The effects of company’s age, size and type of industry on the level of CSR

The development of a new scale for measurement of the level of CSR

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Abstract

Sustainable development is one of the most frequently used expressions in the economic context. Its importance is emphasized not only at the national level but also at the corporate level. The purpose of this study is to find the influence of company’s age, size and type of industry on the level of sustainable development among Swedish companies. In order to accurately evaluate the level of sustainable development a comprehensive measurement scale is needed. We have recognized the research gap of lack of sustainability measurement methods. Thus, the second goal we have decided to achieve is to develop an extensive measurement scale for sustainability performance evaluation. The main contribution of the study lies in filling the research gap by providing a new measurement method that can be adopted in order to evaluate the sustainability performance and to find the effects of company age, size and type of industry on the level of CSR. The relationships in the study are hypothesized and summarized in the conceptual model and consequently tested.

This study distinguishes five underlying perspectives of sustainability and several categories of company ages, size and types of industry. These aspects are in the focal point of the questionnaire sent to our sample of Swedish companies. The data collected from the survey were analyzed in SPSS statistics program using a variety of analytical methods. At first, each set of questions was analyzed separately. Thereafter, the findings regarding each determinant of CSR were thoroughly discussed. Based on the results from analytical tests a revised conceptual model is proposed. The new features added to the model should enhance its quality and explanatory value.

The collected data reveal that the responding Swedish companies engage in the sustainability perspectives in a considerable extent. According to the results of the study there is no or minor effect of company age and type of industry on the level of CSR. Company size, however, is found to be a significant determinant of CSR causing an U-shaped effect. This U-shaped effect of company size implies that the level of CSR activities decreases as a company grows from small to middle-sized but increases from middle-sized to large company.

Keywords: Corporate Social Responsibility, Sustainable Development, Stakeholder Theory, Legitimacy Theory, Triple Bottom Line, Sustainability Disclosure, CSR Activities
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1. Introduction

In this chapter we will define general concepts of CSR and issues related to sustainable development. Consequently, determinants of CSR and their influences on the level of CSR are outlined. Finally, the research gaps are identified leading towards the formulation of purpose of the study and research question.

1.1 Definitions of sustainable development concepts

Much debate is recently taking part around the sustainable development matter and the focus of firms on producing and operating in socially and environmental friendly manner. In order to proceed further in our study it is important to define and discuss the essential terms and concepts related to sustainable development. These concepts provide us with the underlying theoretical background required for the understanding of sustainability related issues. These concepts, however, are rather general and it is necessary to find the most appropriate definitions in order to comprehend the particular dimensions of sustainability which are thoroughly discussed in the theoretical framework.

1.1.1 Corporate Social Responsibility (CSR)

Along with the environmental awareness, the role of business in society has also been a matter of discussion. The increasing pressure of business on humanity accompanied with corporation scandals which occurred especially during the last two decades raised concerns among people around the world. Issues like pollution, waste, product quality, the rights of employees and the power of large corporations in general became the center of attention. Consequently, various stakeholders expect more responsible use of business power (Turker, 2008, p. 411). Hence, a concept whereby companies integrate social and environmental concerns in their operations and their interaction with their stakeholders on a voluntary base has arisen (Reverte, 2008, p. 351). This concept is defined as Corporate Social Responsibility (hereinafter only CSR). CSR provides a general framework to structure the responsible use of corporate power and social involvement (Turker, 2008, p. 411). There are many definitions of CSR though there is still no universal definition (Godfrey & Hatch, 2007).

An accurate definition for CSR is provided by Belz and Peattie (2012, p. 32) stating that “CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interactions with stakeholders on a voluntary base”. This definition seems to capture the importance of the balance between the three elements of sustainability (economic, social and environmental) but it gets unclear with the stakeholders interaction issue. Thereby, another definition could be more useful and is suggested by Aguinis (2011, p. 855): “context-specific organizational actions and policies that take into account stakeholders’ expectations and the triple bottom line of economic, social, and environmental performance.”

1.1.2 Triple bottom line concept

The triple bottom line definition of CSR involves corporate financial responsibility, corporate social responsibility and corporate environmental responsibility. The element of social responsibility refers to internal and external dimensions of CSR where the first dimension refers to employees rights, health and safety at work, the management of
natural resources and the environmental impacts of production, whereas the second dimension refers to local communities, business partners, suppliers, consumers, human rights and environmental concerns (Belz & Peattie, 2012, p. 33). The second feature suggests that social and environmental concerns are integrated into all business sectors and are a part of purchasing, operations, sales and marketing. This indicates that CSR is perceived as a set of policies and practices that are integrated into business operations and decision-making processes. Finally, the interaction with stakeholders is another element which indicates that the main point of stakeholder theory is that corporations are not simply managed in line with the interests of their shareholders, but that there are groups such as customers, employees, suppliers and environmental organizations that have a legitimate interest in the corporation as well (Belz & Peattie, 2012, p. 33).

As aside from the triple bottom line definition, Carroll (1979, p. 500, 1991, p. 283) provided an interesting four-part definition of CSR: “The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time”. Later Carroll and Shabana (2010) redefined the term discretionary as philanthropic. This definition has been successfully used for research purposes for over 25 years (Caroll & Shabana, 2010, p. 89) and we argue that it is the most positive and appropriate definition to be used in our study due to its effectiveness on CSR research and its relevancy to our study.

To conclude, CSR indicates that companies act in a responsible way dealing with a variety of social, environmental, and economic pressures when responding to the expectations of the various stakeholders with whom they interact, such as employees, shareholders, investors, consumers, public authorities, and non-governmental organizations (NGOs) (Reverte, 2008, p. 351).

1.1.3 CSR disclosures

In order to inform about the CSR activities, companies issue either annual reports which embed CSR information or separate social reports. A report can be considered to be a sustainability report if it is public and tells the reader how the company meets the corporate sustainability challenges (Schaltegger et al., 2003). It must contain qualitative and quantitative information on the extent to which the company has managed to improve its economic, environmental and social effectiveness and efficiency in the reporting period and integrate these aspects in a sustainability management system (Daub et al., 2003). At this point CSR disclosure takes place. Reporting on environmental and social matters was prevalent for several decades with further growth over the past decades (Deegan, 2002). Communication of an organization’s social and environmental impact is important and disclosing true and relevant information about corporate behavior can have benefits for stakeholders, organizations and society (Golob & Bartlett, 2007, p. 2). Reporting on the CSR activities of an organization forms an integral part of this discourse. Societal expectations about the business responsibility in society have been increased and the recent research on CSR disclosures shows that there has been development of a variety of instruments that aim at improving, evaluating and communicating socially responsible practices (Golob & Bartlett, 2007, p. 1). Thereby, CSR reports are perceived as a key tool for communication with stakeholders about an organization’s CSR activities. As such it forms a central charter for public relations in
communicating and creating mutual understanding, managing potential conflicts (Grunig, 1989) and in achieving legitimacy (Aldrich & Fiol, 1994).

### 1.2 Determinants of CSR

Many studies conducted in the field of sustainable development strived to find factors that have an influence on CSR activities. The research of Roberts (1992, p. 604) stated that company age, size, type of industry as control variables had been found significant determinants of CSR by prior studies. Moore (2001) found positive and significant effects of company age and size on CSR performance. Both studies followed stakeholder theory approach and confirmed the existence of statistically significant relation between age, type of industry as independent variables and CSR activities as dependent variable. Interestingly, the studies of Wiklund (1999) and Hossain and Reaz (2007) concluded that company age does not have an impact on CSR practices and is insignificant in explaining the level of CSR. The findings regarding the influence of company age on the level of CSR are in many studies inconsistent. On the other hand, studies that took into account company size (Moore, 2001; Udayasankar, 2008; Blombäck & Wigren, 2008; Reverte, 2009; Gallo & Christensen, 2011) and type of industry (Banerjee et al., 2003; Rahman & Widyasari, 2008; Sweeney & Coughlan, 2008; Reverte, 2009; Melo & Garrido-Morgado, 2012) agreed on the significant effects of both variables on the level of CSR activities. Moore (2001, p. 308) suggested that larger companies are associated with higher visibility resulting into higher pressure of stakeholders to get involved in CSR activities. Blombäck and Wigren (2008) and Gallo and Christensen (2011) argued that only large companies are able to fully incorporate CSR activities since they have the sufficient amount of resources required for involvement in CSR. The study of Banerjee et al. (2003) found type of industry being strongly correlated to the level of CSR. The authors motivated their findings saying that some industry types classified as “dirty” are more sensitive to the public concern related to CSR than “clean” industries (Banerjee et al., 2003, pp. 108-109).

It is therefore reasonable to expect that these three factors might influence the level of CSR activities. Moreover, we believe that these three aspects are easily quantifiable as independent variables and they do not represent sensitive information for surveyed companies which could become an obstacle for motivation of the companies from the sample to participate in our study.

### 1.3 Research gaps

According to Delai and Takahashi (2011, p. 467) “the sustainability measurement has not yet fully matured”. There is no common agreement on what to measure and how (Delai & Takahashi, 2011, p. 467). Despite the existence of various measurement methods, the majority of them have limitations. For instance, even one of the most important certifications, ISO 14001, fails to measure CSR since it does not show a company's social practice (Juscius & Snieksa, 2008, p. 40). Additionally, Portney (2008, p. 274) states that “empirical tests are hampered by the absence of a good measure of firms environmental performance”. Finally, Turker (2008, p. 415) confirmed this opinion by concluding that there is a lack of scales for measuring CSR. Although there is a variety of scales available many of them cannot be considered as adequate (Turker, 2008, p. 415). Thus, we have identified a research gap of existence of a universally
accepted CSR measurement scale which would be capable of comprehending of all aspects of sustainable development (financial, environmental and social aspects).

The second research gap is related to the determinants of CSR, namely company age, size and type of industry. Although many prior studies tested these determinants against the level of CSR there is still space for academic contribution in this area. According to Jenkins (2006, p. 254) there is a need for future research regarding different company sectors and sizes and their impact on CSR activities. It was highlighted by Sturdivant and Ginter (1977) that it is essential to take into account industry type of a firm when studying CSR and this theme was reinforced by Boutin-Dufrense and Savaria (2004, p. 57) who argued that industry type is more sensitive CSR factor due to the nature of its activities. Finally, Cottrill (1990, p. 723) pointed out that “any investigation of CSR that fails to incorporate industry level realities, particularly of an economic nature, will be fatally deficient”. Ramos et al. (2013, p. 326) suggested that beside company size and type of industry also other company categories should be taken into consideration. Thus, adding company age among the determinants of CSR in our study may be beneficial for the contribution of our study since the findings of prior studies regarding the effects of company age on CSR are in many cases contrary.

1.4 Purpose of study
The purpose of our study is in line with the research gaps identified in this chapter leading to the contribution to current academic literature. As we have identified a research gap of insufficiency in CSR measurement methods; the first purpose of our study is to develop a whole new scale for measuring the level of CSR. We have made an effort to develop a comprehensive CSR measurement scale that covers all aspects of CSR (as defined by TBL concept) and takes into consideration various types of CSR activities. Thus no essential dimensions of CSR will be omitted or neglected when evaluating a firm’s CSR performance and engagement in CSR activities.

The second purpose is the application of this scale and testing the influence of company age, size and type of industry on the level of engagement in CSR activities. The responding companies are divided in several categories so that possible patterns for each category can be separately observed. Based on the significance of differences between these categories we can draw conclusions regarding company age, size and type of industry and their effects on CSR activities.

1.5 Research question
The combination of development of a CSR measurement scale and its consequent application to test the existence of the effects of company age, size and type of industry on CSR activities resulted in formulation of the following research question:

1. Do company age, size and type of industry affect the level of CSR activities?

The research question in our study is very simple and general. Based on the literature review presented in the theoretical framework chapter, the research question will be supported by hypotheses constructed in line with prior research findings.
2. **Theoretical methodology**

In this chapter we will discuss the choice of our research area and research topic. We will explain the nature of different philosophical considerations and research approaches and discuss the selection of scientific methods relevant to our study. Lastly, we will enlighten our choice of theoretical background.

2.1 **Selection of research area**

With our thesis work we have decided to contribute in the field of sustainable development. Our study should fill the research gaps by developing a new measurement scale of the level of CSR and testing the influence of company age, size and type of industry on CSR. The main initiative of our decision of development a new CSR measurement scale was the study of Turker (2008, p. 415) which emphasized the lack of appropriate measurement tools in the area of CSR. There are many prior studies combined company age, size and type of industry as the control variables of CSR (Wiklund, 1999; Banerjee et al., 2003; Reverte, 2009; Gallo & Christensen, 2011). These studies became the driver of selection of the same CSR determinants in our study. Prior studies tested various combinations of CSR determinants in different national settings. As master students at the Umeå School of Business and Economics we have decided to conduct our study among Swedish companies. We believe that we will have better access to contact data of Swedish companies obtained from the University Library database. According to Wilson et al. (2007, p. 310) Nordic countries have the highest ranking among the most sustainable countries in the world. Thus, Sweden is a country that belongs to top ranking countries regarding the level of sustainable development. Therefore, we suppose that there is a considerably high level of awareness of sustainability issues among Swedish companies and it is easier to get in contact with knowledgeable responding parties. The fact that our participants and respondents are familiar with sustainability issues can be considered as a determinant of the successful conduct of our study.

2.2 **Philosophical considerations**

A step that precedes the actual conduct of research consists of choosing the appropriate strategies and considerations regarding the used procedures. In order to successfully convey a study the researchers should determine the scientific approach to be followed during the whole process of the study.

When conducting a research the researcher must choose which reasoning method he/she is going to apply. Bryman & Bell (2009, p. 11) describes deductive reasoning as a method where a hypothesis is drawn and this hypothesis is consequently applied for researchable entities. This deduced hypothesis must be converted into operational terms (Bryman & Bell, 2009, p. 11). This implies that the choice of theory and stating hypothesis precedes the data collection, or in other words the theoretical background along with the hypothesis are determinants of the data collection process (Bryman & Bell, 2009, p. 11). The gathered data are applied in the selected theoretical model which leads towards either confirmation or rejection of previously stated hypotheses. The last phase slightly diverges from the nature of deductive reasoning since it applies induction by inferring the results of study for the theory (Bryman & Bell, 2009, p. 12). All stages of deductive reasoning process are summarized in Figure 1.
An alternative approach to deductive method is inductive reasoning. While deduction uses theoretical knowledge to draw conclusions and presents the findings, induction is a reversed process where the observations lead towards formulation of the theory (Bryman & Bell, 2009, p. 14). The researchers using inductive approach analyze the data in order to formulate a theory based on this analysis (Bryman & Bell, 2009, p. 11). Inductive method does not test the theory but based on observations from the gathered data generates a new theory. This approach is traditionally applicable for qualitative studies while deductive reasoning is typically followed in case of quantitative studies (Bryman & Bell, 2009, p. 11).

We have decided to conduct a quantitative study where the theory is not constructed but based on the theoretical background about CSR we are testing the hypotheses and conclude the results. This type of study is typically associated with deductive approach and follows the steps of deduction. We have developed a research question supported by three hypotheses motivated by the theory and the findings of the prior studies at the first stage. The second stage consists of gathering the evidence, in our case it is primary data collection. This evidence helps us to draw a conclusion and answer to the research question and to confirm or reject the hypotheses. Our results are finally compared with the findings of prior studies as the last phase of deductive method.

2.2.1 Epistemological considerations
The key element of epistemological orientation is knowledge, its acceptability and perception (Bryman & Bell, 2009, p. 16; Saunders et al. 2012, p. 132). Researchers using epistemology question if knowledge and cognition can be adjusted and if it is rational to rely on this knowledge (Goldman, 1986, p. 3). Goldman (1986, p. 2) states that he perceives epistemology as “an evaluative, or normative, field, not a purely descriptive one”. This implies that epistemology is practically useful in studies that use normative, quantified data. Epistemology distinguishes three main epistemological positions: positivism, realism and interpretivism.

Positivism suggests that knowledge has a real basis and researchers are capable of measuring it. Researchers that apply positivistic view gather data related to an observable reality in order to observe patterns and causalities that can be subsequently
generalized according to Gill and Johnson (2010, cited in Saunders et al. 2012, p. 134). In the process of a positivistic study a hypothesis based on theoretical background is stated and relevant data are collected to test this hypothesis (Saunders et al. 2012, p. 134). This approach is typically associated with natural science studies (Bryman & Bell, 2009, p. 16; Saunders et al., 2012, p. 134). Bryman and Bell (2009, p. 17) see the main problem with positivism being more philosophical approach rather than scientific one while Saunders et al. (2012, p. 134-135) emphasize the problem of researchers to remain neutral and keep their studies free from “feelings”.

