# To Be Related or Unrelated?
# The Role of CSR in Purchasing Decisions

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# ABSTRACT

Corporate social responsibility (CSR) is gaining importance in the supply chain and purchasers are increasingly being asked to integrate environmental issues in their purchasing decisions. Still there is limited research in what type of supplier CSR activities that the buyers prefer. Through case scenarios this experiment investigated the influence of CSR and types of products on participant responses. By using different categories of environmental CSR as well as search, experience and credence goods, the results indicated that both CSR category, whether it is related or unrelated, and type of product do have an effect on supplier choice.

*Keywords:* corporate social responsibility (CSR), purchasing decisions, supply chain activities, search, experience and credence goods

# TABLE OF CONTENTS

## ACKNOWLEDGEMENTS

# 1. INTRODUCTION

During the last decade a globalized market economy has become more and more evident. The negative side effects of this progress are related to regulatory gaps and problems with wealth distribution and, as international regulatory bodies have had difficulties to fill these gaps, hope is instead placed on complementary, self regulated mechanisms such as voluntary corporate social responsibility (Halme and Laurila, 2009).

With the globalization the need for coordinated supply chains are becoming a vital part of the competitive landscape and a way to create strategic advantages. However, along with the economic benefits connected to these integrated supply chains, corporations today often meet challenges related to the possible irresponsible practices inherent along their supply chains (Amaeshi, 2008) making the choice of supplier and its CSR activities important.

As a result, the role of the purchasing function has expanded from strictly ensuring lowest product price to become value chain oriented. As a function, purchasing is therefore central in the buyer-supplier relationship and for work with social considerations (Leire & Mont, 2010). Despite the impressive amount of CSR research in the field of business ethics up to now, it is only recently that the dimensions of *purchasing social responsibility* have been investigated empirically (Carter & Jennings, 2004).

Addressing CSR in the field of purchasing is demanding and concerns complex supply decisions which involve economic and non-economic issues. From this perspective the purchase decision making calls for new ways to deal with many interrelated decision variables (Harwood & Humby, 2008). The internal corporate policies usually serve as a guiding device and a starting point for development and integration of social purchasing criteria. Nevertheless, current practices are still limited and unsystematic and steps taken in setting purchasing criteria are seldom easy (Leire & Mont, 2010). Today, constraints and doubts over the prioritization of resources in a purchasing situation still remain. Combining CSR and economic objectives within a single framework is one major challenge and is also related to costs of CSR and the old surrounding reward mechanisms that reward economic variables in procurement (Harwood & Humby, 2008).

Although interesting, the focus of this paper will not be the tug of war between economic and CSR variables in supplier decisions. Instead my focus is to weigh and rank only the

environmental criteria. Given that the economic variables are the same for two different suppliers, how do buyers choose? Based only on environmental criteria, are there any patterns in the choices made? Have the type of CSR activities in purchasers´ *own* company any impact on the supplier selection? Does industry matter?

In the field of environmental criteria, two studies were found to be of primary interest since both ranked and investigated the effect of environmental criteria, although in different ways: Handfield et al (2002) for instance, introduced a model based on relevant environmental ranking criteria, intended to be easily modified for any supplier assessment situation and capture the buying company´s environmental strategic priorities. Thus, if a company emphasizes recycling, then the purchasing policy should reflect this.

In the study a group of environmental managers, representing several large companies, were asked to rank criteria for supplier environmental performance. Each criterion was ranked par wise against other criteria and then used in the model (Handfield et al, 2002). Interestingly, the perceived measures on environmental performance did not always turn out to be the most important in terms of their environmental impact. This may imply that some criteria are superior in a decision situation other than what one first expects it to be. Furthermore, the connection between a company´s environmental strategic priorities and the choice of the right supplier touches upon the perspective I seek to investigate. Similar to what is investigated in this study, the focus of my study is to weigh and rank environmental criteria as well.

Another study in this field was the recently conducted scenario based experiment made by Mohr and Webb (2005), which examined the influence of CSR and price on consumer responses. Outlined across two domains, environmental or philanthropic CSR activities, the scenarios were created to manipulate price and CSR level. CSR in both the environmental and philanthropic domain had a positive impact on purchase intent and how the consumer evaluated the company. In addition, price had less effect on purchase intent than CSR actions had in the environmental domain. Furthermore, even though the focus was not to investigate the relative strength of CSR across the two domains, results did indicate a stronger effect on company evaluation in the environmental domain compared to the philanthropic domain (Mohr & Webb, 2005). Like this experiment, the study I intend to do is scenario based as well and includes different types of CSR, but is framed differently due to the chosen buyer perspective.

The previous research in this field has tended to focus on consumer choice or the management perspective, rather than on the choices made by purchasers. Little is known about what choices a buyer would prefer facing different types of CSR activities at suppliers.

Two research questions guided the study in hand: (a) Does a company´s own environmental responsibility activities have an influence on supplier choices? and (b) If different types of products are considered, does that have an impact on the choices? To investigate these issues, experimental scenarios were designed and tested on a sample of graduate students.

The remainder of this paper is organized as follows. Section 2 presents relevant theoretical concepts and hypotheses development. Section 3 describes the methodological aspects. Results of findings and analyses are presented in section 4. Finally, section 5 offers conclusions and recommendations.

## 2. HYPOTHESES DEVELOPMENT

## 2.1 CSR

### 2.1.1 CONCEPT AND MOTIVATION

Increasingly, various stakeholder groups - customers, investors, communities, suppliers, regulators and society as a whole - demand resources to actions referred to as *corporate social responsibility* (CSR). Since these pressures and requirements emerge from many different actors, goals and objectives are conflicting and the definition of CSR is therefore not clear. One of the many definitions in use is the one that McWilliams and Siegel (2001) use in their article, defining CSR as *"actions that appear to further some social good, beyond the interests of the firm and that which is required by law"* (McWilliams & Siegel, 2001, p.117) and exemplifies this definition with activities like; abating pollution, adopting progressive human resource management programs, supporting local business or developing non-animal testing procedures etc. (McWilliams & Siegel, 2001).

The concept of CSR defines not only the responsibilities of firms towards the natural environment and societal stakeholders, but it also include a managerial perspective (how managers should handle the responsibilities) (Halme and Laurila, 2009). Being considered as a management concept, CSR integrates social and environmental concerns in business operations and in the interactions with stakeholders. For this reason, the CSR concept is also understood as being a way through which a company can balance economic, social and environmental objectives, and at the same time address the expectations of stakeholders and shareholders (Elkington, 1996).

The theoretical literature on CSR often addresses the behind drivers or motives as to why firms engage in CSR activities (Bansal & Roth, 2000). Market and political forces are both powerful drivers and as these forces often interact together they add to the diffusion of this concept and this is one reason why CSR means different things to different people (Lyon & Maxwell, 2008).

The level of competition within an industry, the prospect of production efficiencies and cost reduction, are market forces that create incentives for companies to engage in CSR. Other incentives might be the labor market, since most employees want to feel good about their work and their employer. Yet another driving force is the incentive to meet green consumers´

demand, i.e. consumers which prefer products that are produced by socially responsible companies (McWilliams et al, 2006; Lyon & Maxwell, 2008).

In terms of political forces, government regulation and politics are key forces as to why many firms prefer to engage in CSR activities. The reasons are in some cases related to regulatory threats, enforcement pressures and boycott threats from Non Governmental Organizations (NGO). Engaging in CSR may be a way to avert political conflicts with these actors and to instead take part in voluntary agreements (Lyon & Maxwell, 2008).

## 2.1.2 CATEGORIZATION AND PERSPECTIVES

To understand the role CSR plays in a business context, it is vital to distinguish between CSR activities. The following text introduces different ways to categorize CSR to put light on the vast variety of ways to distinguish between these activities, it also clarifies the approach I will adopt in this paper.

A recent article written by Halme and Laurila (2009) argue that future research regarding the outcomes of CSR, and its link to financial performance should be modified in two ways. They argue that *the type of* CSR makes a difference to this financial performance link and also point to the lack of investigated social outcomes of CSR, which according to them have been left largely unexplored. In order to build a framework for assessing societal and economical benefits of CSR, an action oriented typology is introduced. In contrast to prevalent typologies based on motivation, normative or stage based CSR, this typology has a more pragmatic perspective and includes three action types: *Philanthropy, Innovation* and *Integration*.

The primary orientation of firms that practice *philanthropy* is characterized by actions such as charity, donations and voluntary work. These types of activities take place outside the corporation´s immediate business and are not a part of the core business. Typically these actions are extra activities aimed at improving market opportunities or a firm´s reputation.

