the non-clear relationship between CSR and profitability in this case. In terms of the inconsistent finding, several reasons are explained that: (1) It is not enough to choose solely the accounting-based approach to measure the financial impacts form CSR; (2) The normal CSR-profitability relationship can be influenced by specific financial crisis; (3) Solely depending on EHS when evaluate the CSR performance of Sandvik is not sufficient; (4) It is hard to define the time scape for the financial return of CSR due to he tricky word “long-term”; (5) Lacking of comprehensive system to measure the CSR and its financial impacts.
6 Conclusion

To date, companies are not only asked to fulfill the economic needs from shareholders, but also need to pay more attention on environmental and social responsibilities relevant to other stakeholders, e.g. customers, employees etc. However, both profitability and corporate social responsibility (CSR) play significant roles for the company’s development. It is interesting to analyze the relationship between these two variables and figure out how CSR has impacts on the profitability.

As a result of the empirical research, some findings are found: (1) The CSR-profitability relationship of Sandvik is not clear; (2) The prior quantitative data analysis is inconsistent with the qualitative result that from the CSR manager’s point of view. The ambivalent finding surprises authors, and encourages authors to discuss the reasons. After illustrating the relationship among CSR, mediating process and profitability through several examples, the authors think that one of the main reasons is the complexity of the mediating process, which is used to explain and define the CSR-profitability relationship. Besides, lacking comprehensive measurement system to measure both direct and indirect financial effects also is capable to explain the inconsistency. Following, some other reasons, e.g. the problem of solely choosing the accounting-based approach, the impacts from the financial crisis etc., which may cause the inconsistent finding, are pointed out.

To sum up, the authors conclude: (1) The relationship between CSR and profitability is not clear, and CSR has non-statistically significant relationship with profitability. (2) Generally, it is difficult to measure financial impacts from the whole CSR performance. (3) Individually, the financial impacts and profitability from CSR initiatives are likely to be measured project by project. (4) However, even for the individual project, intangible factors and resources that related to CSR cannot be measured in order to see their financial impacts on firm’s profitability.

Nevertheless, no matter the CSR performance has positive, negative or even non-clear relationship with the firm’s profitability, companies still need to continually make commitment of implementing the CSR. Because only by doing that, company can achieve the sustainable success from economic, social and environment perspective in the long term future.

6.1 Contribution of the research

As mentioned in the introduction, most studies in this research subject merely concentrate on defining the relationship between CSR and firm’s profitability, and a few researches focus on explaining the internal relationship between CSR and firm’s profitability. The accomplish of this dissertation, on the one hand, prove the viewpoints that there is no definitive, clear and statistically significant consensus in the CSR-profitability relationship due to its complexity
and subjective, from several researchers, e.g. Aupperle et al. (1985), Orlitzky et al. (2003), Griffin & Mahon (1997), Aguinis & Glavas (2012), Hammond & Slocum (1996), Lin et al. (2009), Morsing & Schultz (2006); Sun (2012) and Brammer & Millington (2008). Besides, this thesis also deepens the knowledge about the CSR-profitability association in the case of a heavy-industry company and expands the understanding of how CSR has financial impacts on the profitability through exploring the mediating process and factors.

6.2 Limitation of the research

Except those limitations, e.g. limitation of the research strategy that lacking the ability to generalize the findings, limitation of collecting data that relying on company’s official reports causes some uncertain issues etc., that have mentioned in previous chapters, this study is limited by time to do more in-depth researches, for example, not only exploring the CSR-profitability relationship, but also explaining the profitability-CSR association etc. Besides, the restriction to access the information or data related to research subject is also a highlighted problem that impedes authors to have detail research. The subject in this dissertation is related to the financial performance. However, the authors are not able to touch more about the financial area of the case company.

6.3 Further studies

In this dissertation, a single-case design is used to exploring the relationship between CSR and profitability. Thus, the further studies can be generated to analyze the CSR-profitability relationship by using multi-case research strategy, to compare the CSR-profitability relationship across different industries, to study the two-way relationship between CSR and profitability in a specific industry, or to establish the guidance about how to measure those indirect financial impacts related to CSR.
7 References


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8 Appendix

Appendix 1. Calculation of ROS, ROA and ROE

In the calculation of return on sales (ROS), return on assets (ROA) and return on equity (ROE), financial statistical data are collected from charts of balance sheet, income statement and cash flow statement in the annual reports in Sandvik (Sandvik, 2009b, 2010, 2011, 2012, 2013b) and the calculating methods are based on the formula provided in the financial accounting book written by Weetman (2006).

- Return on sales (ROS) is the best index to compare company’s over time to look for trends and compare it with other companies in the industry. The increasing ROS implies that the company is growing more efficient, whereas a decline ROS represents a financial trouble.

Calculating formula: \[\text{ROS} = \frac{\text{Net Income}}{\text{Revenue}} = \frac{\text{Operating profit}}{\text{Revenue}}\]

ROS in Sandvik from the year 2008-2012:

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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<tbody>
<tr>
<td>ROS</td>
<td>8.5%</td>
<td>-3.6%</td>
<td>8.4%</td>
<td>6.22%</td>
<td>8.22%</td>
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</table>

- Return on asset (ROA) is another variation on measuring how well the assets of the business are used. It tells investor what earnings were generated from invested capital, and indicates how profitable a company is relative to total asset. Through comparing the ROA calculating number, the higher ROA, the better firm’s profitability is, because the company earning more money on less asset.

Calculating formula: \[\text{ROA} = \text{ROS} \times \text{Asset turnover (sales on assets)}\]

ROA in Sandvik from the year 2008-2012:

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<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
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<tbody>
<tr>
<td>ROA</td>
<td>7.6%</td>
<td>-2.8%</td>
<td>7.7%</td>
<td>5.9%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

- Return on equity (ROE) is a key measure of a company’s success. It measures a company’s performance from the shareholders’ perspective. Through the ROE number, the investor can identify the company’s investment value.
Calculating formulas:

\[
\text{ROE} = \frac{\text{net income}}{\text{shareholder’s equity}} \\
\text{Or } \text{ROE} = \text{ROS} \times \text{Asset turnover (sales on assets)} \times \text{Financial leverage (assets on equity)}
\]

Asset turnover = Revenue / Assets
Financial leverage (assets on equity) = Total assets / Shareholders’ equity

ROE in Sandvik from the year 2008-2012:

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<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>21.3%</td>
<td>-8.6%</td>
<td>20.5%</td>
<td>17.3%</td>
<td>22.3%</td>
</tr>
</tbody>
</table>
Appendix 2. Interview questions

Q1: What is the initial motivation for Sandvik to implement the CSR strategy? Is it to create profitability for firm’s shareholders? If not, what is that?

Q2: How about the costs for doing CSR activities? Do you think whether they can influence the costs of the company or not? And how? Could you give some examples that positively or negatively influence the company’s costs or profitability?

Q3: In terms of the costs for environmental strategy, is it possible to measure the costs saving from reducing wastes, energy saving etc.?

Q4: What tangible (costs saving…) and intangible benefits (facilitate innovation, motivate employees, increase employee’s loyalty…) does Sandvik get from its CSR strategies? Could you give some examples?

Q5: Do you think these intangible assets have any indirect financial impacts on the firm’s profitability? And how? Could you give some examples? (E.g. the increasing customer confidence may have positive impacts on the firm’s share price…)