Realism, on the other hand, determines the reality as an uncontrollable aspect which cannot be influenced by the human mind (Saunders et al., 2012, p. 136). This approach is similar to positivism in terms of the assumption that the knowledge and scientific approach are two independent features (Saunders et al., 2012, p. 136). Bryman and Bell (2009, p. 18) differentiate two forms of realism; empirical realism and critical realism. Empirical realism assumes that if a reasonable research method is applied the reality can be observed (Bryman & Bell, 2009, p. 18). Critical realism claims that researchers can only capture the images that mirror the real world but the real world cannot be measured and observed directly (Saunders et al., 2012, p. 136).

The third epistemological position, interpretivism, provides an alternative view to positivistic approach. Interpretivism perceives humans as social actors and puts the focus on studying these social actors rather than other objects that do not play a role in the researched issue (Saunders et al., 2012, p. 137). The researchers that try to interpret the roles of social actors may observe findings of the researched phenomena by focusing on significantly influential actors.

We believe that CSR activities are in some extent tangible objects that can be observed and measured, quantified (for instance in monetary units) or simply reported. We also believe that we have sufficient background of knowledge about CSR, partially from our courses and partially from the academic sources, and therefore we can test the relationship between the extent of engagement in CSR activities and other factors. In our study we follow positivistic approach since we measure the level of engagement in various CSR activities and quantify it by using a measurement scale.

2.2.2 Ontological considerations

The nature of ontological methods is the perception of reality from the position of social actors or independently from external entities (Bryman & Bell, 2012, p. 22). Thus the reality is viewed from different positions depending on the person who describes this reality. There are two main ontological positions: objectivism and constructivism.

Objectivistic approach defines reality to be independent from social actors; these actors have only an external position and the social aspects cannot be influenced (Bryman & Bell, 2009, p. 22; Saunders et al., 2012, pp. 130 - 131). This view separates the social phenomena and the actors giving space for the objective observations (Bryman & Bell, 2012, p. 22). The social actors act in accordance with the cultural norms, standards and procedures without having a possibility to influence them (Bryman & Bell, 2012, p. 22). Those social entities who fail to follow the norms and duties given by a pre-determined organizational structure might be reprimanded (Bryman & Bell, 2012, p. 22).
Constructivism assumes an ongoing process of social interaction among different social actors (Bryman & Bell, 2009, p. 23; Saunders et al., 2012, p. 132). The social reality is thereby constructed by the social actors and besides this construction; the individual social actors interpret their view of reality (Bryman & Bell, 2009, p. 23; Saunders et al., 2012, p. 132). The role of researcher is to get a full understanding of details of events, motives and intentions of the social actors and interpret the view of reality (Saunders et al., 2012, p. 132). Saunders et al. (2012, p. 132) therefore emphasize the importance of focusing on both the social interactions as well as the varying interpretations of events and phenomena.

From the ontological standpoint we incline to objectivistic view of reality. In the context of CSR engagement we consider CSR activities as a part of objective reality and objective facts. This approach helps us to reveal the relationship between real entities and the level of CSR measures that are taken. This scientific perspective typically associated with quantitative studies assumes that social actors do not influence the objective view of reality. This provides us with objective observations. Based on our epistemological and ontological perspective we suggest that the most suitable method for our research is deductive reasoning.

2.3 Selection of theoretical background

We have conducted a screening of relevant academic material in order to develop our conceptual model to be tested. This material consists predominantly of a variety of academic articles and studies in the field of CSR and sustainable development. In order to refer to trustworthy sources we use the University Library Ebsco database to find the sources for development of our study. Moreover, if we consider a particular academic article to be a good source of information we also check the main literature that was used by the authors. Thus we can trace a new source relevant to our research.

There are many theoretical views on CSR activities from various theoretical standpoints. We have applied triple bottom line principle as the way of perceiving CSR. The TBL concept was also implied by Caroll and Shabana’s (2010) definition of CSR covering also philanthropic activities. Therefore, we have incorporated TBL aspects in our questionnaire and distinguished between environmental, social and financial aspects of CSR activities.

Prior studies also used corporate governance theories to find a support and motivation for their findings. In the CSR context, majority of researchers inclined towards stakeholder theory when conducting the studies (Moore, 2001; Jenkins, 2006; Sweeney & Coughlan, 2008; Reverte, 2009; Godos-Díez et al., 2011). Legitimacy theory was also taken into account when interpreting conclusions of CSR-oriented studies (Blombäck & Wigren, 2008; Reverte, 2009). We find these theories as a relevant motivation of CSR activities and we pay closer attention to these two theories.

Finally, we have selected particular types of CSR activities. As a theoretical background for the selection we have chosen the four dimensions of CSR identified in Perrini’s study (2004, p. 612). Consequently, we discuss the academic literature related to the CSR and particularly the findings of prior research regarding effects of company age, size and type of industry on the level of CSR activities. Based on the literature review we state the hypotheses reflecting our assumptions regarding the CSR determinants chosen in our study.
3. Theoretical framework

In this chapter we will discuss the theoretical background that became the basis for our study. In the first part, different theoretical views of CSR in the context of corporate governance are discussed. Second part presents a variety of components of CSR leading towards the development of a conceptual model. In the final phase, we construct hypotheses in line with the prior research which will guide us throughout the study.

3.1 CSR activities and corporate governance

There are different approaches towards CSR based on the variety of theories in corporate governance. Husted et al. (2006, p. 76) distinguish two motivations of a firm’s investment in CSR activities, namely altruistic and egoistic. The theory of the firm supporting the economic definition of firm states against the firm’s engagement in CSR activities. Thus, the firm behaves as an entity established for the purpose of profit maximization (Husted, 2006, p. 80). The wealth maximization of the third parties is therefore not the best interest of the firm.

An alternative to the theory of the firm is represented by stakeholder theory. According to this theory companies do not have social responsibility only towards shareholders but also towards other stakeholders (Doh, 2006, p. 54). Companies do not focus exclusively on profit maximization but also invest their money in CSR activities. Engagement in CSR helps firms to meet the needs of other stakeholders which can be considered as a condition of satisfying the needs of shareholders (Jamali, 2008, p. 217).

A number of theories which are referred to as system-oriented (Gray et al., 1995) managed to explain the CSR perspective including political economy, legitimacy, and stakeholder theories (Farook & Lanis, 2005). These theories propose that firms seek to legitimize and sustain their relationships in the broader social and political environment in which they operate (Farook & Lanis, 2005; Gray et al., 1995; Polonsky et al., 2002).

3.1.1 Legitimacy theory

Legitimacy is being indicated as the rationale for public relations (Boyd, 2000; Massey, 2001) and provides a theory to link public relations worldwide (van Ruler & Vercic, 2005; Vercic et al., 2001). Guthrie and Parker (1989, p. 344) indicate that legitimacy theory refers to the idea that companies’ disclosures depend on their environmental factors (economic, social and political) and that such disclosures legitimize the actions. The legitimacy theory provides a comprehensive perspective on CSR disclosure and sustainability in general; as it recognizes that businesses are bound by the “social contract” in which the firms agree to perform multiple socially desired actions in return of approval for their objectives and ultimately this will guarantee their continued existence (Brown & Deegan, 1998; Deegan, 2002; Guthrie & Parker, 1989). Furthermore, it is argued that a company needs to disclose a sufficient amount of information in order to reach an approval; the company needs to show information to society so that it can be determined whether or not the company is performing according to the “social contract”.

Gray et al. (1995) and Hooghiemstra (2000) argue that most insights into CSR disclosure originate from the application of this theory which posits that social and environmental disclosure is a way to legitimize a firm’s continued existence. Perrow (1970, pp. 97-101) discusses legitimacy in organizational context which can be
summarized as a generalized perception that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, value, beliefs and definitions. Additionally, Jennings and Zandbergen (1995) argue that the type of institutional pressure influences the rate at which sustainable development practices spread among firms.

Tilling (2004, p. 3) suggested that there are many different layers in legitimacy theory (as it can be seen in Figure 2). The institutional legitimacy theory (Kaplan & Ruland, 1991; Suchman, 1995, p. 370) deals with the way of how organizational structures (e.g. governments) get acceptance from society. Legitimacy at this level gives to the organizations meaning and making them seem natural (Kaplan & Ruland, 1991, pp. 370-371; Tilling, 2004). The organizational level is defined to be located below the institutional level. As explained by Tilling (2004), organizations aim to reach balance between what is seen as socially acceptable and their activities as an organization while at the same time arguing that when the balance is not achieved, then there is a threat to organization legitimacy (Tilling, 2004; Wood, 1991). If an organization fails to achieve a sufficient level of legitimacy, it can have quite negative consequences which could lead to complete inability to operate (Tilling, 2004).

Blombäck and Wigren (2008) attempted to find a relationship between CSR and firm size having the theoretical standpoint of legitimacy theory. They argued that the concept of CSR is “beyond firm size” and companies of all sizes can be involved in CSR activities (Blombäck & Wigren, 2008, p. 261). We agree with Blombäck and Wigren (2008, p. 261) at the point that particular types of industry (for example chemical industry) might depend on their capability of legitimizing their actions regardless of size. Hence, we believe that legitimacy theory might support the choice of type of industry as a determinant of CSR rather than age and size of company.

![Figure 2 – Layers of legitimacy theory (Tilling, 2004, p. 3)](image-url)
3.1.2 Stakeholder theory

According to Freeman (1984) stakeholder theory indicates that there is a wide range of groups in the social environment which a company can affect. At the same time these groups have legitimate claims on the organization due to concepts that have roots in agency theory. Additionally, stakeholders provide organizations with resources that they require to conduct their business such as capital, customers, employees and materials (Deegan, 2002, p. 294). This creates a bond between stakeholders and the organization where stakeholders provide a “license to operate” in return for the provision of socially acceptable actions (Dowling & Pfeffer, 1975; Guthrie & Parker, 1990; Suchman, 1995). This bond can be perceived as a form of “social contract”, like in legitimacy theory, which allows the organization to continue to operate (Deegan, 2002, p. 292).

The stakeholder theory considers the expectations and the impact of different stakeholder groups within society upon corporate disclosure policies (Reverte, 2008, p. 353). Reverte (2008, p. 353) concludes that the central idea which emerges from the stakeholder theory is that “corporate disclosure is a management tool for managing the informational needs of the various powerful stakeholder groups”. Hence, it is mandatory to identify and clarify who the different stakeholder groups are. Perrini (2005, p. 615) summarizes stakeholder-based categories in a table that can be seen in Appendix 1. The author includes eight different stakeholder groups each of them being connected with various CSR themes.

Although there are similarities between stakeholder and legitimacy theory, the two theories differ on the basis of fundamental assumptions (Reverte, 2008, p. 354). Woodward et al. (1996) indicate that both theories consider an organization to be part of a wider social system. Legitimacy theory, however, looks at society as a whole whereas stakeholder theory recognizes that some groups within the society are more powerful than others.

Roberts (1992) applied stakeholder theory on finding determinants of CSR disclosure. The author explained the positive and significant effect of company age found in the study in line with stakeholder theory approach. According to Roberts (1992, p. 605) companies’ history of involvement in CSR activities is increasing with growing age of company. Stakeholders’ expectations to sustain these activities are the main obstacle for their withdrawal (Roberts, 1992, p. 605). Godos-Díez et al. (2011, p. 541) strengthened this motivation by stating that companies who once adopted CSR activities might under the pressure of stakeholders to reinforce them. Based on stakeholder theory, we anticipate that older companies engage in CSR activities in larger extent.

Moore (2001) found strongly positive relationship between company size and sustainability performance. Large companies are associated with higher visibility and thus external pressure to involve in CSR activities (Moore, 2001, p. 308). Their reputation is more likely to suffer if they lack active CSR policy (Moore, 2001, p. 308). Engagement in CSR activities can become crucial for companies since some of them might affect the support of certain stakeholder groups (McWilliams, 2006, p. 3). Independent third parties that evaluate and provide rating of companies’ CSR performance can publish the information that can positively or negatively affect these companies, for example in form of boycotts from customers (Mohr & Webb, 2005, p. 143). We believe that larger companies are more visible and therefore face the pressure of various stakeholders groups to improve their CSR performance. Based on these
arguments supported by stakeholder theories we expect positive effect of company size on CSR performance.

3.2 Instruments of CSR

Due to multiple international corporate scandals, investors and regulators require greater regulation, increased disclosure, and stronger oversight (Rodriguez & LeMaster, 2007, p. 371). Additionally, society has expectations about the business responsibility and hence, reporting CSR activities through CSR disclosure became an important procedure for a vast amount of companies. A variety of instruments which aim at improving, evaluating and communicating CSR practices have been developed throughout years. Therefore we consider CSR reporting activities being a key aspect of CSR and CSR disclosure is the first sustainability perspective in our study. We have identified additional four CSR activities that we believe are relevant for evaluation of overall sustainability. These perspectives are CSR-oriented principles and codes of practice, management system certifications, sustainability rating indices and philanthropic activities.

A variety of prior researches tried to find the effects of company age, size and type of industry on CSR activities. The positive effect of company age on the level of engagement in CSR activities was observed in several studies (Roberts, 1992; Moore, 2001; Godos-Díez, 2011). The study of Gallo and Christensen (2011) found that larger companies in size tend to engage in CSR activities in greater extent due to the larger amounts of resources available. Udayasankar (2008) contradicts to these findings stating that medium-sized companies are involved in CSR activities in lesser extent than small and large companies. The study of Jenkins (2006, p. 247) found that companies of printing, manufacturing and engineering industry target their CSR activities more on environmental aspect while service and construction industry companies are more concerned about social aspects. Banerjee et al. (2003, p. 108) identified differences among different industry types regarding their involvement in CSR especially between “clean” and “dirty” industries. Wiklund (1999, p. 44) concluded that there are no significant effects of company age, size and type of industry on sustainability performance. The majority of prior academic literature found company age, size and type of industry as determinants of CSR. This motivates our choice of these factors being adequate and reasonable.

3.2.1 Sustainability reporting frameworks

Following the above discussion about sustainable development and stakeholders value, several companies have now turned their environmental reports into more comprehensive sustainability reports, including environmental, social and economic issues according to so called “triple bottom line” (TBL) accounting (Hedberg & Malmborg, 2003, p. 154). Hedberg and Malmborg (2003, p. 154) conclude that “the production of CSRs goes along with the development of an international CSR guideline, i.e. the Global Reporting Initiative (GRI) guideline”. Hedberg and Malmborg (2003, p. 154) based on empirical evidence from Swedish companies, have found out that corporate sustainability reports of Swedish companies are prepared in accordance with CSR guidelines developed by the Global Reporting Initiative (GRI). Their study concludes that companies produce sustainability reports in order to seek organizational
legitimacy; the main reason for GRI guidelines adoption is an expectation of increasing credibility of CSR activities; but also that GRI provides a pattern guiding companies how to design a sustainability report.

The section of GRI Performance Indicators is related to economic, environmental and social performance taking into consideration human rights, labor practices and decent work, society and product responsibility (Reverte, 2008, p. 358). Daub (2007, p. 80) provided an analytical GRI guideline overview which contributes to comprehend the GRI framework. Morhardt et al. (2002) suggests that the GRI Sustainability Reporting Guidelines 2000 are the most detailed, comprehensive, and prescriptive guidelines hitherto and to follow them meticulously would be a tremendous performance by any company. Daub (2007, p. 80) also expressed that the GRI guidelines, “though extensive and supporting the idea of standardized report content, do not require the company to fulfill or handle all topics”. This means that the companies are free to use the guidelines in whatever way they suit them. However, as Daub (2007, p. 82) continues, this can both be seen as the strengths as well as the weaknesses of the GRI guidelines. More precise he states: “Although, made to fit all types of companies, there is no telling what a report includes just by knowing that it orients on the GRI guidelines. In addition, the topics and indicators are written in a fairly general way, making the implementation for many companies difficult”.

The above mentioned statements recognize that although GRI guidelines are one of the most commonly used reporting guidelines, they are not without any limitations. Hence, we will proceed with another significant sustainability reporting framework, which is AA1000 (accountability 1000). AA1000 Accountability Principles are issued by the Institute of Social and Ethical AccountAbility and are CSR Management Systems Rating (MSR) which evaluate the adherence of the processes and management systems in the CSR context (Reverte, 2008, p. 357).

Additionally, we would like to discuss about one more sustainability reporting tool which can be applicable in our study, namely the Sustainable Balance Score Card (SBSC). Kaplan and Norton (1996) originally developed the Balance Score Card concept (BSC) in order to include intangible factors such as knowledge, skills and quality of processes, and not only financial performance measures. With its “balanced” approach, the BSC is an ideal tool for integrating social and environmental criteria (Hansen et al., 2010, p. 390).