The second action category, *Innovation*, is often found in corporations that seek to create new business opportunities or business models at the same time as they solve various problems of disadvantaged groups. Contrary to philanthropy, this CSR type seeks to achieve a win win

situation. So, while trying to alleviate an environmental problem or benefit a specific group it also aims at creating profit.

Whereas Innovation is a starting point of making new business, *Integration* is connected to existing business. Firms involved with Integration are chiefly concerned with their primary stakeholders (customers, employees and suppliers) and with combining the responsibility aspect with their own core business. Actions related to this group may be; paying proper wages, ensuring high product quality, environmental soundness of production and supporting responsibility actions in the supply chain. This group seeks benefits in cost savings, risk reduction and corporate reputation (Halme & Laurila, 2009).

Halme and Laurilas´ (2009) categorization of activities will be used to some extent in this study. *Integrated CSR* activities will be denoted as "Related" based on their relatedness to core business activities. For the same reason are *Philanthropic CSR* activities denoted as "Unrelated", since these activities take place outside the corporation´s immediate business. Note that the Philanthropic CSR activities in my study are not equivalent to a non strategic or altruistic perspective. As strategic and altruistic perspectives are connected to types of CSR as well, I continue the discussion about CSR types by making a distinction of these perspectives.

In recent management literature, classifications of CSR are frequently made to distinguish between *Strategic CSR* and *Altruistic CSR* or similar definitions. *Strategic CSR* in these contexts refer to actions that are related to a profit maximizing strategy and the company that exercise these activities are chiefly motivated by the potentials to increase the demand. So in an attempt to attract green consumers companies provide a public good (the socially responsible action), as a part of their business strategy. (Baron, 2001; Lyon & Maxwell, 2008). In contrast, *Altruistic CSR* (unselfishness) sacrifices profits for the social interest. The actions are unprofitable and driven by altruistic motives. However, it is debated whether this latter type of CSR actually is unprofitable, the evidence of firms truly sacrificing profits to serve a social interest is lacking (Lyon and Maxwell, 2008).

Moreover, Husted and Salazar (2006) offer a comparison between three different cases - the firm as a *coerced egoist*, the firm as *altruist* and as *strategist* - when firms are confronted with the two objectives of profit maximization and of social performance. With the tools of microeconomics they provide potential optimal levels of social outputs for each approach.

Their analysis indicates that strategic, rather than altruistic and coerced egoist activities are more profitable for a company.

According to the authors, neither the *coerced egoist firm* (profit maximizer, activities may generate negative externalities which may affect third parties and needs governmental intervention i.e. taxes) nor the *altruistic firm* (based on unselfish deeds) are able to reach the same levels of social output as for the *strategic firm*. Here, the investment equilibrium shifts in a way which is not possible in the altruist or coerced egoist cases and the optimal social output level increases partly because of the additional benefits it yields at the firm (Husted & Salazar, 2006). Upon making a social investment, the strategic oriented firms obtain additional benefits such as differentiated products that extract a premium and good reputation etc which are accounted for in the economic model (Husted & Salazar, 2006; McWilliams & Siegel, 2001). Referring to Husted and De Jesus Salazars´ (2006) article, Halme and Laurila (2009) relate their three action types to strategic and altruistic activities. In their view, the strategic approach is the one that supports core business activities, i.e. *Integration and Innovation* (Halme & Laurila, 2009).

As pointed out before, distinguishing between definitions and categorizations is imperative to make the notion of CSR more comprehensible. In order to conduct a study like the one I intend to do the perspective here adopted is a *strategic CSR approach*, which is equivalent to Baron´s (2001) and Husted and Salazar's (2006) definitions concerning the actions that are related to a profit maximizing strategy which is chiefly motivated by potentials to increase the demand due to socially responsible consumers. Socially responsible consumers will be discussed more thoroughly at a later point. And again, *Integration* (related) and *Philanthropy* (unrelated) CSR actions will be used in this study, where both are considered to be connected to the strategic CSR approach.

In a purchasing situation, what choice of supplier can be expected? From a strategic perspective firms obtain benefits such as differentiated products and a good reputation when investing in social activities since the consumers request companies that are accountable for the actions pursued by themselves and their suppliers (e.g. Baron, 2001; Lyon & Maxwell, 2008; Roberts, 2003). As previously discussed, an unrelated CSR activity can also be a part of a profit maximizing strategy with potentials to increase demand and is not always a mere altruistic deed that sacrifices profits. From this perspective any supplier, regardless of the type of CSR activity the supplier engages in, could be selected.

However, given a particular CSR domain (CSR action type) in the *buying* company, what supplier does the purchasing manager prefer? As Handfield (2002) mentioned, the purchasing policy should reflect a company´s environmental strategic priority, what may be interpreted as a balance between the company´s own activities and the activities of their suppliers. This implies that companies that engage in one type of CSR activity also choose a supplier with the same priorities (Handfield, 2002). Furthermore, from a strict business perspective where business strategy and investment calculations play an important role, these choices are not likely to be made randomly. Instead nothing is left to chance and it is common to unite activities to comply with the overall corporate strategy (Grant, 2005).

Based on the assumptions discussed above, the following hypotheses are posited:

**H$_{1a}$:** Buying firms with *related* CSR activities are more likely to choose suppliers with *related* CSR activities over suppliers with unrelated CSR activities.

**H$_{1b}$:** Buying firms with *unrelated* CSR activities are more likely to choose suppliers with *unrelated* CSR activities over suppliers with related CSR activities.

## 2.2. CSR AS AN INVESTMENT

### 2.2.1 CONSUMER DEMAND AND PRODUCT DIFFERENTIATION

In her article, Roberts (2003) discusses the relationship between supply network conditions and reputation. Several groups of stakeholders such as authorizers, business partners and customer groups are presented, all of which requires effective management of environmental and social issues in order to uphold their trust in the company. By meeting the expectations of key stakeholders, which often includes a high level of CSR, companies can maintain a good reputation. Consumers today generally want to be confident in that the products they buy will not cause any harm to the environment or to the people who are producing them. Companies in supply networks serving consumer markets are therefore more willing to engage in CSR activities than those that serve business markets (Roberts, 2003). In other words, in addition to the obvious utility a certain product or service provides, consumers also base their purchasing decisions on the company´s operating practices. The socially responsible consumer searches for goods that are produced in accordance to their own moral standards.

However, what challenge the reputation and trust is the trend to outsource key business activities to suppliers. In an effort to tackle complex supply network sustainability issues, ethical sourcing initiatives have increasingly been undertaken, which among other things includes the setting and auditing of corporate codes of conduct. The main objective in so doing is to guarantee that products do meet specific social and environmental standards. Roberts (2003) points out that in order for such initiatives to be effective they must be supported by key company personnel as well as the staff at an operational level; where the procurement function is likely to be successful if forward-thinking and possess the appropriate skills (Roberts, 2003).

While many firms have responded positively to stakeholders´ investment in CSR, others have a less progressive view and avoid attempts to satisfy CSR demand. The main reason for doing that is the inconsistent research results regarding the relationship between financial performance and CSR involvement. Hence, being confronted with opposing facts and the belief that CSR investment are inconsistent with profit maximization, the desirability of investments in CSR and how much a firm should spend becomes unclear to many managers (McWilliams & Siegel, 2001).

The purpose of McWilliams and Siegel´s (2001) study is to fill this knowledge gap and propose a way to determine the appropriate level of CSR based on the perspective of firms attempts to maximize their profits. This perspective enables firms to view CSR as a form of investment, which can be assessed through the mechanism of product differentiation. Based on the firm perspective CSR resources are accordingly added to a product resulting in certain outputs. McWilliams and Siegel´s (2001) analysis is therefore a supply and demand framework where they suggest an ideal level of CSR. Their discussion on the demand side of CSR implies that investments in CSR add socially responsible attributes to the product which consumers prefer and may also work as a signal to the consumer that the firm is adding an intangible value, such as a reputation for reliability and quality. In the eye of the consumer, the presumption is that companies which support CSR activities are more trustworthy and therefore are their products of higher a quality.

Since many consumers value CSR attributes, firms are increasingly adopting a differentiation strategy where CSR is the means of achieving the product differentiation. The authors also elaborate on the link between CSR and advertising since consumers need to be aware of CSR attributes in order for differentiation to be successful. From the literature on advertising

McWilliams and Siegel (2001) discuss two types of goods: search goods and experience goods. Search goods are easily estimated before purchase in contrast to experience goods, which must be consumed before its value can be evaluated. Hence, consumers must rely more on reputation of the firm and as a support of CSR activities creates a reputation of being honest and reliable, CSR is more likely to be related to experience goods rather than to search goods (McWilliams & Siegel, 2001). A broader discussion about this subject will be provided in the next subsection.