Nikolaou and Tsalis (2013, p. 85) found out that food and beverages and telecommunication industries have contributed to more aspects in their SBSCs using GRI indicators than other industries that were mostly focusing on economic aspects. The results of Rahman and Widyasari study (2008, p. 33) showed that high profile industries (such as mining, petroleum, chemistry industry etc.) are more likely to have higher quality of CSR disclosure than low profile industries. This provides us with evidence that type of industry might be influential on CSR reporting activities and some types of industry might have enhanced CSR disclosure comparing to others.

We find company age and size also reasonable factors of sustainability reporting. Gallo and Christensen (2011, p. 337) found a positive correlation between company size and CSR reporting. The study of Reverte (2009, p. 361) confirmed that increasing company size positively affect the level of CSR disclosure. Roberts (1992, p. 606) found a significant positive correlation between company age and the level of CSR disclosure.
3.2.2 Principles and codes of practice

Principles and codes of practice can be defined as CSR standards which are normative and are based on universal values (Sacconi et al., 2003). The most prevalent are the UN (United Nations) Global Compact’s Ten Principles and the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinationals. There are values that are more suitable expressed in various UN conventions and agreements (Sacconi, 2003, p. 11). The development of such international codes of practice seeks to provide a globally acceptable uniform standard of reporting (Golob & Bartlett, 2007, p. 4).

The publication of OECD principles in 1999 was aimed at improving the corporate governance of firms (Hopkins, 2003, p. 7). The OECD report covers the rights of shareholders, their equitable treatment, the role of stakeholders in corporate governance, disclosure, transparency and the responsibilities of the board (Hopkins, 2003, p. 7). OECD principles indicate that “a key role for stakeholders is concerned with ensuring the flow of external capital to firms and that stakeholders are protected by law and have access to disclosure” as it is stated by Hopkins (2003, pp. 7-8).

UN Global compact principles are ten principles in total and are divided into four categories (human rights, labor standards, environment and anti-corruption) UN Global Compact Office (2010). As it is described by their blueprint, these principles are a helpful tool to encourage businesses worldwide to adopt sustainable and socially responsible policies and to report about their implementation, UN Global Compact Office (2010). The Global Compact, unlike the much broader OECD, provides a precise framework for businesses. Therefore, we argue that these principles and OECD guidelines along with two other codes of practice (Amnesty International Guidelines and WHO/UNICEF Global Code of Practice) that we have included into our survey can represent fundamentals of corporate codes of practice and can be adopted at the national level.

The study of Svensson et al. (2009) compared the adoption and communication of corporate codes of ethics in three countries. The study found significantly higher level of implementation of codes of ethics by companies operating within manufacturing industry in all three countries (Svensson et al., 2009, p. 394). While in Australia and Canada finance and insurance companies also adopted codes of ethics in larger extent in Sweden wholesale and retail industry proved to have a higher level of adoption among other industries (Svensson et al., 2009, p. 394). This supports our assumption that particular types of industries might more likely implement principles and codes of practice than other industries.

3.2.3 Management system certifications

There are literally hundreds of specialized system certifications. Sacconi et al. (2003, p. 4) state that some of them are pure process standards and some incorporate normative standards. Such an example is SA8000, a certificate that encourages organizations to develop and apply social practices that are exclusively acceptable at the workplace and are divided in nine areas: “Child labor, Forced labor, Health and safety, Freedom of association and collective bargaining, Discrimination, Disciplinary practices, Working hours, Compensation, Management systems”, IISD (2013).
Two of the most spread certifications are the ISO 9000 and ISO 14001 which we also believe are important to be mentioned in our study. ISO was developed by International Organization for Standardization, according to ISO (2007), which is a non-governmental, international organization based in Geneva. The aim of this standard is the development of a standard on worldwide basis that allows trade across borders and prevent trade barriers, ISO (2007). According to Quazi et al. (2001, p. 526), ISO establishes management system guidelines and aims at helping organizations to ensure compliance with customers, industry and/or regulations.

ISO 9000 provides a system of standards aiming at defining, establishing and maintaining an effective quality assurance system for manufacturing and service industries (Pokinska et al., 2002, p. 297). The last decade witnessed a significant growth and more than 150 countries adopted and recognized its importance in the quality management systems context (Pokinska et al., 2002, p. 297). All in all, ISO 9000 deals with the fundamentals of quality management systems (Gunnlaugsdottir, 2002, p. 41). ISO 14001 is perceived as the future development of ISO 9000 in order to improve environmental quality and according to Melnyk et al. (2003, p. 330) it can replace the EMS (environmental management systems) criteria which refer to local and not international standards. Quazi et al. (2001, p. 526) suggest that ISO 14000 meets the goal of sustainable development and environmental friendliness. ISO 14001 provides a standardized process where companies set up their own goals and these goals have to be followed and audited (Feldman, 2012, p. 70).

EU Eco-Management Audit Scheme (EMAS) is a similar management system certification as ISO certifications. Preite (1992, cited in Sacconi et al., 2003, p. 59) defines EMAS as “a management tool for companies and other organizations to evaluate report and improve their environmental performance”. Sacconi et al. (2003, p. 59) perceive EMAS and ISO 14001 as key elements when they are combined with the CSR disclosure process.

The research of Ramos et al. (2013) revealed that small and medium companies analyzed in the study were associated with poor environmental management systems. The authors explained their findings by stating that SMEs are not familiar with these practices which are typically used by large companies (Ramos et al., 2013, p. 326). We therefore expect the level of adoption of management system certifications to be lower for small and medium-sized companies compared to large companies.

Salomone’s study (2008) mainly focused on benefits and obstacles arising from implementation of certified management systems among Italian companies. Their sample was divided into several categories according to region, type of industry and size of company. The author concluded that sector (industry) had some effects on benefits and obstacles to implementation of management systems but company size proved to have the greatest influence (Salomone, 2008, p. 1805). We argue that benefits and obstacles of implementation of environmental management systems are closely connected with their actual adoption. Since company size and type of industry proved to have effects it is relevant to include these determinants as control variables in our study. Based on the findings of both studies we expect that company size will be the most influential factor for management system certification. Moreover, we suppose that company size will have positive influence as it was found in the study of Ramos et al. (2013).
3.2.4 Rating indices
A variety of rating indices in the context of sustainable development and CSR disclosure is also available. They can be defined as screenings and rankings. The rating indices provide basis for responsible investing and more importantly a method for comparing companies in the sustainable context (Golob & Bartlett, 2007, p. 4). Such indexes are for example Dow Jones Sustainability Index, FTSE4Good, EPI (Environmental Performance Index), ECPI (Ethical Index Euro) and GPI (Global Peace Index). The category of indices can be perceived as too selective though providing an opportunity to evaluate and compare the sustainable performance among companies across the global.

Only a little space in academic literature is dedicated to sustainability rating indices. We have not found any study comparing the use of sustainability rating indices against company age, size or type of industry. Since Perrini (2004, p. 614) identified sustainability indices as one of the dimensions of CSR we have decided to include them in our study. Thus, the results of our study might provide unique information regarding their use by Swedish companies.

3.2.5 Voluntary activities
According to the definition of CSR that we have emphasized in the introduction part stated by Carrol (1979, p. 500, 1991, p. 283), we believe that voluntary activities are an important part of sustainable development that companies should also take into consideration.

This definition identifies four categories of CSR: economic, legal, ethical and discretionary/philanthropic responsibilities. These responsibilities can be perceived as the expectations placed on the corporation by corporate stakeholders and society as a whole (Carrol & Shabana, 2010, p. 90). McGuire (1963, p. 144) argued saying: “The idea of social responsibilities supposes that the corporation has not only economic and legal obligations, but also certain responsibilities to society which extend beyond these obligations”. Carroll (1979; 1991) took this statement and enhanced it even more by adding the discretionary/philanthropic responsibilities. By doing so, a new perspective about the additional responsibilities of the corporation embodied in the ethical and discretionary/philanthropic responsibilities has arisen. This reflects a new, broader social contract between businesses and society (Caroll & Shabana, 2010, p. 90). Hence, we argue that corporate obligations should be extended beyond the economic and legal responsibilities and capture the whole essence of CSR which also refers to the ethical and philanthropic obligations towards society.

Jenkins (2006) conducted a study of CSR practices among various industry categories of SMEs in the UK. The results showed that all companies in the study were engaged in voluntary and philanthropic activities in different extents (Jenkins, 2006, p. 247). The researchers, however, did not specify more in detailed the differences they had found among various industries related to the engagement in voluntary and philanthropic activities. Our study may find possible effects of company age, size and type of industry on the extent of voluntary activities they are engaged in. This might be a contribution to the research in this field since we have experienced a lack of emphasis put on philanthropic activities in the CSR oriented research.
3.3 Prior research
There have already been attempts to develop a suitable measurement scale for CSR activities in prior studies. Researchers have tried to create a reasonable measurement scale that could effectively serve the measurement purposes of sustainability performance evaluation. The study of Reverte (2008) focused on finding the determinants of level of CSR disclosure activities. The authors used three CSR disclosure ratings to quantify the levels of CSR disclosures (Reverte, 2008, p. 357). These disclosure ratings took into consideration management systems, GRI and AA1000 reporting frameworks, New Economics Foundation (NEF) principles and generally accepted norms and recommendations (Reverte, 2008, p. 357). We argue that voluntary activities and sustainability indices and indicators are absent from this model. Another study conducted by Ramos et al. (2013) proposed a scale of sustainability performance evaluation based on the adoption of environmental management systems and reporting initiatives. This scale was used to find patterns of variation of sustainability performance among Portuguese companies of different sizes. The authors took only into consideration sustainability reporting frameworks and management systems omitting other aspects of CSR. The study of Turker (2009) developed a unique CSR measurement scale based on 42 items related to CSR activities. We believe that this scale is addressed to various stakeholders rather than particular initiatives. We suppose that there might arise difficulties regarding the comparison of results since this measurement method is not based on any generally accepted CSR initiative. Hubbard (2009) combines the use of Sustainable Balanced Scorecard and Organizational Sustainability Performance Index as a measurement tool of organizational sustainability performance. Delai and Takahashi (2011) developed a measurement system based on 8 sustainability initiatives. We argue that this measurement scale is not a relevant tool for those companies that adopt other initiatives than those included in the study. We therefore believe that each of the presented alternatives has its shortcomings and does not cover all the aspects of sustainable development.

3.4 Conceptual model
Although the current literature referring to CSR and sustainability in general is wide and significant it does not provide a certain pattern that an organization can follow in order to be characterized as sustainable. As we have clearly defined the existence of research gap characterized by the lack of CSR measurement techniques and their insufficiency our study is designed to contribute to the development of a comprehensive measurement method in combination with testing the influence of company age, size and type of industry on the level of CSR.

By examining a vast amount of theories and evaluating them, we have reached to a conclusion to develop our own scale for CSR activities measurement. For that purpose we provide a model based on dimensions of CSR defined by Perrini (2004, p. 614). Perrini (2004, p. 614) identifies four basic dimensions of CSR, namely sustainability reporting frameworks, principles and codes of practice, management system certifications and sustainability rating indices. Perrini (2004) summarizes these perspectives in a comprehensive table along with particular items that belong to each of the perspectives, see Appendix 2. We see that voluntary and philanthropic activities are absent among these perspectives. Therefore, we have decided to enhance our conceptual model with this fifth perspective. Caroll and Shabana (2010, p. 90) argue that philanthropic responsibilities are essential for CSR. Thereby, we have decided to fill in
the gap in CSR performance assessment by including also voluntary activities among other conventional measures.

We believe that the above mentioned CSR perspectives can be used as reasonable indicators in order to measure the overall sustainability performance. Companies can improve their sustainability performance and thus contribute to overall sustainable development by active engagement in each of these five perspectives. We will also test if firm-specific factors as age of company, size of company and type of industry affect particular dimensions of CSR and thus the overall sustainable development. This will help us to find the answers to our research question stated in the previous chapter. The conceptual model we use to assess the sustainability performance of our respondents and to examine relationship between the sustainability perspectives and the independent variables is displayed in Figure 3.

![Conceptual model](image-url)

**Figure 3 – Conceptual model**
3.5 Hypotheses

Using the above-mentioned conceptual model enables us to find an answer to our research question. Based on the literature review about various types of CSR activities in connection with the determinants of CSR we have constructed three hypotheses emerging from the research question. These hypothetical statements are supported by the results of prior academic research in the CSR area which are summarized in the following paragraphs.

According to Roberts´ study (1992) there is a positive and significant effect of company age on CSR disclosure. The author of study supported this finding arguing that higher company age is associated with its longer history of CSR involvement and reputation (Roberts, 1992, p. 605). Godos-Díez et al. (2011, p. 541) confirmed this findings adding that it is more difficult to withdraw CSR actions once they have been implemented by a company due to stakeholder expectations. Both studies agreed on the positive effect of company age on the level of CSR. We assume that age of company has a positive impact on the level of engagement in CSR activities and state the following null hypothesis in negation (alternative hypothesis):

H1. Company age has a significant positive effect on the level of CSR activities.

Moore (2001, p. 308) concluded based on the results of his study that “the strong positive association between firm size and social performance is statistically significant”. His study showed that company size has even stronger influence than company age but both factors have positive effects. Moore’s study (2001) regarding the effect of company size is consistent with the findings of Gallo and Christensen (2011) and Reverte (2009). According to Ramos et al. (2013, pp. 317, 326), the analyzed SMEs had a poor environmental management systems and environmental performance evaluation which are “almost exclusively used as a tool in large companies”. These studies support our assumption that larger companies in size tent to engage in CSR activities to a greater extent, leading towards formulation of the second hypothesis:

H2. Company size has a significant positive effect on the level of CSR activities.

The study of Jenkins (2006, p. 253) concluded based on the observations that companies of different industry types are engaged in different types of CSR activities. These differences are caused by sectoral differences that should also be taken into consideration (Jenkins, 2006, p. 253). Other academic sources also found type of industry to be one of the determinants of CSR (Banerjee, 1992) or particular types of CSR activities (Rahman & Widyasari, 2008; Svensson, 2009; Nikolaou & Tsalis, 2013). We therefore expect type of industry to have an impact on CSR activities and state our final hypothesis:

H3. Company type of industry has a significant effect on the level of CSR activities.
4. Practical methodology

In this chapter we will present the methods used for data collection and survey construction. We will also enlighten the motivation of our respondents to participate and summarize errors. Additionally, ethical considerations along with analysis methods that have been applied are more detailed discussed.

4.1 Data collection

For the purpose of our study the collection of primary data is the most relevant. This is due to the fact that the aspects we measure are not available in form of secondary data collection. Bryman and Bell (2009, p. 325) define secondary data as those obtained by other researchers or organizations. There is no database available that could provide us with detailed information about all the measures that companies take within their CSR policies. It is highly probable that secondary data are collected for a specific purpose which might not be completely aligned with our purpose (Bryman & Bell, 2009, p. 336). Primary data are defined as the data primarily collected for the purpose of a particular study (Saunders et al., 2012, p. 678). The collection of primary data is therefore the only possibility to obtain appropriate and up-to-date information regarding CSR actions.

One way of collecting primary data is the observations. Saunders et al. (2012, p. 340) describe observation as a process consisting of several fundamental parts, namely “systematic observation, recording, description, analysis and interpretation”. There are two types of observations, participant being applicable in qualitative studies and structured which is suitable for quantitative studies (Saunders et al., 2012, p. 340). The second type of collection method is the research interview. Interview is a meaningful conversation between researcher and one or several participants that enables interviewer to gain information necessary for the research purpose (Saunders, 2012, p. 372). The last means of primary data collection is via questionnaires.

4.1.1 Collection method

We find self-completion survey to be the most suitable way of primary data collection for our study. Bryman and Bell (2009, p. 241) provide a list of advantages of self-completion survey mentioning that this type of data collection method is both cheaper and more convenient for researchers. This type of survey can be conducted as a postal survey or electronic-based survey. Due to time constraints and limited resources we have decided to distribute our questionnaires in electronic form rather than by post. We believe that electronic-based questionnaire is more convenient not only for us but also for our respondents because it is much less time consuming and takes less effort for them to respond comparing to postal survey. Another advantage arising from the use of electronic-base questionnaire is the high level of assurance that the right person has answered the questions (Saunders et al., 2012, p. 421). There are, however, limitations of self-completion surveys comparing to interviews such as lack of control of who responds, not-complete replies, low response rate (Bryman & Bell, 2009, p. 243). The most substantial issue related to our questionnaire we have encountered is the low response rate. In order to increase the response rate we have taken several measures.
4.1.2 Questionnaire construction

Saunders et al. (2012, p. 431) argue that replications of existing studies may require adoption of the questionnaires used in these studies. This results in the possibility of comparing the two studies (Bryman & Bell, 2009, p. 274). Our study, however, is unique since no previous research has implemented a similar conceptual model. This results in impossibility of adoption of an existed survey developed by other researchers. We have undertaken this challenge and constructed the questionnaire following our conceptual model. The questionnaire consists of a total of 23 closed questions; the majority of questions being multiple choice questions with the possibility of adding an answer in the optional field. The first three questions help us to identify the company and assign it to the corresponding pool according to age of the company, its size and type of industry. The remaining questions are equally distributed among our CSR perspectives giving four questions related to each of the perspectives. We have decided to keep the same pattern of asking about the particular perspectives. We believe that it is easier for respondents to get familiar with the survey when the questions are asked in a similar manner. The first question is therefore always dedicated to adoption of the measure or initiative. The second question identifies the concerned measure or initiative. The third and fourth question is addressed to the time period of adoption and the relevant area as defined by the triple bottom line concept.

In order to avoid the risk that the questionnaire discourages our respondents from participation we have tried to construct a survey that is short and therefore less time consuming. The questionnaire does not include any open questions and consists exclusively of multiple choice questions. The “list questions”, where respondents are supposed to choose one or more options that are applicable, are provided with an option to add and specify the answer. We have decided to add this option in order to eliminate the risk that some significant items are absent from the possibilities.

4.1.3 Sampling method

In order to determine an appropriate sampling technique it is necessary to identify the population and the sample in the context of our study. Bryman and Bell (2009, p. 182) define the population as “the universe of units from which the sample is to be selected”. In order to find the most suitable companies for our study we used the Amadeus online database obtained from Umeå University database library. This database provided us with a vast amount of information about a number of Swedish companies, including contacts and type of industries. We have chosen 1624 companies based in Sweden to be our population. We believe that we have a good access to Swedish companies and that we do not need to overcome the language barriers which could hinder us from obtaining the data. That is one of the reasons why we have decided to examine only Swedish companies. Researchers are unlikely able to collect the data from the whole population (Bryman & Bell, 2009, p. 180). Therefore we have chosen a sample of companies, a part of the population that is to be examined (Bryman & Bell, 2009, p. 182), which we believe is adequate to represent the whole population.

We have applied random, also known as simple probability sampling method. This method can be considered as representative since the units from the population are chosen randomly preventing the sample being biased (Saunders et al., 2012, p. 273). The questionnaire was sent to the total of 706 e-mail addresses giving us the sample size of 706 companies with confidence level of 43.5%.
4.2 Accessibility
Amadeus database provided us, among others, with contact information of the selected companies. Hence, we used internet-mediated access, which involves the use of computing technology to gain virtual access to administer our survey (Saunders et al., 2012, p. 210). Subsequently, we started to contact the selected companies through emails. The difficulty that we encountered was the gathering of personal emails, since the majority of them were general. We expect the possibility of receiving an answer to be higher when questionnaires are sent to personal e-mails rather than general ones.

We received 66 eligible responses which can be translated into the total response rate of 9.3%. However, 80 e-mails were not delivered implying the active response rate of 10.5% according to the formula proposed by Neuman (2005, cited in Saunders et al., 2012, p. 268). The response rate in case of internet-based questionnaire is likely to be 11% or lower according to Saunders et al. (2012, p. 421). Hence, we were aware of a possible low response rate. However, we believe that the amount of primary data that has been collected is sufficient for our study. We argue that if the number of respondents was higher it would add more credibility to our research.

4.3 Motivation and errors
In order to give a motive to our sampling companies to participate, we also translated our survey to Swedish language. This gave them possibility to choose the language they preferred. This proved to be effective in our case since 64 out of 66 responses were in Swedish. The second measure for increasing the response rate is a reminder about the survey that was sent to our respondents. Unfortunately, we were not able to send a second reminder due to time constraints. Sending reminders was not quite successful since the number of additional answers was not so significant comparing to the sample size. The survey was sent out with an attached cover letter informing our respondents about the purpose of the survey, conditions and a brief description of our study. Moreover, on several occasions we have received questions from our respondents regarding further information about our study and the questionnaire. We have replied to these questions and provided our respondents with additional information. We believe that a transparent approach can have a positive impact on the willingness of participants to reply. The reasons for the low response rate maybe occurred because members of the sample refused to participate and cooperate or for some reason they could not supply the required data (either for matters of privacy or impossibility to recognize the included material) (Bryman & Bell, 2007, p. 182). In general, the motivation to answer the online survey proved to be low.

Out of 66 responses we received three surveys that were not completely answered and there was no empty survey submitted. This could have occurred due to the fact that the survey software we used does not record empty replies. Hence, we believe that the proportion of not fully answered surveys is relatively low. A possible reason for the partially responded surveys could be the fact that respondents may have not met the research requirements and hence it would be ineligible to respond (Saunders et al., 2012, p. 268).
4.4 Ethical considerations

When it comes to ethical considerations, Diener & Crandall (1978, p. 7) describe four areas of ethical issues which might arise during a research: “harm to participants, lack of informed consent, invasion of privacy and deception”. Bryman and Bell (2007, p. 133) suggest that harm to participants refers to “physical harm, harm to career prospects and future employment, harm to participants self-esteem, stress and inducing subjects to perform reprehensible acts”. Our study does not require any personal data and guarantees anonymity for all the participants. This means that neither the participating companies nor the personnel have to specify their firm name or reveal their identity. For this reason we do not believe that there is any potential risk of harm.

Lack of informed consent principle suggests that the participants should be given an amount of information in order to decide whether or not they are willing to participate (Bryman & Bell, 2007, p. 137; Hair, Jr. et al., 2007, p. 68). To overcome this problem, we disclosed an honest text available to the responding companies informing them about our research topic and goals. After reading the text, the companies could decide whether or not they are willing to participate in the survey.

Invasion of privacy deals with the privacy of the respondents (Bryman & Bell, 2007, p.139; Hair, Jr. et al., 2007, p. 68). Privacy is closely connected with the concept of informed consent (Bryman & Bell, 2007, p. 139). Depending on its extent the respondents will acknowledge that the right of privacy is submitted since the informed consent provides information included in the cover letter. Hence, the content of the cover letter must be detailed and understandable (Bryman & Bell, 2007, p. 140). As stated before, we assured anonymity and additionally we do not ask for any personal or sensitive information. Furthermore through our information letter the companies are well informed that it is their decision if they want to respond to our survey or not. Thus any kind of invasion of privacy has been avoided.

Lastly, deception occurs when researchers present their work as something else than what it is (Bryman & Bell, 2007, p.141). The difference from lack of informed consent is that the researcher uses falsehoods about the purpose of the study or just withholds information to generate better results (Bryman & Bell, 2007). For that purpose we disclose all the information about our study available to the companies, as stated before. We explain what the purpose of our study is and the reason why we are conducting it.

Aside from the aforementioned general ethical considerations, we also took into account the considerations that are presented in internet research. Ethical issues that arise in this context are related to the vast array of venues in which these new forms of communication and possibilities occur (emails in our case) (Bryman & Bell, 2007, p. 683). Shiu et al. (2009, p. 234) point out that ethical concerns are raised by the leading questions which can be posted in an unethical way like putting words in the respondents mouth (e.g. why do you think your products are highly sustainable?). In our survey we do not try to affect the respondents in any way since it is constructed in a purely quantitative way trying only to measure or quantifying the aspects. We do not include any types of such questions which we believe can more likely occur in qualitative researches. Our survey is designed to give the participants possibility of choosing options that are applicable for their situations.

Furthermore, we do not demand any company or employee names and hence the respondents do not disclose private, confidential or in any way sensitive information.
which is more probable to occur in interviews (Dale et al., 1988, p. 57). Thereby, we agree with Dale et al. (1988, p. 57) arguing that the usage of survey means less ethical issues in comparison with other methods. In conclusion, we believe that we have made efforts to act in an ethical way and we have engaged in an honest communication with the respondents.

4.5 Data analysis
The survey that we conducted was sent out on the 31st of March 2014 to the sampled companies. We also sent out one reminder on the 8th of April and the survey was closed down on the 16th of April. We used SPSS software to analyze the obtained data. Before the analysis took place, we coded the responses into an Excel worksheet. After this we exported coded results into SPSS program. This program helped us to test the importance of the attributes that affect sustainable development.

4.5.1 Evaluation of collected data
It is important for researchers to choose a correct statistical method that not only serves the purpose of analysis but also match the type of data/variables analyzed. The data obtained from our questionnaire are mostly transformed into ordinal categorical variables. We have identified types of variables used in our study according to the classification of data by Saunders et al. (2003, p. 357). The questions regarding the implementation time and the number of triple-bottom line aspects covered by the particular sustainability perspectives are split into several ranked categories. Thus the categories in case of implementation time can be ranked from 1 to 3 years; 4 to 9 years until 10 years or more and in case of the number of TBL aspects can be ranked from 1 aspect; 2 aspects until 3 aspects. The responses to the first questions related to actual implementation of the sustainability perspectives are in the form of nominal variables. These variables take on values 0 and 1 for responses No and Yes. Finally, the set of second questions (categories of particular initiatives adopted) cannot be considered as ranked categorical variables but descriptive categorical variables. Therefore, these questions are not analyzed and only the frequencies of adoption of particular initiatives are discussed. The data obtained from the survey have considerably limited our choice of statistical methods. The limitations arise from the type of variables (ordinal and nominal), low number of responses caused by low response rate, unequal distribution among different categories etc.

4.5.2 Choice of statistical methods
Ordinal data can be processed, among others, by analysis of variance using correlations, slopes, means etc. (Agresti, 2010, p. 3). A common way to present the results is using the two-way contingency tables (cross-tabulation). These tables can combine the observations of ordinal dependent variables followed by the corresponding ordinal independent variables (Agresti, 2010, p. 13). If the variables are categorical; “a contingency table can display the frequencies of observations for the various combinations of levels of the variables” (Agresti, 2010, p. 13). Another analytical technique to compare categorical distribution applicable for the ordinary data is Pearson chi-squared test of independence (Svensson, 2001, p. 48; Agresti, 2010, p. 3). “Some researchers routinely apply such methods to nominal and ordinal data alike because they
are both categorical‖ (Agresti, 2010, p. 3). “Appropriate measure of association, when at least one set of data is ordinal, is the Spearman rank-order correlation coefficient” (Svensson, 2001, p. 48). Unlike Pearson coefficient, Spearman coefficient is applicable for the data that are categorical (ranked) and not quantifiable (continuous or discrete) (Saunders et al., 2003, p. 357).

Based on the discussion above we have decided to apply the mentioned statistical methods in our analysis. At first, we will analyze the categorical distribution of responses. Consequently we will compute the level of association by using Spearman correlation coefficient. Contingency tables will display the distribution of responses according to various categories of company age, size and type of industry. Finally, Pearson chi-squared test of independence will be conducted in order to reveal which combinations of two variables are statistically significant.

4.5.3 Descriptive statistics and correlation coefficient
We retrieved descriptive statistics on our data from SPSS software which enabled us to describe our variables numerically (Saunders et al., 2012, p. 502). We could additionally observe how many respondents chose each of the alternative options (Shiu et al., 2009, p. 514). Spearman correlation coefficient has been used to assess the strength of the relationship between two ranked variables (Saunders et al., 2003, p. 363) and enabling the quantification of the strength of the linear relationship between those variables (Saunders et al., 2012, p. 677). “A correlation coefficient […] takes on any value between +1 and -1, a value of +1 represents a perfect positive correlation and […] a value of -1 represents a perfect negative correlation” as stated by Saunders et al. (2012, p. 521). Furthermore, a value of 0 means that the variables are perfectly independent (Saunders et al., 2012, p. 521). Although Spearman and Pearson correlation coefficient use different formulas for calculation, their interpretations are in the same way (Saunders et al., 2003, p. 364).

4.5.4 Contingency table (Cross-tabulation)
According to Saunders et al. (2012, p. 498) the best method of finding specific data values is plotting a table known as contingency table or cross-tabulation. “Contingency table is a technique for summarizing data from two or more variables so that specific values can be read” as defined by Saunders et al. (2012, p. 668). It categorizes the number of respondents who answered to two or more variables in a survey (Shiu et al., 2009, p. 512). This method is useful for us because it helps us to study relationships between variables (relationship between age, size, type of industry and the level of sustainable development in our case) and its purpose is to determine if the responses differ for a certain variable (Shiu et al., 2009, p. 512).

4.5.5 Chi-squared test
Chi-squared test reveals the likelihood that the data in a contingency table are associated (Saunders et al., 2003, p. 358). In other words, this indicates the probability that the relations occurred by chance alone. If there is a probability of 5% ($p = 0.05$) then 95% of the relationship between two variables could not have occurred just by random factors (Saunders et al., 2003, p. 356).
5. Empirical findings

This chapter shows the results obtained from the collected data using a variety of analytical techniques. The findings from each analytical method conducted are summarized in comprehensive tables or graphs. This chapter provides a background for the result interpretations covered by the following chapter.

5.1 Categorical distribution

We have tested our results of the level of sustainable development against the three criteria, namely the age of the company, its size and industry. We have divided our respondents into several categories among each criterion to discover a possible relationship between a categorical group of respondents and the level of sustainable development. The first classification, company age, distinguishes four categories and all 66 respondents were classified in this aspect. The first two groups, companies that are less than 3 years old and companies older than 3 years but not older than 10 years, have both 1.5% representation among our respondents. Companies with age between 10 and 20 years have 16.7% share of the total number of respondents and the companies 20 years old or more have the major representation of 80.3%.

The second question in our questionnaire identifies company size. We have followed the division of companies according to EU legislation defining a micro company as a company with fewer than 10 employees, small company as a company employing more than 10 but less than 50 people and medium company as a company with more than 50 but less than 250 employees (EU, 2007). We classified a company employing 250 and more people as a large company. A total of 63 participating companies responded to this question whereof 14.3% were small companies, 31.7% were medium-sized companies and 54.0% of the respondents were large companies. We have not received any reply from micro-sized companies. Figure 4 displays the distribution of the responding companies according to their size.

![Figure 4 - Distribution of companies' size](image-url)
The third question concerning the industry helped us to categorize our respondents within various industries. This question was answered by 61 respondents and provided default options which we believed that would have a significant representation. We have, however, received too few replies from companies operating within forestry and mining industry and therefore we have decided to add 3 additional categories that had a significant representation. Finally we have divided our respondents in 6 groups, namely energy (14.8%), manufacturing (16.4%), food and beverages (9.8%), real estates (14.8%) and service industry (11.5%). The last group consisting of companies operating within other than above mentioned industry is labeled as other (32.8%). A graphical distribution of companies according to industry can be seen in Figure 5.
A summarizing frequency table showing the actual distribution of all the responding companies according to different categories of company age, size and type of industry is disclosed in Appendix 4. In order to see the distribution of companies of different size among the selected industries we have used cross-tabulation analysis technique in SPSS as displayed in Figure 6. The majority of companies operating within energy industry are small companies while large companies have the smallest share. Manufacturing industry has rather equal distribution between medium-sized and large companies. Real estates and food and beverages industry have both equal distributions of 4 medium-sized companies being the major group. Large companies have significantly high distribution among service industry and other industries.

5.2 Spearman Correlation

The results of Spearman rank correlation test are displayed in the Table 1 below. The correlation coefficients were computed based on the replies to the first questions related to adoption of particular perspectives. As the Table 1 shows, the strength of the relationships varies among the sustainability perspectives and the three factors (company age, size and type of industry) which can be statistically significant at 0.01 or 0.05 significance level. Both control variables, company age and type of industry, do not have a statistically significant effect on any of the sustainability perspectives (dependent variables). Size of company, on the other hand, have two statistically significant correlations both at 0.01 level.

Table 1: Spearman’s correlation coefficients

<table>
<thead>
<tr>
<th>Determinant/Perspective</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of company (1)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of company (2)</td>
<td>-.137</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of industry (3)</td>
<td>-.115</td>
<td>.310*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability reporting frameworks (4)</td>
<td>-.112</td>
<td>.607**</td>
<td>.196</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principles and codes of practice (5)</td>
<td>-.134</td>
<td>.425***</td>
<td>.349</td>
<td>.409**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management system certifications (6)</td>
<td>.076</td>
<td>.177</td>
<td>.175</td>
<td>.059</td>
<td>.073</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability rating indices (7)</td>
<td>-.102</td>
<td>.248</td>
<td>.161</td>
<td>.303</td>
<td>.257</td>
<td>.071</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Voluntary and philanthropic activities (8)</td>
<td>.001</td>
<td>.208</td>
<td>-.115</td>
<td>.454</td>
<td>.165</td>
<td>.120</td>
<td>.242</td>
<td>1</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
There is a strong positive relationship between company size and adoption of sustainability reporting frameworks. Correlation coefficient of +0.607 is close to +0.7 which is according to Saunders et al. (2003, p. 363) assigned to the value of strong positive correlation coefficient. A weak positive correlation is observed between company age and adoption of principles and codes of practice (+0.425). These results imply that increasing company size positively affect its tendency to adopt sustainability reporting frameworks and principles and codes of practice.