### 2.2.2 SEARCH, EXPERIENCE AND CREDENCE GOODS

The economics of information is an important feature in modern micro economic theory, where several economists have examined the role of information connected to signaling, search and advertising. Nelson (1970) provided an analytical classification of search and experience goods, where *"search (experience) goods are those the quality characteristics of which can be determined prior to (only after) purchase"* (Ekelund Jr, et al. 1995, p. 34) and presented results which implied that experience goods are linked to higher consumer demand for information.

However, in these economic models, little attention has been paid to goods with credence characteristics. Credence goods have qualities which are hard to assess *even after purchase*, such as; medical examination, psychiatric services and family counseling. The level of quality assurance demanded in advance by consumers (e.g. licensing or certification) may therefore be higher than it is for search and experience goods (Ekelund, et al., 1995).

Based on insights from prior research of strategic CSR (see Baron´s definition in the previous section) and studies conducted in the field of search, experience and credence goods, Siegel and Vitaliano (2007) examined the possibility that consumers view CSR activity as an indicator about the attributes of a specific good. The idea is based on consumer demand, where the demand for reliable and honest firms is vital since consumers generally believe firms engaged in CSR activities are producing better products.

The study conducted aimed at investigating whether investments in CSR are consistent with patterns of strategic use of CSR and tested if corporations selling credence or experience goods are more likely to be socially responsible than corporations offering search goods. When search goods are subject to substitution and price competition, experience goods are harder to assess since quality (and thereby price) is much more difficult to observe in advance

for this type of good. Siegel and Vitaliano (2007) mentions the relationship between high demanding consumers and CSR as a signal of quality, and states that wealthy consumers are likely to demand high quality goods, therefore are upscale goods often associated with CSR.

Based on Nelson´s (1970) paper regarding information and consumer behavior, Siegel and Vitaliano (2007) classified goods into five categories in their study: *Search goods, Non durable experience goods, Durable experience goods, Experience services* and *Credence services*. Appendix 1 shows the classifications of each category, exemplified with typical types of goods. Markets for frequently purchased goods like *Search goods* and *Non durable experience goods* often involve a high degree of competition and weak brand loyalty, implying an inexpensive repeat buying which makes it easier to judge the product value. *Durable experience goods* on the other hand, requires a longer time frame to fully know the product´s attributes and permit less learning from buying repeatedly. *Credence services* and *Experience services* involve a high degree of information asymmetry since the products tend to be rather diversified. The knowledge about one type or brand is therefore seldom useful in evaluating other, competing services. Repeat buying over time for this type of product has a marginal effect on the ease of judging its value (Siegel & Vitaliano, 2007).

In line with theories of strategic CSR and rational decision making, Siegel and Vitaliano (2007) found that companies selling search goods are less likely to be socially responsible. The highest probability of investing in CSR activities were the companies selling Durable experience goods and Credence services, with an increased probability of 15 % and 23 % more likely to be socially responsible, respectively.

How are these findings connected to supplier choices? In this section the discussion on strategic use of CSR is furthered by theories of micro economic theories of demand and supply perspectives on CSR. It is also discussed how demand and supply is connected to different types of goods and that consumers view CSR activity as an indicator of the attributes of a specific goods (Siegel & Vitaliano, 2007). By fusing theories concerning (product) information and consumer behavior into the earlier discussed strategic considerations, the knowledge about these areas can be furthered.

Of primary interest in this study is the impact the types of products have on companies which engage in the related form of CSR and also choose suppliers that engage in related CSR

activities. With Siegel´s and Vitaliano´s (2007) study in mind, I decided that since companies selling search goods are less likely to be socially responsible and durable experience good and credence good had increased probabilities of 15 and 23 % (compared to search goods), search goods in my experiment serves as a reference category. The above findings of experience goods and credence service related to the level of CSR commitment are the foundation and inspiration of the hypotheses:

**H₂ₐ:** Buying firms with related CSR activities are more likely to choose suppliers with related CSR activities over suppliers with unrelated CSR activities, when the product is *experience* goods rather than search goods.

**H₂ᵦ:** Buying firms with related CSR activities are more likely to choose suppliers with related CSR activities over suppliers with unrelated CSR activities, when the product is *credence* goods rather than search goods.

# 3. METHODS

## 3.1 CHOICE OF METHOD AND FRAMEWORK

By turning to the field of purchasing and supply chains I acknowledge the current interest in this subject and curiously I will investigate supplier choices by using different CSR activities as a criterion. The intention for this study is to merge the CSR (business) perspective with some micro economic theories about customers increased information need when it comes to certain products.

With a deductive approach the theories within these discourses are used to form concrete hypotheses and thereafter they are tested on the empirical material. Since the issues that need to be addressed are dependent on factors that influence outcomes, the quantitative method design is the preferable strategy of inquiry (Creswell, 2009). A suitable quantitative design to test the hypotheses is through an experiment. The experiment was conducted through questionnaires, more specifically as cases, which I will return to later in this chapter.

The framework in Figure 1 pictures the nexuses of interest: The independent variable (X) influences the dependent variable (Y) and the interaction variable (Z) is hypothesized to influence the primary connection between X and Y (Esaiasson, 2007).
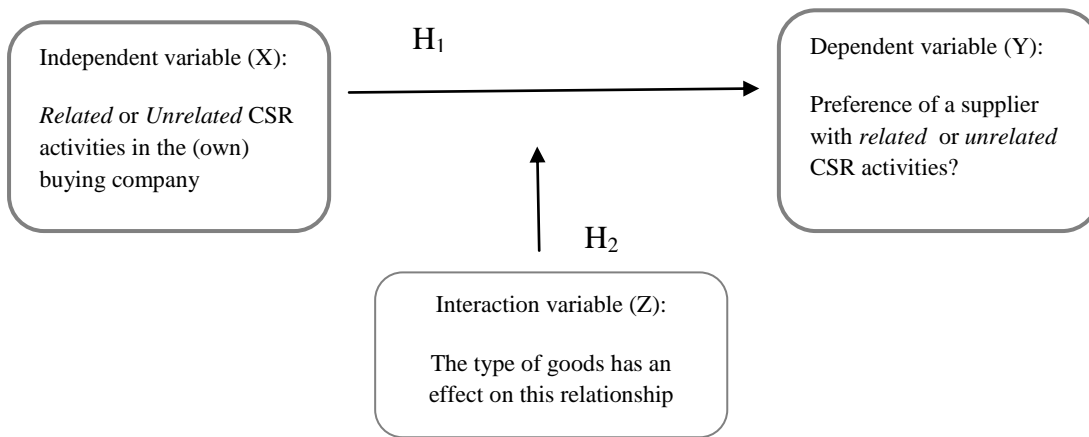


Figure 1: Conceptual framework

## 3.2 EXPERIMENTAL DESIGN AND PROCEDURE

Provided with (fictitious) company information the respondents were asked to position themselves as a purchasing manager of a company. Based on the information about different suppliers the respondents were then asked to make choices of what supplier they preferred to source a certain product or material from. The variables manipulated in the different cases were the form of CSR activities (related versus unrelated) and the type of good (search, experience or credence good). Since the fictitious company had to be involved with all three product types (i.e. search, experience and credence) and also with which many people can associate, the health care industry was chosen. The choice also stemmed from the desirable implicit approach I wanted to take; the type of products or services included in the case had to be as realistic as possible. From these important parameters the occupational health care case was constructed. See Appendix 2: Experimental material.

The background information provided on the first page in the case included general information about the (own) buying company and some information about sustainability activities. Half of the group found themselves engaged in *related* type of CSR activities, while the other half was engaged in an *unrelated* form of CSR activities. Based on this information the respondents were asked to make three supplier choices out of six possible options.

Although activities differed in terms of their relatedness to core business, only environmental activities were chosen for this test. By doing so the hope was to reduce the probability of participants making decisions based on personal preferences between these types of responsibilities.

On the second and third pages of the questionnaire, participants were provided with information about six different suppliers, two suppliers for each product type. Two suppliers of painkillers, two suppliers of staff clothes and two suppliers of health checkups, representing experience good, search good and credence service respectively. The words "search", "experience" and "credence" were not used. The intention was that they should make choices unknowingly of the intent of the experiment. Each of the suppliers was introduced with product information and price. As in real life, pricing differs between suppliers due to discounts, additional costs and batch sizes, the supplier information was written with pricing differences. However, even though prices varied between suppliers the sum added up to the same amount for each supplier. In addition to the price information, it was also made clear that all suppliers were able to meet the same quality standards.

In each product pair only the variable of CSR activity distinguished the suppliers from each other: one engaged in related and the other one in unrelated activities. This difference was not explicitly mentioned in the text. In accordance with the classification presented in the previous chapter, the unrelated CSR activities used in the case was focused outside the firm, whereas related activities were linked to core business activities. The order in which the suppliers were presented, in terms of their type of CSR activities, varied. In the pair of the painkillers the unrelated activity was presented first, but the other way around for the staff clothes suppliers and then again the order was switched for the last supplier pair. To ensure that the suppliers´ CSR activities were interpreted as equal, additional information about its value was included. The measure for this value varied between invested money, time or effort.

Having read the background and supplier information, the respondents were asked which supplier they preferred over another: *"How large do you judge the probability that you´d choose supplier # 1 over supplier # 2?"* this was followed by a verbal 7-point semantic differential scale, ranging from *very high* to *very low*. When the statistical analyses were conducted, the respondents´ answers were given scores ranging from 1 to 7.

When using pre set answering alternatives in questionnaires it is important that the alternatives are mutually exclusive, which means that no answering alternatives should be left

out and the respondent always can find *one* alternative that match her or his choice, so that there is no confusion in what choice to make. The number of alternatives used on scales varies, but it is common to use seven answering alternatives, where three are positive, one is neutral and the remaining three are negative (Esaiasson, 2007).

The last pages in the questionnaire contained questions to determine how the respondent perceived the preceding text and whether the manipulation of variables had been successful. The purpose of the questions in section A and B were meant to clarify whether the respondents perceived themselves as being in a company engaging in related or unrelated activities and also to see if they acknowledged the difference between sustainability activities in each supplier pair. Questions in section C were framed to find out the respondents general opinion of the three product types in the case.

### 3.2.1 PRETESTING

To rid the questionnaire of any ambiguities, a pretest was conducted about a month before the actual test was made. 23 undergraduate students, all attending a sustainability course at The School of Business, Economics and Law (University of Gothenburg), participated in the test. Overall, the information and questions in the questionnaire were being understood and interpreted the way they were intended. Some obscurities and reflections were however found, and these were revised accordingly prior to the actual test.

The students were not allowed to ask questions during the test, but were given the opportunity to express their thoughts and questions afterwards. These afterward comments focused exclusively on the grading of sustainability activities on one scale only (they found it hard to weigh the activities against each other answering only on a scale), linguistic choices and supplier details, questions like: What does "partly" in this context mean? Is the use of staff clothes roughly the same for both suppliers?

Some results from the pretest were quite surprising. In order to investigate them further, another pretest was made which focused only on the supplier choices. In this condensed version the company background information was removed and so was suppliers´ price and product information. In addition to these changes some value measures were included for every CSR activity to ensure that the suppliers were interpreted as putting the same amount of money, time or effort into their CSR activity, no matter which type of activity the supplier engaged in. Each supplier pair was given the same value, but were described differently. A

small sample of 9 people filled out the questionnaire and I was able to discuss with some of them afterwards.

The results revealed that they perceived the value of the activities as equal and that some words or activities seemed to have created negative associations. The activity "Gala dinner" for instance, was frequently regarded as green wash (activities made to get a better reputation where environmental effects have secondary priority) and therefore ignored in favor of the (only) other option. The participants in this test also expressed how they weighed their options; the choices were often made between how they expected the environmental outcome to be, abreast of a slight preference to choose related CSR activities since they considered it to be better to start this kind of work at the own company first, and only after that continue to perform other activities.

Based on these findings some activities were changed or revised and yet another small pretest was made. See Pretest in Appendix 3. The test focused only on the expected and perceived environmental outcome of each activity. Compared to the previous test, where the answers were biased towards related CSR activities, this sample now showed a better balance between the alternatives.

## 3.3 CRITERIA AND SAMPLE SELECTION

A convenience sample of about 100 respondents was asked to read and fill out the questionnaire. The respondents were graduate students, all participating in one of the University of Gothenburg´s sustainability courses. The participants are presumed to have some knowledge and awareness about supply chains and sustainability concepts. Additionally, it is likely that these students may be working in this field soon. The group of participants is heterogeneous in respect of ethnicity and the participation in diverse master programs at School of Business, Economics and Law.

Respondents were appointed to one of the two groups through random assignment. This randomization is to let chance decide which of the respondents to be exposed to one of the values the experimental variable could take (Esaiasson, 2007). Approximately 50 random students in each group therefore found themselves engaged in a company that performed the unrelated type of CSR activity and the other group consequently found themselves engaged in a company that performed the related type of activities.

## 3.4 ANALYZING THE DATA

### *3.4.1 STATISTICAL METHODS*

For research designs like experiments, significance testing is the principal tool for inference. Whether differences between control and experiment groups are statistically significant is the only determiner to reject or accept a hypothesis. The types of significance test used in this paper are chi square, one sample t-test, paired t-test and independent t-test.

The main idea of calculating the chi square value is to review the discrepancy between expected frequencies in each cell and the observed value. The observed frequencies are obtained in a cross tabulation between two variables. The decision is that if chi square value is small it is safe to conclude that the observed value equals the expected values, i.e. the null hypothesis is accepted, but only under the condition that chi square value equals or is less than a specific critical value, which is based on number of categories, degrees of freedom and significance level (Körner & Wahlgren, 2000).

There is a family of t-distributions and when $\sigma$ (population standard deviation) is unknown and you only want to test a single sample, the one sample t-tests can be used to test if the mean value of a sample is different from a (chosen $\mu$ ) value.

Paired sample t-tests are conducted when samples are related or dependent. For hypothesis testing there is only one sample and what is investigated is if the mean of the distribution of differences in the values is 0. The decision rule is: $H_0$: $\mu=0$, $H_1$:$\mu\neq0$

The independent t-test is a two sample test which is often used to determine if the sampled populations have the same mean. A weighted mean of the two sample deviations is computed and used as an estimate of the unknown $\sigma$ (population standard deviation). We would expect the difference between the means to be 0. But what if the results yield a difference other than 0? Is that difference a real difference between the samples or is it due to chance? (Lind et al, 2008).

The p-value is a way to express whether $H_0$ is true or not. If this value is small the $H_0$ can be rejected and the smaller value the larger support for the alternative hypothesis. The limit value to use in hypothesis testing is up to the researcher to decide. However, it is common practice to use the 5 % limit (Körner & Wahlgren, 2000) but in some contexts the 10 % limit value can be used. The p-value (and the weight of evidence against $H_0$) can be interpreted; 0.10 indicates *some evidence* that $H_0$ is false. 0.05 indicates *strong evidence*, 0.01 *very strong evidence* and 0.001 *extremely strong evidence* that $H_0$ is not true. The decision about a limit value can also be set in relation to significance level; if the p-value is less than significance level the $H_0$ is rejected (Lind et al, 2008).

### 3.4.2 VARIABLES IN SPSS

Since Statistical Package for the Social Sciences (SPSS) analyses require numeric data, the questionnaire had to be translated into values. The first group is the one that in the fictitious company information engaged in a related type of CSR activity. This group is denoted as group 1 henceforth and it was given the variable name 1 in the SPSS data. The other group was provided with the unrelated type of CSR activity and this group is denoted as group 2.

In the data material the three different products; staff clothes, painkillers and health checkups were given the numbers 1, 2 and 3 respectively. The numbers were set to correspond with the theories about product information; search is the easiest goods to evaluate in advance etc.

The three questions related to the supplier choices were transformed to a scale, ranging from 1 to 7:

*How large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high | | | | | | | | Very low

       **1**                 **7**
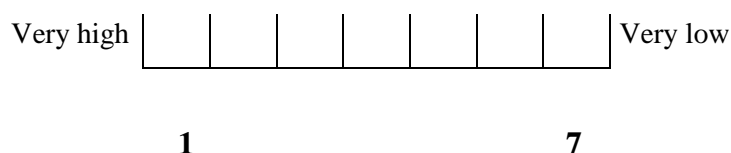
Number 4 indicates indifference between the two choices. For these questions, a large value equals a preference for the related supplier.

The questions related to the manipulation check questions, Section A, B and C, were given the same numeric scales, where *Large extent* and *Easy to evaluate in advance* are equivalent to value 1.

Two data sets were used in SPSS to be able to make suitable analyses. This means that I typed in data from the questionnaires in two different SPSS Statistics Data Editors due to the fact that some analyses methods required a different set up and other variables (e.g. preference for suppliers) to be able to work.

## 3.5 INTERNAL AND EXTERNAL VALIDITY

### 3.5.1 INTERNAL VALIDITY

Since the experiment heavily depended on the cases it was imperative to devote much time and effort on the cases in order to avoid construct validity and thereby possible threats to statistical conclusion validity. Prior to and whilst constructing the cases, I had the opportunity to consult knowledgeable persons in the fields of social psychology and quantitative research methods in statistics.