Two other statistically significant relationships are identified between two control variables or between two dependent variables. Thus, company size has a weak positive effect on type of industry at 0.01 level of statistical significance. In case of correlation between two dependent variables (two nominal variables) the condition of at least one variable being ordinal (Svensson, 2001, p. 48) is violated and we therefore do not interpret these results.

5.3 Adoption of the sustainability perspectives

In this section we analyze the responses to the first set of questions related to actual adoption of the sustainability perspectives. The answers are compared against different categories of company ages, sizes and types of industry. The frequency tables of answers to the first questions obtained from all responding companies to each of the sustainability perspectives are disclosed in Appendix 5.

Age

In order to find out a relationship between age of company and the five sustainability perspectives and consequently the overall sustainability performance we have conducted a statistical analysis. This analysis tests frequencies of occurrence of positive and negative answers among different age categories of the responding companies. We have analyzed the first question of each sustainability perspective which reveals if a particular company is or is not involved in this perspective.

Table 2 displays distribution of answers regarding the companies’ engagement in sustainability perspectives among various age categories. Number of responses in the second column indicates how many companies have positively or negatively answered to each question. This excludes those companies who have skipped the question.

<table>
<thead>
<tr>
<th>Age</th>
<th>No of resp.</th>
<th>3 years or less</th>
<th>4 to 9 years</th>
<th>10 to 19 years</th>
<th>20 years or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rep.</td>
<td>66</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cod.</td>
<td>63</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cer.</td>
<td>64</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ind.</td>
<td>62</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Vol.</td>
<td>64</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

These results have shown that the majority of responding companies within every age category adopted sustainability codes of practice, had a certified management system and were engaged in voluntary and philanthropic activities. An interesting observation
is the fact that the adoption of sustainability rating indices is generally at the lowest level among the remaining four sustainability perspectives.

Due to the insufficient representation of responding companies whose age is 3 years or less and 4 to 9 years (both being represented by a single company) we have decided to exclude these categories from further analysis. Table 3 shows valid percent of involvement in each sustainability perspective among companies whose age is between 10 and 19 years and 20 years or more. Valid percent implies that only the number of companies who answered to the concerned question is taken into account not the total number of all participants. According to the results, the younger companies tend to adopt sustainability reporting frameworks and principles and codes of practice in a larger extent comparing to the older companies. Older companies, on the other hand, are more concerned about management system certification and voluntary activities. Sustainability rating indices are applied by 10% of the respondents in both categories.

Table 3: Frequency – Age and sustainability perspectives

<table>
<thead>
<tr>
<th>Age</th>
<th>Reporting frameworks</th>
<th>Codes of practice</th>
<th>Management sys.</th>
<th>Rating indices</th>
<th>Voluntary activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 19 years</td>
<td>45.45%</td>
<td>72.72%</td>
<td>63.63%</td>
<td>10.00%</td>
<td>63.63%</td>
</tr>
<tr>
<td>20 years or more</td>
<td>41.51%</td>
<td>62.00%</td>
<td>78.43%</td>
<td>10.00%</td>
<td>70.59%</td>
</tr>
</tbody>
</table>

Table 4 below shows mean values of number of positive replies for adoption of all 5 sustainability perspectives. In other words, each company has been assigned a sustainability score by a number of positive/yes responses to the questions regarding actual implementation of sustainability perspectives. Consequently, the mean value and the value of standard deviation have been calculated for each category. According to Table 4 a company of age between 10 and 19 years answered positively to the first questions in average 2.5455 times. A slightly lower number of positive responses can be observed for older companies (2.4717). This implies that the responding companies are in average involved in more than two sustainability perspectives. The lower value of standard deviation for companies older than 19 years indicates that the number of positive responses is more concentrated around the mean value comparing to younger companies.

Table 4: Means - Age and sustainability perspectives adoption

<table>
<thead>
<tr>
<th>Age</th>
<th>Sustainability score</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 years or less</td>
<td>Mean</td>
<td>5,0000</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>4 to 9 years</td>
<td>Mean</td>
<td>4,0000</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>10 to 19 years</td>
<td>Mean</td>
<td>2,5455</td>
<td>11</td>
<td>1,43970</td>
</tr>
<tr>
<td>20 years and more</td>
<td>Mean</td>
<td>2,4717</td>
<td>53</td>
<td>1,38124</td>
</tr>
<tr>
<td>Total</td>
<td>Mean</td>
<td>2,5455</td>
<td>66</td>
<td>1,40528</td>
</tr>
</tbody>
</table>
Size

Similarly to age of company, the responding companies were divided into several categories according to their size. Since there was not any company classified as micro in size the responses were analyzed for the three remaining categories, namely small, medium and large companies. Table 5 shows the distribution of responses according to different company sizes. The results show that the vast majority of large companies have positively answered to the first questions related to the actual implementation of the sustainability perspectives. The only exception is sustainability rating indices which have been adopted only by the total of 7 companies.

Table 5: Cross-tabulation – Size and sustainability perspectives

<table>
<thead>
<tr>
<th>Size</th>
<th>No of resp.</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Rep.</td>
<td>63</td>
<td>1</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Cod.</td>
<td>60</td>
<td>3</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Cer.</td>
<td>61</td>
<td>7</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Ind.</td>
<td>59</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Vol.</td>
<td>61</td>
<td>6</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 6 displays valid percent of different company sizes that positively answered to the first questions. According to the results, more than 50% of the large companies are involved in the sustainability perspectives, except for sustainability rating indices. The large companies have also better results in all 5 sustainability perspectives comparing to small- and medium-sized companies. Surprisingly, small companies showed better sustainability performance in 3 out of 5 sustainability perspectives when compared to the medium-sized companies. A possible reason for this might be the low representation of small companies (the total of 9 small-sized firms) in the group of responding enterprises.

Table 6: Frequency – Size and sustainability perspectives

<table>
<thead>
<tr>
<th>Size</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting frameworks</td>
<td>11.11%</td>
<td>10.00%</td>
<td>73.53%</td>
</tr>
<tr>
<td>Codes of practice</td>
<td>33.33%</td>
<td>46.06%</td>
<td>82.35%</td>
</tr>
<tr>
<td>Management sys. Certifications</td>
<td>77.78%</td>
<td>68.42%</td>
<td>87.88%</td>
</tr>
<tr>
<td>Rating indices</td>
<td>0.00%</td>
<td>5.26%</td>
<td>19.35%</td>
</tr>
<tr>
<td>Voluntary activities</td>
<td>66.67%</td>
<td>57.89%</td>
<td>81.81%</td>
</tr>
</tbody>
</table>

The mean values of the total of positive answers regarding the adoption of perspectives (sustainability score) according different company sizes along with standard deviation values are summarized in Table 7 below. In other words, sustainability score acquires value incrementing for each sustainability perspective adopted by a particular company. Thus, the minimal value of sustainability score is 0 if a company did not adopt any sustainability perspective at all, and the maximal value is 5 for a company that adopted all 5 sustainability perspectives. It can be observed that the responding large companies have superior sustainability performance with an average company being involved in around 3 sustainability perspectives. On the other hand, small- and medium-sized
companies are normally involved in less than 2 sustainability perspectives. Large companies have the highest value of standard deviation implying that the distribution of their answers is less concentrated around the mean value comparing to small- and medium-sized companies with lower standard deviation values.

*Table 7: Means - Size and sustainability perspectives adoption*

<table>
<thead>
<tr>
<th>Size</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>1,8889</td>
<td>9</td>
<td>1,78174</td>
</tr>
<tr>
<td>Medium</td>
<td>1,7000</td>
<td>20</td>
<td>1,08094</td>
</tr>
<tr>
<td>Large</td>
<td>3,3235</td>
<td>34</td>
<td>1,27257</td>
</tr>
<tr>
<td>Total</td>
<td>2,6032</td>
<td>63</td>
<td>1,38587</td>
</tr>
</tbody>
</table>

*Industry*

Table 8 compares the number of positive and negative answers to the first questions divided according to different types of industry. In general, the majority of positive replies have occurred for respondents not classified in any industry, i.e. category other. Besides this, the firms classified as real estates companies seem to have a better sustainability performance while Food and beverages companies tend to have a worse performance.

*Table 8: Cross-tabulation – Industry and sustainability perspectives*

<table>
<thead>
<tr>
<th>Ind</th>
<th>No of resp.</th>
<th>Energy</th>
<th>Manufacturing</th>
<th>Food &amp; Beverages</th>
<th>Real estates</th>
<th>Service</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rep.</td>
<td>61</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Cod.</td>
<td>59</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Cer.</td>
<td>60</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Ind.</td>
<td>59</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Vol.</td>
<td>59</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 9 displays the frequency of occurrence of positive answers among different industrial categories. Energy, manufacturing and food and beverages industry are only involved in two sustainability perspectives in more than or equal to 50%. Real estates and service industry, on the other hand, implemented the sustainability perspectives in a larger extent. Sustainability rating indices proved to have the lowest level of implementation by either category among the remaining sustainability perspectives. The second least adopted sustainability perspective is sustainability reporting frameworks which are implemented by over 50% of responding companies classified as real estates.
or service industry. Management system certifications and are implemented by the majority of companies regardless the type of industry.

Table 9: Frequency – Industry and sustainability perspectives

<table>
<thead>
<tr>
<th>Industry</th>
<th>Reporting frameworks</th>
<th>Codes of practice</th>
<th>Management systems certifications</th>
<th>Rating indices</th>
<th>Voluntary activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>22.22%</td>
<td>33.33%</td>
<td>77.78%</td>
<td>11.11%</td>
<td>77.78%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>40.00%</td>
<td>44.44%</td>
<td>80.00%</td>
<td>.00%</td>
<td>80.00%</td>
</tr>
<tr>
<td>Food and beverages</td>
<td>16.67%</td>
<td>66.67%</td>
<td>50.00%</td>
<td>.00%</td>
<td>40.00%</td>
</tr>
<tr>
<td>Real estates</td>
<td>55.56%</td>
<td>77.78%</td>
<td>55.56%</td>
<td>22.22%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Service</td>
<td>57.14%</td>
<td>85.71%</td>
<td>66.67%</td>
<td>.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>Other</td>
<td>50.00%</td>
<td>78.95%</td>
<td>95.00%</td>
<td>20.00%</td>
<td>65.00%</td>
</tr>
</tbody>
</table>

In order to summarize the overall results for engagement in all 5 sustainability perspectives we have calculated mean values of sustainability scores displaying the average number of sustainability perspectives that responding companies from different industries are involved in. The output disclosed in Table 10 reveals that real estates industry has the highest mean value (3.1111) among the industry categories.

Table 10: Means - Industry and sustainability perspectives adoption

<table>
<thead>
<tr>
<th>Industry</th>
<th>Sustainability score</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Energy</td>
<td>2.2222</td>
<td>9</td>
<td>1.48137</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Energy</td>
<td>2.3000</td>
<td>10</td>
<td>1.33749</td>
</tr>
<tr>
<td>Food and beverages</td>
<td>Energy</td>
<td>1.6667</td>
<td>6</td>
<td>1.21106</td>
</tr>
<tr>
<td>Real estates</td>
<td>Energy</td>
<td>3.1111</td>
<td>9</td>
<td>1.26930</td>
</tr>
<tr>
<td>Service</td>
<td>Energy</td>
<td>2.4286</td>
<td>7</td>
<td>1.51186</td>
</tr>
<tr>
<td>Other</td>
<td>Energy</td>
<td>2.9500</td>
<td>20</td>
<td>1.46808</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2.5738</td>
<td>61</td>
<td>1.41961</td>
</tr>
</tbody>
</table>

This implies that responding companies from real estates industry are in average involved in 3 sustainability perspectives. The value of standard deviation for this particular industry is the second lowest (1.21106). Thus the total numbers of positive
responses for real estates companies are rather concentrated to the mean value. The lowest mean value can be observed for responding companies from food and beverages industry (1.6667). In other words, an average company from this industry positively responded to the first questions 1.6667 times. The highest value of standard deviation is for service industry (1.51186) implying that the numbers of positive replies are least concentrated around the mean value.

5.4 Time of implementation of the sustainability perspectives

The companies from the sample have been asked about the time of implementation of the 5 sustainability perspectives. Thus, for each perspective there are three options regarding the time when the perspective has been implemented, namely 1 to 3 years, 4 to 9 years or 10 years and more. The firms that adopted management system certifications over time have an advantage in the selection and implementation of environmental options (Melnyk et al., 2003, p. 329). We suppose that the time for how long a particular sustainability perspective has been adopted is advantageous not only in case of management systems but also for the other sustainability perspectives. This implies that longer implementation periods should enhance companies’ capability of attaining sustainable performance. The following section analyzes the implementation time with regard to different age, size and industry categories. The results are displayed in three summarizing tables showing the number of replies for each option and valid percent.

### Age

#### Table 11: Time of implementation - Age

<table>
<thead>
<tr>
<th>Age</th>
<th>No of resp.</th>
<th>3 years or less</th>
<th>4 to 9 years</th>
<th>10 to 19 years</th>
<th>20 years or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>Rep.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Cod.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Cer.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Ind.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>Vol.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 11 above shows the distribution of answers according to age of company. Similarly to the previous section, only 2 companies have been classified to be less than 3 years old and 4 to 9 years old. The results show that the responding companies of age between 10 and 19 years have rather widely distributed answers. 6 out of 7 companies, however, have implemented management system certifications for 4 to 9 years giving the valid percent of 85.71%. The responding companies that are 20 years old or more have been implementing codes of practice for shorter time periods than 10 to 19 years old companies. These companies have, on the other hand, the longest implementation period of management system certifications and voluntary activities. We can conclude this since 72.09% (management system certifications) and 69.44% (voluntary activities) of responding companies have been implementing the sustainability perspectives for 10 years or more. Sustainability rating indices have generally low response rate regardless the age of company.

**Size**

Table 12 below displays the distribution of answers according to different company sizes. The majority of responding medium and large companies have adopted sustainability reporting frameworks during the period between 4 and 9 years or longer. Principles and codes of practice have been adopted by small and medium-sized companies during shorter time periods comparing to large companies. Majority of medium and large companies have been implementing management system certifications for more than 10 years. Voluntary and philanthropic activities are adopted by more than 50% of all responding companies for more than 10 years. Sustainability rating indices again proved to have the lowest response rate among all company sizes. Based on the results it can be concluded that larger companies in size tend to adopt the sustainability perspectives during longer time periods.

**Table 12: Time of implementation - Size**

<table>
<thead>
<tr>
<th>Size</th>
<th>No of resp.</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Rep.</td>
<td>1 to 3</td>
<td>1</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>Cod.</td>
<td>1 to 3</td>
<td>2</td>
<td>66.67</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>1</td>
<td>33.33</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>3</td>
<td>100</td>
<td>6</td>
</tr>
<tr>
<td>Cer.</td>
<td>1 to 3</td>
<td>1</td>
<td>14.29</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>3</td>
<td>42.86</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>3</td>
<td>42.86</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>7</td>
<td>100</td>
<td>14</td>
</tr>
<tr>
<td>Ind.</td>
<td>1 to 3</td>
<td>-</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>-</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>-</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>-</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Vol.</td>
<td>1 to 3</td>
<td>1</td>
<td>16.67</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>0</td>
<td>.00</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>5</td>
<td>83.33</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>6</td>
<td>100</td>
<td>11</td>
</tr>
</tbody>
</table>
Industry

The existence of patterns between the adoption time of the sustainability perspectives and various industry types can be observed in Table 13. The results show that management system certifications are adopted by more than 50% of responding companies during the time period of 10 years or more. The only exception is service industry where only 20% of responding companies have been implementing certifications for 10 years or more. Similarly, the majority of responding companies of all industries (except for service industry) have been involved in voluntary and philanthropic activities during the longest time period.