In respect of conformance between theories and the operational indicator, i.e. the cases, obviously, the smaller the gap the better. The scenario based experiment facilitates manipulation of variables in a fairly easy way and it is possible to access decision making situations between two groups with different background information. Mintz et al (2006) for instance, investigated how information is being accessed in the decision making process by manipulating certainty and framing. In this way it was possible to compare information searching as well as decision making processes in two groups (Mintz et al, 2006). The design here taken is constructed in a similar way as one of the papers referred to in the introduction (Mohr & Webb, 2005). Scenarios were created as background information and the participants were asked to imagine shopping for shoes. In the cases CSR level, price and CSR domain were manipulated subtly. With the starting point in their work I furthered this idea by adding other factors to the design.

To be able to make conclusions from the results and about the relationship that the independent and interaction variables in this study actually caused changes in the dependent variable, the design of the study also included manipulation checks. As such, these

manipulation check questions served as a qualifier of what the participants understood from the text and how they perceived the options they were confronted with.

An aspect to be aware of when creating experiments is that some participants may define their participation as a problem solving situation where the problem is to understand the experiment´s purpose, so called hypothesis guessing. Irrespective of guessing right or wrong, this phenomenon may negatively affect the results (Söderlund, 2010). Due to hypothesis guessing it is common to make smokescreens with the intention to mislead the respondents to reduce that risk. It was therefore important to state supplier differences and product characteristics implicitly, thereby increasing the likeliness to get valid answers. In other words; the case studies were conducted to divert the attention from the CSR choices to avoid that participants did see through the questions and answer the way they think was the most appropriate way to answer.

As mentioned, were the results from the pretests used to change and revise some parts of the described CSR activities prior to the actual test. Evidently, some activities created associations which biased the result which is why it became important to investigate these activities in isolation, hence the need for pretest 3. To get valid answers, options had to be regarded as equal in terms of (monetary) value and assumed environmental effect and had to create fairly symmetrical answer alternatives were by far the most difficult task. Nevertheless, the outcome from the pretests was useful and enabled the construction of activity options that were perceived as fairly equal.

### 3.5.2 EXTERNAL VALIDITY

Characteristically, experiments are artificial and some critics claim that experiments differ significantly from reality, which make it hard to generalize the results to other situations in real life (Söderlund, 2010). I agree. Nevertheless, the way I see it, the artificial experiment is a first step in a process to understand more about real life situations. In my view many studies are not intended to give a solution, rather add insights into a field or discourse.

The ability to make generalizations is limited for the obvious reason that the participants are students and not real purchasers. Naturally the selected group is not (yet) professionals which implies that conclusions and recommendations drawn from this experiment ought to be made carefully. However, results may still indicate assessment criteria and point a direction to others interested in the subject.

To be able to draw accurate conclusions from the material random assignment is essential to get homogenous groups. With randomization, participants are randomly assigned to the experimental group or to the control group which increases the likeliness of two rather similar groups. With some uncertainty margin, does chance account for that there are no differences between the two groups. If randomization is conducted in a proper way it is possible to calculate the risk of non systematic factors when the results are summarized (Esaiasson, 2007). The random allocation of participants into different groups is the admission ticket to statistical tests which analyses similarities and differences between groups and treatments, as random assignment offers known probability distributions and these distributions can be used to compute for instance p-values. A common misunderstanding is the presumption that statistical tests require random sampling, but randomized allocation to different groups do enables this option. Hence, in an experiment random assignment is enough to make use of statistical tests (Söderlund, 2010).

In contemporary research, college students are common actors in experiments, particularly in the social sciences. Some argue that students are a problematic group to use since they do not fully represent the broad population that they are a part of, for instance in terms of age and social class. Many researchers have compared college students with other participant groups and their reactions on the same stimuli with ambiguous results (Söderlund, 2010). For instance, students may be adequate substitutes in many decision making experiments concerning accounting (Liyanarachchi, 2007); biased results are likely to be found when relying on experiments with students asked to play the role of national security policy makers (Mintz et al, 2006), whereas a meta study investigating psychological relationships found no *systematic* pattern to differences observed between students and non students and the authors recommended to replicate student based research with non students before attempting any generalizations (Peterson, 2001).

# 4. RESULTS AND ANALYSES

## 4.1 MANIPULATION CHECKS

### 4.1.1 MANIPULATION CHECK ON OWN RELATEDNESS

The first step was to find out whether the participants perceived themselves as being either related or unrelated. Group 1 was told that their company continuously revised and improved

routines for maintenance and usage of their buildings and for waste disposal (Related type of CSR activity). Group 2 was informed that their company made investments in Clean Development Mechanism (CDM) projects in East Africa (Unrelated type of CSR activity).

To be able to test whether the manipulation of the participants own relatedness was successful several questions about the company, the potential suppliers and product types were added to the questionnaire (see Appendix 2, Experiment material). The results from the first question (Section A: MedCorp) *To what extent do you judge the sustainability activities performed by MedCorp to be related to their business?* with a scale ranging from Large extent to Small extent was used to conduct an independent t-test (Table 1 below). The test showed that group 1 does perceive the CSR activities stronger linked to their own business activities than group 2 (mean values 3.43 and 4.09, Large extent gives a small value and vice versa). There is a significant (p-value = 0,027) perceived difference between group 1 and 2, which is why the conclusion is that the manipulation has been successful.

**Group Statistics**

| | Related or Unrelated company | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| A1 | Related | 49 | 3,43 | 1,275 | ,182 |
| | Unrelated | 43 | 4,09 | 1,556 | ,237 |

**Independent Samples Test**

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| A1 | 2,465 | ,120 | -2,251 | 90 | ,027 | -,664 | ,295 | -1,251 | -,078 |

Table 1: Results of independent samples test on own relatedness

### 4.1.2 MANIPULATION CHECK ON RELATEDNESS OF THE SUPPLIERS

The next step was to test the manipulation of supplier activities, i.e. analyze whether the participants viewed the suppliers with related CSR activities as being more related than the unrelated suppliers. The questions connected to this manipulation check are found in Appendix 2, Experimental material, under section B: Potential suppliers.

The paired samples T-test (Table 2 below) comparing the two painkiller suppliers (pair 1) showed that the respondents judged the second supplier´s sustainability activity as being more

related to the core business than the first supplier (mean values 4.25 and 3.11), i.e. the respondents view the supplier with the related type of CSR as more related. The same was true for, pair 2, (mean values 3.25 and 4.16) and for pair 3 (mean values 4.41 and 3.65). The numbers are inversed in pair 2 since the suppliers were presented in that order in the case: Number 1, 4 and 5 were assigned the unrelated type of activity, while 2, 3 and 6 were given the related type of activity. The significance values (0.00, 0.02 and 0.02) are small and less than 0.05, why it is safe to conclude that the mean differences between the pairs are not due to chance and the manipulation of the suppliers´ relatedness has been successful.

Paired Samples Statistics

|  |  | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | B1 | 4,25 | 93 | 1,672 | ,173 |
|  | B2 | 3,11 | 93 | 1,564 | ,162 |
| Pair 2 | B3 | 3,25 | 91 | 1,677 | ,176 |
|  | B4 | 4,16 | 91 | 1,607 | ,168 |
| Pair 3 | B5 | 4,41 | 91 | 1,563 | ,164 |
|  | B6 | 3,65 | 91 | 1,508 | ,158 |

Paired Samples Correlations

|  |  | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | B1 & B2 | 93 | -,077 | ,464 |
| Pair 2 | B3 & B4 | 91 | -,444 | ,000 |
| Pair 3 | B5 & B6 | 91 | -,071 | ,506 |

Paired Samples Test

|  |  | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | 95% Confidence Interval of the Difference | |  |  |  |
|  |  | Mean | Std. Deviation | Std. Error Mean | Lower | Upper |  |  |  |
| Pair 1[a] | B1 - B2 | 1,140 | 2,376 | ,246 | ,651 | 1,629 | 4,627 | 92 | ,000 |
| Pair 2[b] | B3 - B4 | -,912 | 2,791 | ,293 | -1,493 | -,331 | -3,117 | 90 | ,002 |
| Pair 3[c] | B5 - B6 | ,758 | 2,248 | ,236 | ,290 | 1,226 | 3,218 | 90 | ,002 |

a. Painkiller supplier

b. Staff clothes supplier

c. Health checkup supplier

Table 2: Results of paired samples test on relatedness of suppliers

### 4.1.3 MANIPULATION CHECK ON TYPE OF PRODUCT

The final step in the manipulation check was to find out about the participants´ general opinion about the different products and if they judged each product type easy or hard to

evaluate in advance. The mean values (3.22, 4.36 and 5.09) are in accordance with assumed outcomes: Staff clothes (search goods) was judged easiest to evaluate in advance, painkillers (experience good) a bit harder and finally, health checkups were viewed as the hardest goods to evaluate in advance (Table 3 below). P-values are small and it is safe to conclude that the mean differences in the pairs are not due to chance. The manipulation check on product types has been successful.

Paired Samples Statistics

|  |  | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | Painkillers | 4,36 | 91 | 1,650 | ,173 |
|  | Staff clothes | 3,22 | 91 | 1,583 | ,166 |
| Pair 2 | Staff clothes | 3,22 | 91 | 1,583 | ,166 |
|  | Health checkups | 5,09 | 91 | 1,603 | ,168 |
| Pair 3 | Health checkups | 5,09 | 91 | 1,603 | ,168 |
|  | Painkillers | 4,36 | 91 | 1,650 | ,173 |

Paired Samples Correlations

|  |  | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | Painkillers & Staff clothes | 91 | ,080 | ,452 |
| Pair 2 | Staff clothes & Health checkups | 91 | ,119 | ,260 |
| Pair 3 | Health checkups & Painkillers | 91 | ,126 | ,232 |

Paired Samples Test

|  |  | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  |  |  | 95% Confidence Interval of the Difference | |  |  |  |
|  |  | Mean | Std. Deviation | Std. Error Mean | Lower | Upper |  |  |  |
| Pair 1 | Painkillers - Staff clothes | 1,143 | 2,194 | ,230 | ,686 | 1,600 | 4,970 | 90 | ,000 |
| Pair 2 | Staff clothes - Health checkups | -1,868 | 2,115 | ,222 | -2,309 | -1,428 | -8,428 | 90 | ,000 |
| Pair 3 | Health checkups - Painkillers | ,725 | 2,150 | ,225 | ,277 | 1,173 | 3,218 | 90 | ,002 |

Table 3: Results of paired samples test on type of product

*4.1.4 MANIPULATION CHECK REMARK*

Overall, the results from the manipulation checks proved successful. However, the manipulation check on relatedness of the suppliers discussed in 4.1.2 needs further consideration. When running a paired samples t-test on each group separately (Table 4 below), the results differed between the two groups. When group 1 had results similar to the numbers presented above, yet with even smaller significance values, the story for group 2 was

quite different: The mean differences between the pairs were less than for the whole group and were only significant in pair 1. That is, the mean differences were only significantly supported for the painkiller supplier.

Group 2 showed that they had difficulties to distinguish between suppliers´ activities. To them it seems unclear what is regarded as a related or an unrelated activity. One reason may be the results of the manipulation check on own relatedness; Even though successful, the results for group 2 are rather modest. Thus, there may be a connection between the uncertainty about the own activities and the assessment of supplier activities.

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | B1 | 4,32 | 44 | 1,695 | ,256 |
| | B2 | 3,52 | 44 | 1,548 | ,233 |
| Pair 2 | B3 | 3,45 | 44 | 1,758 | ,265 |
| | B4 | 3,82 | 44 | 1,715 | ,259 |
| Pair 3 | B5 | 4,25 | 44 | 1,557 | ,235 |
| | B6 | 3,91 | 44 | 1,682 | ,254 |

Paired Samples Correlations

| | | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | B1 & B2 | 44 | -,198 | ,198 |
| Pair 2 | B3 & B4 | 44 | -,304 | ,045 |
| Pair 3 | B5 & B6 | 44 | ,000 | 1,000 |

Paired Samples Test

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | | | | |
| | | Mean | Std. Deviation | Std. Error Mean | Lower | Upper | | | |
| Pair 1 | B1 - B2 | ,795 | 2,511 | ,379 | ,032 | 1,559 | 2,101 | 43 | ,042 |
| Pair 2 | B3 - B4 | -,364 | 2,804 | ,423 | -1,216 | ,489 | -,860 | 43 | ,395 |
| Pair 3 | B5 - B6 | ,341 | 2,292 | ,346 | -,356 | 1,038 | ,987 | 43 | ,329 |

Table 4: Results of paired samples test on relatedness of suppliers, group 2 only.

## 4.2 THE EFFECT OF CSR TYPE ON SUPPLIER CHOICES

### *4.2.1 HYPOTHESIS H1a*

Are there choice differences between the groups? An independent T-test was conducted (Table 5 below), where group 2 served as a reference group to find out if there were differences between the mean values.

The group statistics, which include all three product categories (staff clothes, painkillers and health checkups) show that there is a mean difference (0.569) between the two groups and group 1 has a higher mean. The values for the variable "Preference for related or unrelated supplier" is ranging from 1 to 7, where a high number indicates larger preference for Related suppliers. The mid value 4, on the 7 point scale indicates that the participant is indifferent when choosing a supplier with related or unrelated CSR activities.

Implicit here, is the null hypothesis, $H_0$, which would indicate that there are no differences between the two groups observed. The research hypotheses $H_1$ are the alternative hypothesis that is accepted if the data provide evidence that $H_0$ is false. The t-value (2,848) in this test is outside the 95 % confidence interval of the difference, which means that $H_0$ is rejected. How confident am I in rejecting the $H_0$ hypothesis? Since the p-value is less than 5 % I can reject the null hypothesis that the two groups have the same mean.

Group Statistics

| | Related or Unrelated company | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Preference for related or unrelated supplier | Related | 146 | 4,71 | 1,589 | ,132 |
| | Unrelated | 132 | 4,14 | 1,742 | ,152 |

Independent Samples Test

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Preference for related or unrelated supplier | ,980 | ,323 | 2,848 | 276 | ,005 | ,569 | ,200 | ,176 | ,962 |

Table 5: Results of independent test, effect of CSR type on supplier choices

The results from this independent test show that there was a *difference* in the mean numbers assembled between the two groups. However, to be sure that the groups actually preferred related CSR activities at suppliers, one tailed t-tests on each group was conducted to

investigate the mean values in relation to the mid value, 4. Thus, investigating if these values are significant in relation to the indifference value 4, this is the value between related and unrelated answering alternatives.

Hence, to find out if the *related* group is more prone to choose *related* suppliers the one sample t-test was conducted (Table 6 below). At the 0.05 significance level, is it reasonable to conclude that the mean is *greater than* 4? The following hypotheses were taken: $H_0:\mu=4$ and $H_1:\mu>4$. The critical value is 1.656 (region of rejection in right tail). The decision is to reject $H_0$ if the computed t-value is greater than 1.656. Since the t-value is larger (5.363), $H_0$ is rejected at the 0.05 significance level.

Consequently, the first hypothesis *"Buying firms with related CSR activities are more likely to choose suppliers with related CSR activities over suppliers with unrelated CSR activities"* is confirmed by the test results.

One-Sample Statistics

|  | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Preference for related or unrelated supplier | 146 | 4,71 | 1,589 | ,132 |

One-Sample Test

|  | Test Value = 4 | | | | | |
|---|---|---|---|---|---|---|
|  | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|  |  |  |  |  | Lower | Upper |
| Preference for related or unrelated supplier | 5,363 | 145 | ,000 | ,705 | ,45 | ,97 |

Table 6: Results of one sample test, effect of CSR type on supplier choices, group 1

### 4.2.2 HYPOTHESIS H1b

To find out if the *unrelated* group is more prone to choose *unrelated* suppliers, a one sample t-test was conducted (Table 7 below). At the 0.05 significance level, is it reasonable to conclude that the mean is *less than* 4? The following hypotheses were taken: $H_0:\mu=4$ and $H_1:\mu<4$. The critical value is -1.656 (negative since the region of rejection is in the left tail). The decision is to reject $H_0$ if the computed t-value is less than -1.656. Since the t-value is larger (0.899) than this value and also to the right of the region, $H_0$ is not rejected at the 0.05

significance level. To put it differently, there is insufficient evidence that the mean of this group is less than 4, this means that **H₁ᵦ**

Buying firms with *unrelated* CSR activities are more likely to choose suppliers with *unrelated* CSR activities over suppliers with related CSR activities <u>cannot be confirmed.</u>

One-Sample Statistics

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| Preference for related or unrelated supplier | 132 | 4,14 | 1,742 | ,152 |

One-Sample Test

| | Test Value = 4 | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | |
| | t | df | Sig. (2-tailed) | Mean Difference | Lower | Upper |
| Preference for related or unrelated supplier | ,899 | 131 | ,370 | ,136 | -,16 | ,44 |

Table 7: Results of one sample test, effect of CSR type on supplier choices, group 2

### 4.2.3 ANALYZING THE RESULTS, H1

The intention of the first two hypotheses was to investigate what effect different CSR domains in the buying company had on the choice of suppliers. Based on assumptions about strategic CSR and consumer demand (Baron, 2001; Roberts, 2003), where reputation and differentiation are main motives of either choosing unrelated or related supplier depending on what image or differentiation strategy the company wanted to take, the hypotheses was that either choice had the same probability to be chosen. Other than that, I expected the related (unrelated) company to choose related (unrelated) suppliers (e.g. Handfield, 2002; Grant, 2005). However, only $H_{1a}$ could be confirmed by the test results. The related types of suppliers were preferred in both groups, although the unrelated group had chosen related suppliers to a less extent. What are possible reasons to why $H_{1b}$ could not be confirmed?