Table 13: Time of implementation - Industry

<table>
<thead>
<tr>
<th>Ind.</th>
<th>No of resp.</th>
<th>Energy</th>
<th>Manufac.</th>
<th>FB</th>
<th>Real Est.</th>
<th>Service</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Rep.</td>
<td>1 to 3</td>
<td>1</td>
<td>33.33</td>
<td>1</td>
<td>25.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>1</td>
<td>33.33</td>
<td>2</td>
<td>50.00</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>1</td>
<td>33.33</td>
<td>1</td>
<td>25.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>3</td>
<td>100</td>
<td>4</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Cod.</td>
<td>1 to 3</td>
<td>3</td>
<td>75.00</td>
<td>2</td>
<td>33.33</td>
<td>2</td>
<td>66.67</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>1</td>
<td>25.00</td>
<td>3</td>
<td>50.00</td>
<td>1</td>
<td>33.33</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>16.67</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>4</td>
<td>100</td>
<td>6</td>
<td>100</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Cer.</td>
<td>1 to 3</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>2</td>
<td>28.57</td>
<td>2</td>
<td>50.00</td>
<td>1</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>5</td>
<td>71.43</td>
<td>6</td>
<td>75.00</td>
<td>3</td>
<td>60.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>7</td>
<td>100</td>
<td>8</td>
<td>100</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Ind.</td>
<td>1 to 3</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>N/A</td>
</tr>
<tr>
<td>Vol.</td>
<td>1 to 3</td>
<td>2</td>
<td>28.57</td>
<td>0</td>
<td>.00</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>4 to 9</td>
<td>1</td>
<td>14.29</td>
<td>0</td>
<td>.00</td>
<td>1</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>&gt;10</td>
<td>4</td>
<td>57.14</td>
<td>8</td>
<td>100</td>
<td>1</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>7</td>
<td>100</td>
<td>8</td>
<td>100</td>
<td>2</td>
<td>100</td>
</tr>
</tbody>
</table>

The adoption periods of sustainability reporting frameworks and principles and codes of practice seem to be more equally distributed among the industries. Sustainability rating indices have the lowest response rate among the perspectives. According to the results,
service industry appears to have rather shorter adoption periods comparing to other industries. Manufacturing and energy industry have, on the other hands, longer adoption periods.

### 5.5 Triple bottom line aspects of the sustainability perspectives

The fourth questions are related to triple bottom line concept of the four sustainability perspectives. The responding companies have answered which TBL aspects (financial, environmental and social) have been covered by the implemented perspectives. In this part we analyze the number of aspects that are covered and compare them with different age, size and industry categories.

#### Age

Table 14 displays the number and valid percent of TBL aspects covered by various age categories. The first two age categories have only representation of a single company. It is therefore insufficient number of responses to draw a conclusion. Valid percent values for the third and fourth age category show generally higher number of covered TBL aspects in case of older companies for all four sustainability perspectives. The majority of responding companies cover all three TBL aspects by their sustainability reports (71.43% of companies 10 to 19 years old and 80.00% of companies 20 years old or more). The participation in voluntary and philanthropic activities mostly covers one or two TBL aspects by all responding companies. The summary results show that older companies tend to cover more TBL aspects than younger companies.

**Table 14: TBL aspects -Age**

<table>
<thead>
<tr>
<th>Age</th>
<th>No of aspects</th>
<th>3 years or less</th>
<th>4 to 9 years</th>
<th>10 to 19 years</th>
<th>20 years or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Rep.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>7</td>
</tr>
<tr>
<td>Cod.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>7</td>
</tr>
<tr>
<td>Ind.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>-</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>100</td>
<td>-</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0.00</td>
<td>-</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>-</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Vol.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>Σ</td>
<td>1</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>6</td>
</tr>
</tbody>
</table>
Size

Analogically to the previous table, Table 15 shows the number of TBL aspects covered by each sustainability perspective for different company sizes. Although the response rate of small companies is very low we can observe the highest number of TBL aspects being covered by principles and codes of practice. Large responding companies have generally higher number of TBL aspects covered by the sustainability perspectives comparing to medium-sized companies. Sustainability reporting frameworks and principles and codes of practice cover all three TBL aspects in each company-size category. Voluntary and philanthropic activities, on the other hand, mostly cover one or two aspects. The summarizing results show that larger companies in size tend to cover more TBL aspect than smaller companies.

Table 15: TBL aspects - Size

| Size | No of aspects | Small | | | Medium | | | | Large | | |
|------|---------------|-------|---|---|-------|---|---|---|-------|---|
|      | No | %    | No | %    | No | %    |
| Rep. | 1 | 0 | .00 | 0 | .00 | 2 | 7.41 |
|      | 2 | 1 | 50.00 | 1 | 25.00 | 2 | 7.41 |
|      | 3 | 1 | 50.00 | 3 | 75.00 | 23 | 85.19 |
|      | Σ | 2 | 100 | 4 | 100 | 27 | 100 |
| Cod. | 1 | 1 | 33.33 | 2 | 25.00 | 3 | 10.00 |
|      | 2 | 0 | .00 | 2 | 25.00 | 8 | 26.67 |
|      | 3 | 2 | 66.67 | 4 | 50.00 | 19 | 63.33 |
|      | Σ | 3 | 100 | 8 | 100 | 30 | 100 |
| Ind. | 1 | 1 | 100 | 1 | 100 | 2 | 25.00 |
|      | 2 | 0 | .00 | 0 | .00 | 2 | 25.00 |
|      | 3 | 0 | .00 | 0 | .00 | 4 | 50.00 |
|      | Σ | 1 | 100 | 1 | 100 | 8 | 100 |
| Vol. | 1 | 2 | 40.00 | 9 | 81.82 | 9 | 32.14 |
|      | 2 | 2 | 40.00 | 2 | 18.18 | 14 | 50.00 |
|      | 3 | 1 | 20.00 | 0 | .00 | 5 | 17.86 |
|      | Σ | 5 | 100 | 11 | 100 | 28 | 100 |

Industry

The responses to questions related to TBL aspects sorted according to various industry types are displayed in Table 16. Sustainability reporting frameworks cover all three TBL aspects of at least 50% companies within all industries. The majority of companies of various industries apply all three TBL aspects in their principles and codes of practice. The exception is food and beverages industry where none company has covered the three TBL aspects in their codes of practice. Sustainability rating indices have again the lowest response rate and we will therefore consider their exclusion from the conceptual model. There is no industry where the majority of responding companies cover three TBL aspects by the voluntary and philanthropic activities.
Table 16: TBL aspects - Industry

<table>
<thead>
<tr>
<th>Ind</th>
<th>No of aspect</th>
<th>Energy</th>
<th>Manufac.</th>
<th>FB</th>
<th>Real Est.</th>
<th>Service</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Rep.</td>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>50.00</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
<td>16.67</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>50.00</td>
<td>4</td>
<td>100</td>
<td>100</td>
<td>5</td>
<td>83.33</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>4</td>
<td>100</td>
<td>4</td>
<td>100</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Cod.</td>
<td>1</td>
<td>0</td>
<td>0.00</td>
<td>0</td>
<td>0.00</td>
<td>1</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>3</td>
<td>75.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>100</td>
<td>6</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>4</td>
<td>100</td>
<td>6</td>
<td>100</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Ind.</td>
<td>1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.00</td>
<td>2</td>
<td>40.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>100</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>100</td>
<td>N/A</td>
<td>5100</td>
</tr>
<tr>
<td>Vol.</td>
<td>1</td>
<td>42.86</td>
<td>3</td>
<td>37.50</td>
<td>0</td>
<td>4</td>
<td>50.00</td>
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<tr>
<td></td>
<td>2</td>
<td>28.57</td>
<td>5</td>
<td>62.50</td>
<td>2</td>
<td>100</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>28.57</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>Σ</td>
<td>100</td>
<td>8</td>
<td>100</td>
<td>2</td>
<td>100</td>
<td>31</td>
</tr>
</tbody>
</table>

5.6 Pearson chi-squared test
This chapter ends with significance testing that helps us distinguish which combination of factors (determinants of CSR) and sustainability perspectives are statistically significant for the three questions analyzed in this chapter. In order to achieve results we have conducted Pearson chi-squared test of independence in SPSS Statistics program. We have summarized the p-values (probability values) obtained from this test in Table 17.

P-value indicates the probability of occurrence of a relationship by pure chance (Saunders et al., 2003, p. 356). In general, a minimal acceptable level of significance is usually p=0.05 or lower (Saunders et al., 2003, p. 357). We have therefore decided to accept those results that have p<0.05 as statistically significant. In Table 17 are statistically significant relationships highlighted by green color and statistically insignificant relationships by red color. In the following chapter we will address and further discuss only those relationships that are found statistically significant.
Table 17: Pearson Chi-squared – Significance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adoption Age</td>
<td>.442</td>
<td>.667</td>
<td>.629</td>
<td>.044</td>
<td>.782</td>
</tr>
<tr>
<td>Size</td>
<td>.000</td>
<td>.004</td>
<td>.231</td>
<td>.160</td>
<td>.166</td>
</tr>
<tr>
<td>Industry</td>
<td>.431</td>
<td>.096</td>
<td>.118</td>
<td>.413</td>
<td>.142</td>
</tr>
<tr>
<td><strong>Question 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time of Implementation Age</td>
<td>.632</td>
<td>.271</td>
<td>.000</td>
<td>.615</td>
<td>.017</td>
</tr>
<tr>
<td>Size</td>
<td>.371</td>
<td>.016</td>
<td>.766</td>
<td>.565</td>
<td>.341</td>
</tr>
<tr>
<td>Industry</td>
<td>.816</td>
<td>.563</td>
<td>.484</td>
<td>.223</td>
<td>.349</td>
</tr>
<tr>
<td><strong>Question 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBL perspectives Age</td>
<td>.886</td>
<td>.831</td>
<td>N/A</td>
<td>.000</td>
<td>.540</td>
</tr>
<tr>
<td>Size</td>
<td>.001</td>
<td>.010</td>
<td>N/A</td>
<td>.382</td>
<td>.040</td>
</tr>
<tr>
<td>Industry</td>
<td>.038</td>
<td>.221</td>
<td>N/A</td>
<td>.770</td>
<td>.404</td>
</tr>
</tbody>
</table>

Based on the replies to the first questions (adoption of sustainability perspectives) we have computed mean values of sustainability scores showing the average number of perspectives adopted by a particular category of companies. The results of Pearson chi-squared test displayed in Table 18 have shown that the only significant relationship (p<0.05) has been found between size of company and sustainability score.

Table 18: Pearson Chi-squared – Sustainability score

<table>
<thead>
<tr>
<th>Question 1 - Adoption</th>
<th>Sustainability score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.226</td>
</tr>
<tr>
<td>Size</td>
<td>.003</td>
</tr>
<tr>
<td>Industry</td>
<td>.792</td>
</tr>
</tbody>
</table>
6. **Analysis and discussion**

This chapter is dedicated to discussion about the findings obtained from the data analysis. In the first part we will interpret the general results and results for each determinant of CSR and compare our findings with the prior studies. In the second part we will discuss adoption of particular initiatives and based on the observations we will propose a modified conceptual model.

6.1 **Sustainability perspectives**

Based on the results extracted from various analytical methods we can formulate the statements and translate these numerical expressions into the actual findings. This section provides general discussion about implementation of each sustainability perspective by responding Swedish companies as it can be seen in Appendix 5. Throughout the analysis we could notice visibly lower response rate and lower level of engagement in sustainability rating indices. In other words, many of responding companies did not answer to the questions related to use of sustainability rating indices and the majority of those who answered provided us with negative response regarding their adoption.

A study of sustainability measurement system conducted by Dalai and Takahashi (2011) identifies 8 sustainability measurement initiatives. From these initiatives GRI corresponds to sustainability reporting frameworks and IChemE, DJSI and TBL Index correspond to sustainability rating indices in our study. The study concludes that sustainability measures used for sustainability reporting purposes are separated from those used for sustainability performance evaluation (Dalai & Takahashi, 2011, p. 467). Moreover Singh et al. (2008) point out that sustainability rating indices should be implemented in line with a coherent framework. Despite the existence of a wide range of sustainability-oriented indices and indicators we have encountered a shortage of academic literature related to this area. The vast majority of sustainability-related studies take into consideration other perspectives, especially sustainability reporting frameworks, rather than sustainability rating indices. We therefore believe that usage of rating indices is not so wide-spread and it might not be perceived as an important aspect of sustainable development by Swedish companies.

According to our findings, the level of sustainability reporting frameworks implementation is the second lowest among the five perspectives. Despite this fact, nearly 50% of responding companies issue their sustainability reports. Moreover, sustainability reporting frameworks are the only perspective where all 66 respondents answered to the question regarding their adoption. Thus we can assume that responding companies are familiar with sustainability reporting frameworks and are fully aware of their existence. A study of sustainability reporting among Swedish companies conducted by Hedberg and Malmborg (2003) found several advantages of implementation of sustainability reporting guidelines. Application of sustainability reporting frameworks contributes to the increase of internal communication as well as helps to identify the facts that were unknown but discovered thanks to the sustainability reports (Hedberg & Malmborg, 2003, p. 162).

The CSR measure that was implemented in the largest extent among the sustainability perspectives is management system certifications (adopted by 74.2% of respondents). The implementation time of management system certifications appears to be rather longer time period for the majority of responding companies. This perspective therefore seems to be a crucial tool for achieving the sustainable development. Its importance is
highlighted by Burström (2002, p. 321) who describes it as a useful tool enhancing communication but it is not “a substitute for human action”. This implies that environmental management system alone is not sufficient unless accompanied by action and learning (Burström, 2002, p. 321). From the results we could observe that the majority of responding companies with certified management systems are also engaged in other sustainability perspectives.

The level of adoption of sustainability-related principles and codes of practice among our respondents also seems to be sufficient (being adopted by more than 60% of all responding companies). We believe that codes of conduct that take into account CSR issues are important and contribute to sustainable development. Bondy et al. (2004, p. 476) however argues that by adopting CSR-oriented codes of practice companies seek to control the actions of internal and external participants rather than enhance their corporate social responsibility. On the other hand, Perrini (2005, p. 613) connects codes of practice with stakeholders who are interested in reassuring that organizations will operate according to what is morally right. Stakeholders can help an organization to understand the right way to be responsible and this can be enhanced by the spread of a common stakeholder-based approach as reported by Perrini (2005, p. 613). Principles and codes of practice are an essential part of this perception which contributes to the overall enhancement of CSR.

The average level of engagement in voluntary and philanthropic activities is also considerable and it is the second most frequently adopted perspective (nearly 70% of responding companies are involved in voluntary activities). Carroll and Shabana (2010, p. 89) highlighted the importance of voluntary and philanthropic activities in the CSR definition by including four categories, namely “economic, legal, ethical and philanthropic”. Philanthropic activities are an essential part for firms engaging in CSR activities which in return will be rewarded by the market in economic and financial terms (Carroll & Shabana, 2005, p. 101). For these reasons we perceived voluntary and philanthropic activities as an important sustainable development perspective. We believe that there is a lack of emphasis put on philanthropic activities in prior studies that assess the level of sustainable development.

### 6.2 Determinants of CSR

Prior studies that examined the effects of age, size and type of industry on environmental, social and financial sustainability are concerned about a more general context. Moreover, they tend to focus nearly solely on sustainability reporting aspects omitting other aspects. There is not any prior research which takes into consideration exactly the same sustainability perspectives that we have used in our study. Therefore, our research can be perceived as a unique approach within the sustainable development context. Due to the above-mentioned facts we have experienced a shortage of academic literature and we have been forced to use even the studies that go beyond the CSR concept to find an academic literature supporting our findings. Thus, we have found motivating factors for our results also in studies that are not entirely focusing on CSR but are in some extent related to this issue and therefore relevant for the comparison of our results.
6.2.1 Age of company
The companies from the sample have been split into four age categories. Due to the low representation of young companies among the respondents we have excluded the first two categories from the analysis. Thus, in the previous chapter we have analyzed the companies that are 10 to 19 years old and those who are 20 years old or more. A statistically significant relationship has been found between age of company and adoption of sustainability rating indices and their implementation periods. In this case, younger companies (10 to 19 years old) have exactly the same level of adoption as older companies (20 years old or more) being 10.00%. Godos-Díez et al. (2011, p. 540) found a significant and positive relationship between firm age and CSR practices. This study contradicts to our findings regarding the adoption of remaining four sustainability perspectives where the influence of company’s age has been found insignificant.

The study, on the other hand, confirms the findings that age significantly and positively affects the implementation time of management system certifications and voluntary and philanthropic activities. According to our findings, the older companies tend to have longer implementation times comparing to younger companies. Godos-Díez et al. (2011, p. 541) provides a reasonable explanation of this fact stating that once the CSR activities are implemented, “stakeholder expectations increase and the firm is forced to meet them and even reinforce them”. Stakeholder theory takes into consideration expectations of various stakeholder groups and their influence on corporate policies (Reverte, 2008, p. 353). We can therefore assume that older companies who have adopted management system certification and voluntary and philanthropic activities have faced the pressure from stakeholders not to withdraw these actions which resulted in longer implementation periods of older companies comparing to younger ones.

The relationship between age and adoption of sustainability reporting frameworks, the time period of their implementation and TBL aspects covered by sustainability reports have been found insignificant in our analysis. This finding can be confirmed by the study of Hossain and Reaz (2007) conducted to find determinants of voluntary disclosing activities. The study revealed that age is an insignificant variable of the level of disclosure (Hossain & Reaz, 2007, p. 531). A study of disclosure on intellectual capital among Danish companies conducted by Bukh et al. (2005) found out that age did not affect disclosure activities. We believe that disclosure on intellectual capital and sustainability disclosure are similar in terms of providing non-financial firm-specific information. It may share some reasons why companies are/are not willing to disclose this sensitive information related to their operational activities. Thus, we consider this study to be relevant and its findings are partially capable of comparison.