One reason may be found in the first manipulation check; the differences in how the participants perceive the CSR activity in the own company between the two groups are pretty small. Each mean is close to the mid value (especially in the unrelated group), which indicates that even though the manipulation check was successful, some participants in that group actually perceive themselves as being related. Under the assumption of being in a company

engaging in a related form of CSR activities their choices actually are in conformance with what was hypothesized.

Another option is that the participants in this group actually preferred the related option over the unrelated because it was connected to the core business (Davis, 1994). This preference could have generated related supplier choices within group 2. When constructing the cases, two CSR aspects were imperative; monetary effort and the environmental effect of activities. Both these aspects had to be regarded as equal between the supplier pairs. Nevertheless, even if the participants considered the options as fairly equal (results from the last pretest), a preference for related activities may exist. There is also a chance that, if the respondents actually did recognize the unrelated type of CSR activities in the own company, they considered these activities less serious or desirable and therefore wanted to "compensate" with a supplier that engaged in related CSR.

A third aspect involves the results from the second manipulation check regarding suppliers´ CSR activities. Although mean values indicated that group 2 perceived supplier activities as intended, the differences between the suppliers were a lot less compared to the whole group and more importantly, was only significant for the painkiller supplier. This means that compared to group1, this group did not perceive the suppliers´ CSR types in the same way and the distinction between them was not clear to this group.

Even though hypothesis $H_{1b}$ could not be confirmed by the test results, there still were differences in the results between the groups. This means that the background information in the case did have an impact on how the respondents answered. So even if only the first hypothesis could be confirmed, there are still differences both in how participants view themselves and also how they view the suppliers. Similar to Mohr and Webb (2005) I found differences when constructing case scenarios and similar to their results mine are stronger in the related case than in the unrelated case as well.

## 4.3 THE INFLUENCE OF PRODUCT TYPES

### 4.3.1 HYPOTHESES H2a AND H2b

To get a general view of what choices the respondents made for each type of good, a cross tabulation was conducted. The cross tabulation is divided in three sections representing type of good 1 (search), 2 (experience goods) and 3 (credence goods). For each product, 7 options

of preference for related or unrelated suppliers is stated, where 1 is equivalent to an unrelated choice and 7 a related choice.

In table 8 below, the unrelated and related groups´ choices are presented both in actual numbers and in percentages. The percentage is summarized column wise, which means that the percentage in each column is calculated vertically on each group, and for each type of goods. For instance, the marked area in the cross tabulation is interpreted as 7 out of 49 participants in group 1 (14.3%) choose number 3, which corresponds to a rather unrelated choice for product 1. In comparison, group 2 presents less participants choosing number 3 (6.8 %) for that same product.

To further analyze the cross tabulation, the Chi square test (Table 9 below) can be used to see if there is a statistical relation between the variables. By assuming following hypotheses we can analyze the results:

$H_0$= There is no relationship between choice of supplier (Preference for related or unrelated supplier) and group belonging (Related or Unrelated company)

$H_1$= There is a relationship between choice of supplier (Preference for related or unrelated supplier) and group belonging (Related or Unrelated company)

The critical value for 6 degrees of freedom (df) and a 5 % significance level is 12,592 and the decision rule is to reject $H_0$ if the computed value of chi square is greater than this value.

The (two sided) Chi square test was made to analyze each product category separately. Considering the values for staff clothes and painkillers, the $H_0$ cannot be rejected, i.e. I cannot prove a difference in the relationship. On the other hand, $H_0$ can be rejected (hence alternative hypothesis accepted) for product 3, health checkups. For this product, there is a casual nexus between supplier choice and which group participants are in. The p-values reported in the chi square test also result in the same decision.

| Type of good | | | | Related or Unrelated company | | |
|---|---|---|---|---|---|---|
| | | | | Unrelated | Related | Total |
| 1 | Preference for related or unrelated supplier | 1 | Count | 4 | 2 | 6 |
| | | | % within Related or Unrelated company | 9,1% | 4,1% | 6,5% |
| | | 2 | Count | 8 | 7 | 15 |
| | | | % within Related or Unrelated company | 18,2% | 14,3% | 16,1% |
| | | 3 | Count | 3 | 7 | 10 |
| | | | % within Related or Unrelated company | 6,8% | 14,3% | 10,8% |
| | | 4 | Count | 9 | 6 | 15 |
| | | | % within Related or Unrelated company | 20,5% | 12,2% | 16,1% |
| | | 5 | Count | 7 | 11 | 18 |
| | | | % within Related or Unrelated company | 15,9% | 22,4% | 19,4% |
| | | 6 | Count | 8 | 11 | 19 |
| | | | % within Related or Unrelated company | 18,2% | 22,4% | 20,4% |
| | | 7 | Count | 5 | 5 | 10 |
| | | | % within Related or Unrelated company | 11,4% | 10,2% | 10,8% |
| | Total | | Count | 44 | 49 | 93 |
| | | | % within Related or Unrelated company | 100,0% | 100,0% | 100,0% |
| 2 | Preference for related or unrelated supplier | 1 | Count | 2 | 2 | 4 |
| | | | % within Related or Unrelated company | 4,5% | 4,1% | 4,3% |
| | | 2 | Count | 5 | 4 | 9 |
| | | | % within Related or Unrelated company | 11,4% | 8,2% | 9,7% |
| | | 3 | Count | 7 | 8 | 15 |
| | | | % within Related or Unrelated company | 15,9% | 16,3% | 16,1% |
| | | 4 | Count | 13 | 7 | 20 |
| | | | % within Related or Unrelated company | 29,5% | 14,3% | 21,5% |
| | | 5 | Count | 6 | 10 | 16 |
| | | | % within Related or Unrelated company | 13,6% | 20,4% | 17,2% |
| | | 6 | Count | 7 | 12 | 19 |
| | | | % within Related or Unrelated company | 15,9% | 24,5% | 20,4% |
| | | 7 | Count | 4 | 6 | 10 |
| | | | % within Related or Unrelated company | 9,1% | 12,2% | 10,8% |
| | Total | | Count | 44 | 49 | 93 |
| | | | % within Related or Unrelated company | 100,0% | 100,0% | 100,0% |
| 3 | Preference for related or unrelated supplier | 1 | Count | 5 | 1 | 6 |
| | | | % within Related or Unrelated company | 11,4% | 2,1% | 6,5% |
| | | 2 | Count | 5 | 0 | 5 |
| | | | % within Related or Unrelated company | 11,4% | ,0% | 5,4% |
| | | 3 | Count | 5 | 3 | 8 |
| | | | % within Related or Unrelated company | 11,4% | 6,3% | 8,7% |
| | | 4 | Count | 8 | 11 | 19 |
| | | | % within Related or Unrelated company | 18,2% | 22,9% | 20,7% |
| | | 5 | Count | 13 | 14 | 27 |
| | | | % within Related or Unrelated company | 29,5% | 29,2% | 29,3% |
| | | 6 | Count | 5 | 13 | 18 |
| | | | % within Related or Unrelated company | 11,4% | 27,1% | 19,6% |
| | | 7 | Count | 3 | 6 | 9 |
| | | | % within Related or Unrelated company | 6,8% | 12,5% | 9,8% |
| | Total | | Count | 44 | 48 | 92 |
| | | | % within Related or Unrelated company | 100,0% | 100,0% | 100,0% |

Table 8: Crosstabulation of preference for related or unrelated supplier and type of good, across the two groups

Chi-Square Tests

| Type of good | | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|---|
| 1 | Pearson Chi-Square | 4,039[a] | 6 | ,671 |
| | Likelihood Ratio | 4,099 | 6 | ,663 |
| | Linear-by-Linear Association | ,517 | 1 | ,472 |
| | N of Valid Cases | 93 | | |
| 2 | Pearson Chi-Square | 4,438[b] | 6 | ,618 |
| | Likelihood Ratio | 4,482 | 6 | ,612 |
| | Linear-by-Linear Association | 1,403 | 1 | ,236 |
| | N of Valid Cases | 93 | | |
| 3 | Pearson Chi-Square | 13,084[c] | 6 | ,042 |
| | Likelihood Ratio | 15,389 | 6 | ,017 |
| | Linear-by-Linear Association | 9,771 | 1 | ,002 |
| | N of Valid Cases | 92 | | |

a. 4 cells (28,6%) have expected count less than 5. The minimum expected count is 2,84.
b. 5 cells (35,7%) have expected count less than 5. The minimum expected count is 1,89.
c. 8 cells (57,1%) have expected count less than 5. The minimum expected count is 2,39.