To conclude our results, the effect of company age on sustainability score, the adoption and number of TBL aspects covered by the majority of sustainability perspectives is statistically insignificant. Only positive and significant effect of age has been found on implementation time of principles and codes of practice and voluntary activities. This supports the results of Wiklund’s study (1991) showing that age of company only has a minor influence on sustainability performance.

6.2.2 Size of company
The sampled companies have been divided into four company size categories. Since we have not received any response from a company that could be classified as micro-sized, we have conducted our analysis for the remaining three categories, small, medium-sized and large companies. The majority of relationships that are found significant in our
study are between company’s size and sustainability perspectives (a total of six statistically significant relationships have been identified). Thus, it can be concluded that size is a determinant of the adoption of the sustainability perspectives, the implementation time and the TBL aspects covered, in a larger extent than age and type of industry.

The results from the analysis show significant and positive effect of company’s size on adoption of sustainability reporting frameworks and principles and codes of practice. The different adoption patterns can be observed especially between medium-sized and large companies where the percentual difference of adoption is greatest in favor of large companies. However, in case of sustainability reporting frameworks, the adoption rate of medium-sized companies is 10.00% while 11.11% of small companies and 73.53% of large companies have adopted reporting frameworks. This pattern matches the findings of Udayasankar’s study (2008) of CSR and firm size. The study identified “a U-shaped relationship between firm size and CSR participation” as a result of lowest motivation to engage in CSR activities by medium-sized companies (Udayasankar, 2008, pp. 167, 172). The similar adoption pattern can be also observed for mean values of sustainability scores. This score indicates the number of sustainability perspectives adopted by a particular company. The mean value of sustainability scores for small companies is 1.8889, for medium-sized companies is 1.7000 and for large companies is 3.3235. Therefore we can conclude that our findings are consistent with Udayasankar’s (2008, pp. 167, 172) observations of U-shaped relationship between size and CSR showed in Figure 7. The study found high levels of CSR participation of small and large firms while the levels of CSR participation of middle-sized firms are considerable lower (Udayasankar, 2008, p. 172). The study motivates these findings arguing that middle-sized companies are highly pressure-resistant and under a lower level of scrutiny of stakeholders (Udayasankar, 2008, p. 172).

The only statistically significant relationship between size and time of implementation is found for principles and codes of practice. In this case, we can again observe the U-shaped pattern where implementation periods are declining with increasing company size between small and medium-sized companies but increasing when comparing medium-sized and large companies. The relationships between implementation time of the remaining four sustainability perspectives and company’s size are found insignificant.

Lastly, we have managed to identify three significant relationships between size and number of TBL aspects covered by sustainability perspectives. The effects of company’s size on TBL aspects covered by principles and codes of practice and voluntary and philanthropic activities copy the U-shaped curve with increasing company’s size. Only the number of TBL aspects covered by sustainability reporting frameworks is constantly increasing with growing size. The support for this finding can be seen in the studies of Reverte (2009) and Gallo and Christensen (2011). Reverte (2009, p. 361) found a significant and positive relationship between firm size and CSR disclosure among Spanish companies. Gallo and Christensen (2011, p. 336) found that firm size influences firms to “enact support behaviors toward sustainability”. They found positive results between firm size and sustainable development and sustainability reporting as well. In detail they conclude that there are differences in sustainability reporting patterns among the largest and smallest companies (Gallo & Christensen, 2011, p. 337). This confirms our findings that size of company is generally a considerably influential aspect affecting the sustainability reporting practices. The
researchers justify the findings by stating that sustainability reports preparation is more demanding and requires more resources which are mostly available for larger companies rather than smaller companies (Gallo & Christensen, 2011, p. 337). Again, this confirms our positive relationship between increasing company size and increasing number of CSR aspects engaged when preparing reports. Finally, Gallo and Christensen (2011, p. 334) argued that only the largest companies are capable of incorporating a combination of mechanisms to engage sustainability. This supports our overall results implying that large companies outperform both small and medium-sized companies in all cases where size of company has been identified as a significant determinant of CSR. Thus, company’s size can be considered to be one of the crucial factors affecting the level of sustainable development.

A study among Swedish companies attempting to find determinants of CSR actions conducted by Blombäck and Wigren (2008) does not explicitly state that large companies perform better in CSR area compared to large companies but provides several arguments why large companies might have superior performance. The first argument that might explain our findings says that large companies are exposed to greater pressure from stakeholder groups (Blombäck & Wigren, 2008, p. 264) implied by stakeholder theory that is mostly applicable to large companies (Blombäck & Wigren, 2008, p. 261). Secondly, the authors argue that SMEs may lack some specialized departments that can be, among others, responsible for CSR actions (Blombäck and Wigren, 2008, p. 261). We believe that smaller companies might gain from having CSR activities “embedded in the firm’s everyday life” as suggested by Blombäck and Wigren (2008, p. 261) while large companies dispose of larger amounts of resources needed for active CSR policies (Gallo & Christensen, 2011). The advantageous position of small and large companies combined with higher level of pressure-resistance of middle-sized companies (Udayasankar, 2008, p. 172) might have resulted in U-shaped pattern associated with increasing size of company.

*Figure 7 – U-shaped pattern of size*
Wiklund’s (1999) study contradicts to our findings that company age and size do have an effect on some of the sustainability perspectives and sustainable development. The research conducted by Wiklund (1999) examined the relationship between sustainability and entrepreneurial performance by using data from Swedish small firms. Although the study found out that some variables, such as the capital availability, positively affect the relationships between sustainability and the company’s performance, the author states that firm age and size as control variables do not have any significant influence on sustainability performance (Wiklund, 1999, p. 44). A limitation of these findings could be the fact that the collected data were mainly gathered from small-sized firms excluding the larger ones.

6.2.3 Type of industry

The respondents have been divided into six categories of various industry types. The category other industry encompass the residual industry types with minor representation among the responding companies. Since this category does not represent any specific industry type it lacks explanatory value and therefore is not a subject of discussion when presenting the results.

The effect of industry type on the number of TBL aspects covered by sustainability reports proves to be the only significant relationship. According to the results, real estates firms along with manufacturing firms tend to cover more TBL aspects in their reports than energy and service companies. Only one company that is classified as food and beverages industry has responded to this question. It is therefore not reasonable to draw conclusion for this type of industry based on a single observation. The finding of industry type being a determinant of sustainability reporting framework is in line with the study of Sweeney and Coughlan (2008). By analyzing of annual and CSR reports the study confirmed the existence of “a clear industry effect in the reporting of CSR by the different organizations” (Sweeney & Coughlan, 2008, p. 120). CSR reports are used to communicate CSR actions with the main stakeholder groups that are associated with a particular type of industry (Sweeney & Coughlan, 2008, pp. 119-120). We can therefore expect that main stakeholders of real estates and manufacturing companies have higher demand on CSR disclosure practices. This can imply that the companies operating within these two industries tend to cover more TBL aspects in their CSR reports. Another support for this finding can be identified in the study of Rahman and Widyasari (2008). According to the study there is an effect of industry type on CSR disclosure (Rahman & Widyasari, 2008, p. 33). High-profile industries are superior in CSR disclosure activities compared to low-profile industries (Rahman & Widyasari, 2008, pp. 29, 33). Although the types of industries in our study do not correspond to those industry types classified either as high-profile or low-profile industries, the results of Rahman and Widyasari (2008) confirm our findings that type of industry has an effect on sustainability reports.

The relations between type of industry and the adoption, implementation time and number of TBL aspects covered by the remaining four sustainability perspectives has been found statistically insignificant. Industry type only affects the number of TBL covered by sustainability reports. We can therefore conclude that type of industry has no or minor effect on sustainability perspectives and thus level of sustainable development. Thus, our findings are consistent with the study of Wiklund (1999, p. 44) where type of industry was one of the control factors where no significant effect had been found. Our
findings oppose the results of Banerjee et al. (2003) that conducted a study regarding sustainable development and type of industry. The authors argue that the type of industry is strongly related to sustainability performance. The study examined three significant differences that are assumed to exist between industries (Banerjee et al., 2003). The first is that the amount of pollution varies from industry to industry. Secondly, the level of public concern about the environment varies among industry as well stating that “its impact will be more acute on ‘dirty’ industries, such as chemicals, than on ‘clean’ ones, such as consulting” (Banerjee et al., 2003, pp. 108-109). Lastly, the dirty industries face more regulations comparing to cleaner industries which affects the cost of compliance (Banerjee et al., 2003, pp. 108-109). Moreover, the study highlights that industry type proved to be a significant determinant of sustainability performance. The majority of academic papers found a significant influence of industry type on CSR activities (Cottrill, 1990, Banerjee et al., 2003, Reverte, 2009, Melo & Garrido-Morgado, 2012). Our study therefore anticipated significant dependence between type of industry and CSR but has only found a negligent influence of industry.

6.3 Sustainability initiatives

Based on the answers to the second questions we have analyzed particular initiatives among each sustainability perspective being adopted by our respondents. Table 19 below shows the most substantial initiatives, the number of companies the initiatives are adopted by and the percentage of the total of respondents that answered the question. Among sustainability reporting frameworks GRI is the standard adopted by the majority of respondents. The second most often used reporting practice is development of an own standard or disclosing sustainability report into the annual report. Nearly 40% of respondents follow UN Global Compact while the usage of other codes of practice is below 10%. The two ISO standards are the leading management system certifications and the second most frequent certification is EU or Nordic Ecolabel. The majority of companies with a certified management system are certified by more than one certification. Although FTSE4Good is adopted only by 3 companies it is the most common index used by our respondents. None of other sustainability rating indices is used by more than one company. The vast majority of respondents actively contribute to charities or donations. Additionally, we have been provided with many other voluntary activities in the optional field. In case of voluntary and philanthropic activities we can observe the broadest scale of various CSR activities the companies are involved in.

The highest percentage of all sustainability reporting frameworks belongs to GRI with 28.79% and 19 respondents adopting GRI as it is exhibited in Table 19. Hence, the majority of the companies that answered to this question chose this type of framework because they are familiar with it. This is due to the fact that the GRI guidelines managed to be the leading sustainability reporting framework among the several that are broadly recognized (Frost et al., 2005, p. 90). However, Frost et al. (2005, p. 90) state that there are limitations of GRI implementation resulting in wide diversification of reports since companies can choose which aspects are to be covered in their sustainability reports. The advantage of GRI is the fact that companies can choose those aspects relevant to the nature of their operations. We argue that this flexibility of reporting about optional sustainability issues may become an obstacle for comparison of various reports. Hence, we suggest that companies should not only depend on GRI guidelines but also try to identify if other reporting framework would possibly better serve its purpose of reporting about particular operations.
The UN Global Compact is the leading code of practice among the responding companies. As it is disclosed in Table 19 we received 25 responses from companies adopting this particular initiative which equals 39.68% of responding companies. The second most frequently adopted initiative is the OECD Guidelines for MNE’s with 9.52%. This implies that the UN Global Compact is the most commonly adopted set of principles among all other options included in our survey. We believe that principles and codes of practice can be considered as an important factor that should not be omitted from our conceptual model since they lead to CSR enhancement and therefore to sustainable development (Perrini, 2005).

As displayed in Table 19 both ISO 14001 and ISO 9000 received the highest amount of responses which equals to 60.94% and 54.69% respectively. This is due to the fact that ISO environmental management system (EMS) certifications are considered to be the most well known. ISO 14001 is the most widespread certification and it keeps increasing especially in Europe (European Environment Agency, 2013). The ISO 9000 certification provides motivations for organizations to address and improve product and service quality systematically (Bansal & Bogner, 2002, p. 271). On the other hand, ISO 14001 is perceived as the future development of ISO 9000 regarding the improvement of environmental quality and aims to replace the local EMS criteria which exist into various countries (Melnyk et al.,

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**Table 19: Sustainability initiatives**

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Initiative</th>
<th>No of responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability reporting frameworks</td>
<td>GRI</td>
<td>19</td>
<td>28.79%</td>
</tr>
<tr>
<td>Principles and Codes of practice</td>
<td>UN Global Compact</td>
<td>25</td>
<td>39.68%</td>
</tr>
<tr>
<td>Principles and Codes of practice</td>
<td>OECD Guidelines for MNEs</td>
<td>6</td>
<td>9.52%</td>
</tr>
<tr>
<td>Management system certifications</td>
<td>ISO 9000</td>
<td>35</td>
<td>54.69%</td>
</tr>
<tr>
<td>Management system certifications</td>
<td>ISO 14001</td>
<td>39</td>
<td>60.94%</td>
</tr>
<tr>
<td>Management system certifications</td>
<td>EU/Nordic Ecolabel</td>
<td>6</td>
<td>9.38%</td>
</tr>
<tr>
<td>Rating indices</td>
<td>FTSE4Good</td>
<td>3</td>
<td>4.84%</td>
</tr>
<tr>
<td>Voluntary or philanthropic activities</td>
<td>Sponsorship</td>
<td>23</td>
<td>35.94%</td>
</tr>
<tr>
<td>Voluntary or philanthropic activities</td>
<td>Charity/Donation</td>
<td>30</td>
<td>46.88%</td>
</tr>
</tbody>
</table>
Hence, the level of acceptance of ISO certifications is proved to be high as confirmed by the large amount of replies received in our study.

As displayed in Table 19 FTSE4Good is an index adopted by the majority of the respondents. This index is a suitable “tool for consultants, asset owners, fund managers, investment banks, stock exchanges and brokers when assessing and creating responsible investment products” (FTSE, 2010). It can be used in investments for “creating index-tracking investments, financial instruments or fund products focusing on sustainability investments”, in researches to “identify environmentally and socially responsible companies”, in benchmarking “as a benchmark index to track the performance of responsible investments portfolios” and as reference “by which companies […] can assess their progress and achievement” when they engage in CSR activities (FTSE, 2010).

Based on Table 19 we summarize that the companies who practice voluntary and philanthropic activities focus mostly on charities and donations (46.88%) and sponsorships (35.94%). We believe that such activities have effect on sustainable development of a company and hence this category is crucial to be included in our model. Additionally, we refer to Carroll’s (1979, p. 500, 1991, p. 283) four-part definition of CSR as mentioned before. This definition also supports including the philanthropic activities in our model as being an important factor of CSR.

6.4 Revised conceptual model

Based on the discussion of the results we have decided to modify our conceptual model to obtain a better picture about the level of sustainable development. We have decided to remove sustainability rating indices from our conceptual model since this sustainability perspective has the lowest response rate in all four questions. We assume that sustainability rating indices are not a common CSR practice among Swedish companies. We therefore believe that this perspective might not necessarily mirror the true sustainability performance. The second variable excluded from the model is age of company. This is due to the low level of statistical significance in the majority of analyzed cases. Although we have found industry type being mostly insignificant variable, we have decided to keep this variable in our model. Since our findings regarding industry contradicts to the majority of studies it could be interesting to test the existence of relationship using different industry categories.

Banerjee et al. (2003, p. 118) identified other aspects such as top management commitment which proved to be more important. Specifically it is stated that “internal environmental orientation, in general, pertains to corporate values regarding the firm environment relationship and thus is more likely to have an impact at the corporate level regardless of industry type” (Banerjee et al., 2003, p. 119). Furthermore, Banerjee et al. (2003, p. 119) pointed out that employee commitment and organizational culture has an influence on sustainable development. Ramos et al. (2013, p. 322) identified the main drivers of sustainable development among Portuguese companies. We therefore suppose that the motives of socially responsible behavior could have effects on the companies’ engagement in various sustainability perspectives. Thus, we hope that by adding more CSR determinants we could increase the explanatory value of our conceptual model and contribute to the overall quality of the concept. The proposal of a new improved conceptual model is graphically displayed in Figure 8.
Figure 8 – Revised conceptual model
7. Conclusions

In this chapter we will draw conclusions based on the results and we will address to the research question and hypotheses that were guiding us throughout the study. We will also discuss the contribution of the study and its limitations resulting into recommendations for the future research. Finally, the quality criteria of the study will be addressed.

7.1 General conclusions and discussion

The purpose of this study is to develop a new comprehensive method for evaluation of the level of CSR and consequently to identify whether or not company age, size and type of industry affect the sustainability performance of a company. We believe that the designed conceptual model could become a useful tool for overall CSR evaluation. The perspectives in the model are based on the dimensions of CSR as defined by Perrini (2005) extended by an additional perspective, namely voluntary and philanthropic activities. This study contributes to the prior research by developing a unique measurement tool of the level of engagement in CSR activities as well as testing the effects of company age, size and type of industry on the level of CSR.

We have stated one research question that will help us to achieve the purpose of study:

1. Do company age, size and type of industry affect the level of CSR activities?

The research question is supported by three hypotheses each focusing on a single determinant of CSR. The first hypothesis assumes that company age has a significantly positive effect on the level of CSR activities.

The first conclusion based on our findings is that company age is significantly and positively associated with the length of implementation periods of certified management systems and voluntary and philanthropic activities. In other words, increasing company age is associated with increasing implementation time period of these two CSR activities. The other two significant relationships have been found between age and sustainability rating indices (adoption and number of TBL aspect covered by sustainability indices). These effects, however, have not been taken into consideration due to the very low response rate for this particular perspective. The remaining effects of company age on the sustainability perspectives are statistically insignificant implying that age has no influence on their adoption, implementation periods and the number of TBL aspects covered by them. Thus we have not enough evidence to either confirm or reject the first hypothesis and our results contradict the findings of prior studies where strong positive and significant effects of company age was found and company age was recognized as an influential determinant of CSR activities (Roberts, 1992; Moore, 2001; Godos-Díez et al., 2011). The conclusion of our study is that company age has a minor positive effect on the level of CSR activities.

The second hypothesis expects a significantly positive effect of company size on the level of CSR activities. We have identified a total of 7 cases where company size was a significant control variable of CSR activities. 2 out of these 7 cases have shown the positive effect of company size as it was found by the majority of prior studies (Moore, 2001; Reverte, 2009; Gallo & Christensen, 2011; Ramos, 2013). Thus, according to our findings company size positively affects adoption of principles and codes of practice and the number of TBL aspects covered by these principles. The remaining 4 cases have confirmed the U-shaped effect of company size found by Udayasankar (2008). The U-
shaped effect of size has been found for adoption of sustainability reporting frameworks, implementation periods of principles and codes of practice and the number of TBL aspects covered by sustainability reporting frameworks and voluntary and philanthropic activities. This U-shaped pattern has also been found for the relationship between company size and the number of adopted sustainability perspectives. It implies that the level of CSR activities decreases as a company grows from small to middle-sized but increases from middle-sized to large company. Possible explanations for this finding can be pressure resistance of middle-sized companies to engage in CSR activities (Udayasankar, 2008, p. 172) or the increased capability of large companies to engage in CSR (Gallo & Christensen, 2011, p. 334) combined with the lack of organization (for example a separate department in charge of CSR) in case of medium-sized companies (Blombäck & Wigren, 2008, p. 261). Once again, we can neither confirm nor reject the hypothesis regarding the effect of company size. We can, however, conclude that company size is a significant factor influencing the level of CSR activities but its effect has the U-shaped pattern rather than positive impact.

Finally, the last hypothesis supposes the existence of a significant effect of industry type on the level of CSR activities. Out of a variety of cases analyzed only a single statistically significant relationship between type of industry and a sustainability perspective has been identified. This shows that company type of industry affects the number of TBL aspects covered by sustainability reporting frameworks. The remaining effects of industry type on particular sustainability perspectives and the number of adopted sustainability perspectives have been found insignificant. Thus our findings of insignificance of industry type as a determinant of CSR activities opposes the majority of findings of prior researches (Banerjee, 1992; Jenkins, 2006; Rahman & Widyasari, 2008; Svensson, 2009). We can reject the third alternative hypothesis and accept the null hypothesis saying that: Company type of industry does not have a significant effect on the level of CSR activities.

All in all, our findings regarding the effect of company age and type of industry are consistent with Wiklund’s study (1999) conducted among Swedish companies. The study did not find these factors to be significant as control variables of CSR. The U-shaped relationship between company size and the sustainability perspectives is supported by Udayasankar’s study (2008). At last, we can formulate an answer to our research question:

Company age and type of industry have no or only minor effects on the level of CSR activities while company size significantly affects the CSR causing an U-shaped curve of the level of CSR activities with increasing size.

7.2 Practical recommendations
Based on the study we have made there are several issues we would like to address. We have developed a comprehensive scale for measuring CSR activities of companies consisting of four main sustainability perspectives. This scale takes into account the triple bottom line principle, i.e. it distinguishes between financial, environmental and social aspects within each perspective. Moreover, the time of adoption of a particular sustainability initiative is also taken into consideration. We therefore believe that this valuation method can become a useful tool for measuring the level of sustainable
development and companies can adopt it for a quick sustainability performance evaluation.

The responding Swedish companies seem to engage in particular sustainability perspectives in a sufficient extent. We would, however, recommend them to put more emphasis on sustainability reporting activities and adoption of sustainability-related codes of practice. Only around 30% of the respondents report in accordance with a generally accepted reporting framework. The leading codes of practice, UN Global Compact, are adopted by around 40% of respondents. We would like to encourage the Swedish companies to adopt initiatives related to these two sustainability perspectives in a higher extent.

7.3 Theoretical contribution

Although there are previous studies conducted in order to find the effect of age, size and type of industry on sustainability performance there is not any study which examines the relationship between these variables and the sustainability perspectives defined in our study. Moreover, several researchers highlighted the lack of scales for measuring the level of CSR (Turker, 2008, p. 415; Portney, 2008, p. 274) stating that many of them cannot be considered as adequate. In other words, we have identified the first research gap in lacking a comprehensive measurement method of sustainable development taking into consideration various types of CSR activities based on the triple bottom line criteria. We have therefore developed a CSR measurement tool combining four dimensions of CSR as defined by Perrini (2004) and the triple bottom line principle. We have also enhanced our model by including voluntary and philanthropic activities as the fifth dimension since these activities are important components of CSR (Carroll, 1979, p. 500; 1991, p. 283). Finally, based on the analysis we have conducted, we contribute to the knowledge gap regarding the effects of company age size and type of industry on the level of CSR as suggested by Jenkins (2006) and Ramos et al. (2013).

The contribution of our study is the application of the extensive measurement method we have developed in order to find a relationship between company age, size and type of industry and the level of CSR. Previous researchers focused on studying the effects of age, size and type of industry on sustainable development without taking into consideration various perspectives of sustainability (Banerjee et al., 2003; Gallo & Christensen, 2011; Wiklund, 1999). Others proposed a new measurement method without studying the effects of age, size and type of industry on the level of CSR (Perrini, 2004; Portney, 2008; Turker, 2008). We believe that our research will contribute with its findings to the existing studies and become a background for future improvements of the methods for CSR measurement.

7.4 Limitations and future research

Our study has several limitations that could be overcome by future research in the area of sustainable development. Since our study is unique and the conceptual model has not been applied by researchers before we have faced the limitation in terms of comparison of our results with the findings from prior studies. Due to the time constraints and limited resources we were not able to collect the sufficient amount of data required for generalization of our results. We had only access to the university database that could not provide us the complete list of e-mail addresses of all Swedish companies. Thus, our
sample was chosen out of the list of companies contained in the database. Moreover, many of the e-mail addresses were no longer in use and we could not have reached our respondents. This fact along with the lack of motivation of our respondents to participate in the survey resulted in a low response rate. This is the reason why we cannot generalize our results. In addition to that, we conducted our research only among Swedish companies. The companies established in other countries might have different characteristics and different conditions and the results would vary depending on the national setting. The last noticeable limitation is the fact that we only studied three aspects, company age, size and type of industry, and their effects on the level of sustainable development. This was mainly due to time constraints and for the purpose of feasibility of the research itself since we had limited access to firm-specific information.

We can therefore propose other aspects, such as financial performance or motives of CSR, to be tested in our modified conceptual model in the future research. Reverte (2009) tested his measurement scale, among others, also in the relation with ownership structure, international listing and the level of media exposure. These aspects could also be added as determinants of level of sustainability performance in the conceptual model. The model could also be tested in other national settings which would enable an easier comparison of the results. We therefore recommend the replication of our study which could contribute not only by enhancing the knowledge about CSR and its determinants but also by improving the accuracy of the method for sustainable performance evaluation.

7.5 Societal and ethical implications

In practical methodology chapter we have discussed conducting a research in an ethical way. In this part we would like to address to ethical and moral consideration in a broader concept. Christensen et al. (2007, p. 348) argue that many business school programs emphasize two main aspects of ethics: the ethical role of company in society (“CSR”) and its responsibility to minimize the negative aspects (“sustainability management”). According to Persons (2012, p. 66) ethics is a crucial part of CSR. We believe that our study addresses to both areas of ethics defined by Christensen et al. (2007) and will help to raise the awareness about ethical and socially responsible business practices. According to the study of top 50 business schools conducted by Christensen et al. (2007, p. 352) the majority of business programs teach ethics, sustainability and CSR together in the same course. This confirms the fact that ethical considerations are closely related to sustainability issues and should not be treated separately. Both studies (Christiansen et al., 2007; Persons, 2012) highlight the importance of business ethics along with CSR-related issues to be integrated into curriculum of business programs. Our study supports the definition of a sustainable company stating that besides the production of goods and services a company should also “contribute to the well-being of the earth’s inhabitants” (Christiansen et al., 2007, p. 351) and encourages companies to a superior sustainability performance while offering a tool for evaluation of sustainability performance. This tool may help companies to identify the shortcoming related to their CSR-oriented actions.
7.6 Criteria of quality

Validity expresses “whether or not a measure of a concept really measures that concept” (Bryman & Bell, 2009, p. 164). Internal validity evaluates the extent in which there is a causal relationship between two or more variables (Bryman & Bell, 2009, p. 41). Base on the Pearson chi-squared test of significance we could have observed that company age, size and type of industry do have influence on some types of CSR activities. Generally low level of internal validity was observed in case of sustainability rating indices. We have therefore excluded this perspective and proposed other independent variables in the revised conceptual model. External validity deals with the question if the findings of a study can be generalized beyond the concept (Bryman & Bell, 2009, p. 42). Since we did not have available a complete list of all companies based in Sweden we cannot generalize our results on the Swedish companies.

Generalization enables “findings to be generalized beyond the confines of the particular context in which the research was conducted” (Bryman & Bell, 2009, p. 169). In order to be able to generalize the results the sample used in the research must be representative and must be chosen randomly in order to prevent bias (Bryman & Bell, 2009, p. 169). In our study we have used non-probability sampling method in order to achieve a representative sample. The response rate was, however, low and therefore it is difficult to generalize the results based on the responses we have obtained and apply the findings on the whole population of Swedish companies in the list.

Replication is a criterion defining whether or not a study is replicable (Bryman & Bell, 2009, p. 41). In other words it evaluates the capability of a study to be replicated (Bryman & Bell, 2009, p. 41). It is essential that all procedures are described in detail in order to enable a replication by other researchers to take place (Bryman & Bell, 2009, p. 171). We believe that we have sufficiently explained all the methods used in our study and disclosed the questionnaire that we sent to the respondents. We thoroughly described the steps from the development of the conceptual model until the data analysis and discussion of the results. We therefore suppose that our study is capable of replication and we recommend our revised model to be tested in the future research.
List of references:


European Environment Agency. (2013). Number of organisations with registered environmental management systems according to EMAS and ISO 14001. *Number of organisations with registered environmental management systems according to EMAS and ISO 14001 (SCP 033)*. [Retrieved 2014-05-05].


<table>
<thead>
<tr>
<th>Human Resources</th>
<th>Shareholders</th>
<th>Customers</th>
<th>Suppliers</th>
<th>Financial Partners</th>
<th>Public Authorities</th>
<th>Community</th>
<th>Environment</th>
</tr>
</thead>
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<td>CSRT themes</td>
<td>Capital stock formation</td>
<td>General characteristics</td>
<td>Supplier management policies</td>
<td>Relations with banks</td>
<td>Taxes and duties</td>
<td>Corporate giving</td>
<td>Energy consumption</td>
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<td></td>
<td>Shareholders’/ partners’ pay</td>
<td>Market development</td>
<td>Contractual conditions</td>
<td>Relations with local authorities</td>
<td>Direct contributions in the different intervention fields</td>
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<td>Materials</td>
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<td>Rating performance</td>
<td>Customer satisfaction</td>
<td></td>
<td>Codes of conducts and compliance with laws</td>
<td>stakeholder engagement</td>
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<td>Emissions</td>
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<td>Corporate governance</td>
<td>Customer loyalty</td>
<td></td>
<td>Relations, benefits or easy-term financing</td>
<td>Relations with the media</td>
<td></td>
<td>Environmental strategy and relations with the community</td>
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<td></td>
<td>Benefits and services</td>
<td>Products/Services information and labeling</td>
<td></td>
<td></td>
<td>Virtual community</td>
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<td></td>
<td>Investor relations</td>
<td>Ethical &amp; environmental product and services</td>
<td></td>
<td></td>
<td>Corruption prevention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix 1 – Stakeholder-based categories (Perrini, 2005, p. 615)
Appendix 2 – Dimensions of CSR (Perrini, 2005, p. 614)
Appendix 3 – Questionnaire

General Information about the Company

1. How long has your company been operating?
   - □ 3 years or less
   - □ 4 to 9 years
   - □ 10 to 19 years
   - □ 20 years and more

2. How many employees does your company have?
   - □ 1 to 9
   - □ 10 to 49
   - □ 50 to 249
   - □ More than 249

3. What type of industry does the company operate in?
   - □ Mining
   - □ Forestry
   - □ Food and beverage industry
   - □ Energy industry
   - □ Other ………………

Sustainability reporting framework

1. Does the company issue/publish a sustainability report?
   - □ Yes
   - □ No

2. Does the company report in accordance with any of below mentioned Generally Accepted Accounting Principles for sustainability?
   - □ GRI (Global Reporting Initiative)
   - □ AA 1000 (AccountAbility 1000)
   - □ SBSC (Sustainable Balance Scorecard)
   - □ WBCSD
   - □ Others ………………
3. How long does the company report about sustainability?

- 1 to 3 years
- 10 and more years
- 4 to 9 years

4. In which area(s) does the company provide the sustainability reports?

- Financial aspects
- Environmental aspects
- Social aspects

**Principles and codes of practice**

1. Does the company adopt a Principles and Codes of Practice which also take into consideration sustainability issues?

- Yes
- No

2. Does the company follow any of the below mentioned internationally accepted Principles and Codes of practice?

- UN Global Impact
- Amnesty International Guidelines
- OECD Guidelines for multinational enterprises
- WHO/UNICEF Global Code of Practice
- Others ………………

3. How long does the company follow those Principles and Codes of practice?

- 1 to 3 years
- 10 and more years
- 4 to 9 years

4. Which area(s) does the company’s Principles and Codes of practice relate to?

- Financial aspects
- Environmental aspects
- Social aspects
Management system certifications

1. Does the company implement any quality assurance management system? (Based on management system certifications such as ISO 14001 or SA 8000)
   - Yes
   - No

2. Is the company certified by any of the below mentioned Management system certification?
   - ISO 9000
   - ISO 14001
   - SA 8000
   - EU Eco-label
   - EMAS (Eco-management and Audit Scheme)
   - Others ………………

3. How long has the company been implementing any of the management systems in accordance with the management system certifications?
   - 1 to 3 years
   - 4 to 9 years
   - 10 and more years

4. How long is the company certified by any of the Management system certifications?
   - 1 to 3 years
   - 4 to 9 years
   - 10 and more years

Rating indices

1. Does the company apply any rating indices-indicators for sustainability performance evaluation?
   - Yes
   - No

2. Does the company apply any of the below mentioned Rating indices for sustainability performance evaluation?
   - ECPI
   - FTSE4 Good
   - DJSGI
   - EPI
   - GPI
   - Others ………………
3. How long has the company been using any of the Rating indices for sustainability performance evaluation?

☐ 1 to 3 years  ☐ 4 to 9 years

☐ 10 and more years

4. Which area(s) do the Rating indices for sustainability performance evaluation adopted by the company relate to?

☐ Financial indices  ☐ Environmental indices

☐ Social indices

**Voluntary activities and philanthropy**

1. Is the company involved in any voluntary or philanthropic activity?

☐ Yes  ☐ No

2. What kind of voluntary or philanthropic activity is the company involved in?

☐ Voluntary work  ☐ Donation, scholarship etc.

☐ Charity  ☐ Sponsorship

☐ Others ………………

3. How long is the company involved in voluntary or philanthropic activity(s)?

☐ 1 to 3 years  ☐ 4 to 9 years

☐ 10 and more years

4. What is the nature of contribution by participating in voluntary or philanthropic activity(s)?

☐ Financial contribution  ☐ Contribution to environment

☐ Contribution to society
### Appendix 4 – Frequency table

<table>
<thead>
<tr>
<th>Age, size and industry</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 years or less</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>4 to 9 years</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
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## Appendix 5 – Frequency tables for sustainability perspectives

### Reporting frameworks

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### Codes of practice

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### Management system certification

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