Table 9: Results of chi square tests related to the results in table 7.

To be able to answer my second hypotheses, $H_{2a}$ and $H_{2b}$, a paired sample test was conducted (Table 10 below), which only included the participants in group 1. Pair wise comparisons between experience and search good (pair 1) and between credence and search goods (pair 2) were made. As expected, the mean value increased in accordance with the level of product, which means that related supplier choices for staff clothes was less frequent than related supplier choices for health checkups. However, to be certain that this pattern is not due to chance each pair must be investigated further. In pair 1 the $H_0$ cannot be rejected due to the t-value (0,583). This means that $H2_a$

"*Buying firms with related CSR activities are more likely to choose suppliers with related CSR activities over suppliers with unrelated CSR activities, when the product is experience goods rather than search goods*" cannot be confirmed.

In the second pair the computed t-value is 2,563 and the two tailed p-value is 0,014, which is less than 0,05, and the $H_0$ hypothesis is rejected. This means that $H2_b$

*"Buying firms with related CSR activities are more likely to choose suppliers with related CSR activities over suppliers with unrelated CSR activities, when the product is credence goods rather than search goods."* is confirmed.

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | painkillers | 4,59 | 49 | 1,682 | ,240 |
| | staffclothes | 4,41 | 49 | 1,743 | ,249 |
| Pair 2 | checkups | 5,08 | 48 | 1,269 | ,183 |
| | staffclothes | 4,40 | 48 | 1,759 | ,254 |

Paired Samples Correlations

| | | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | painkillers & staffclothes | 49 | ,172 | ,238 |
| Pair 2 | checkups & staffclothes | 48 | ,280 | ,054 |

Paired Samples Test

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 95% Confidence Interval of the Difference | | | | |
| | | Mean | Std. Deviation | Std. Error Mean | Lower | Upper | | | |
| Pair 1 | painkillers - staffclothes | ,184 | 2,205 | ,315 | -,450 | ,817 | ,583 | 48 | ,563 |
| Pair 2 | checkups - staffclothes | ,688 | 1,858 | ,268 | ,148 | 1,227 | 2,563 | 47 | ,014 |

Table 10: Results of paired samples test of preference for related or unrelated supplier and type of good, group 1 only.

### 4.3.2 ANALYZING THE RESULTS, H2

The demand side of the supply and demand framework represents assumptions that CSR investments add attributes to a product, such as reputation, reliability and quality (McWilliams & Siegel, 2001) since consumers today want to be confident that the products they buy do not harm the environment (Roberts, 2003) and believe that companies which support CSR activities provide products of higher quality and are more trustworthy. This perspective enables firms to view CSR as a form of investment (McWilliams & Siegel, 2001) and for these reasons the two second hypotheses were created to investigate how choices were made among potential purchasers and if any choice pattern was possible to discern in the different options presented to them.

According to Siegel and Vitaliano (2007), investments in CSR are consistent with patterns of strategic CSR and the highest probability of investing in CSR activities were the companies selling experience goods and credence services (Siegel & Vitaliano 2007). Instead of examining if CSR was more prevalent in experience and credence goods choices, the focus in my study was to investigate if companies engaging in related CSR activities had a preference for choosing related suppliers (the main nexus in my experiment) when the product was more

advanced, i.e. experience and credence goods compared to search goods. The results partly supported Siegel´s and Vitaliano´s (2007) findings since $H_{2b}$ was confirmed by the test results: The respondents choose the related suppliers more frequent when choosing a health checkup supplier, compared to a staff clothes supplier, which is in line with the theories earlier referred to.

$H_{2a}$, on the other hand could not be confirmed by the test results. The mean values (4.41, 4.59 and 5.08) in the paired samples t-test indeed show mean values in accordance with what was expected, but the results are not significant.

The manipulation check on the type of product was proved successful, which indicates that respondents actually perceive a difference between the products. However, one possibility is that the manipulation check questions, where I asked for their general opinion, are not applicable to the products in the case. In other words, the manipulation check was stated in the end of the questionnaire, and not until then they might have realized the connection between product types and the supplier choices in the case.

Even though one of the hypotheses could not be supported, the answers given by the participants still forms a pattern. Important to keep in mind is that the respondents had no pronounced purchasing policy or strategic directions prior to the decisions; only the company information was provided. Yet there was a link and a clear pattern in their choices.


## 5. CONCLUSIONS AND RECOMMENDATIONS


In the quantitative study, much of the work is made *before* the actual experiment. I have been working in three phases with this project: (1) *Hypotheses development:* I used theories which in sum added to the theory development that become the foundation of my study and thus, the hypotheses development. In this way, theory is therefore a base rather than a mean to explain the results. (2) *Experiment design:* After the (theoretical) hypotheses development was made, the next step was to design the experiments, with the main purpose to enable the measurement of my hypotheses. My challenge was to create an accessible case, where variables also could be easily measured. Pretests and the actual test where then distributed to respondents. (3) *Hypotheses testing*: As a result of the work with theories as well as with hypotheses

development, parts of these theories were confirmed in the hypotheses tests that I analyzed in SPSS.

Two research questions guided this study: *(A) Does a company´s own environmental responsibility activities have an influence on supplier choices?* Yes. In this study, I investigated to what extent a company´s own CSR activities matters when making supplier choices. The results showed that buying companies that engaged in related CSR activities are more likely to choose suppliers that engage in the related form of CSR too. Members in the companies with unrelated CSR activities chose related suppliers as well, but unlike the former group this group chose related activities to a lesser extent. *(B) If different types of products are considered, does that have an impact on the choices?* Yes. The respondents chose the related suppliers more frequent when choosing a health checkup supplier, compared to a staff clothes supplier. The comparison between painkillers and staff clothes showed mean values in accordance with what was expected, however the results were not significant.

In the present study professional purchasers were not used as participants. Although not claiming that such experimental results can always be generalized to professional purchasers, they still may indicate the preference for different suppliers in their decision making. The advantage of using an experiment is that it provides a possibility to study a phenomenon and in this case also allows the researcher to understand contextual influences on the participants. Nevertheless, the question regarding the external validity remains. How serious these limitations of using students in this kind of research are, needs to be explored in future research, if the objective is to apply the results to actual purchasing decisions.

The background information about MedCorp and its potential suppliers was invented to see if it could trigger a specific action among the respondents. The intent was to implicitly state a direction or policy of MedCorp, by just mentioning what the company does in terms of CSR and their product range. The possibility to generalize the findings from this scenario based case is limited in two respects: Firstly, the socially responsible activities were all of environmental nature. The decision was made to avoid personal preference for certain socially responsible behavior, but this approach leaves the possibility open that participants do not care much for these activities and the results might be different if other socially responsible topics were presented. Secondly, even if the manipulation check was successful on type of product, some people may still view, for instance, painkillers as easier to evaluate in advance than clothes. Choosing other products or industries may therefore end up in different results.

Despite the above mentioned considerations, the answers made by the participants still forming a pattern. Important to keep in mind is that the respondents had no pronounced purchasing policy or strategic directions prior to the decisions; only the company information was provided. The only thing that distinguished the background information between the groups was the two sentences:

*"MedCorp actively seeks to reduce its environmental impact and spends a hundred thousand dollars yearly to continuously revise and improve routines for maintenance and usage of their buildings and for waste disposal"*

*"On a yearly basis, MedCorp devotes a significant contribution of a hundred thousand dollars to a fund, which invests in Clean Development Mechanism (CDM) projects in East Africa"*

Having read one of these sentences the groups chose in different ways. From the buying firm´s perspective, does this imply that a company´s other activities and routines may have analogous effects on employees? Said differently, can this finding be translated into other areas within a company? Considering transparency and open mindedness for instance, is that accounted for in the own company activities? These and similar thoughts open up for future research not only in this, but also in other areas where this experimental design could be utilized. The scenario based cases could be used as an instrument or a starting point in other projects. Future research may involve a similar design, but with other variables. For instance, instead of using types of goods, size of suppliers or first and second tier suppliers could be used. In this way, variables are interchangeable and different parts can be elaborated on.

As a concluding remark I return to the suppliers. To be related or unrelated? From a supplier´s point of view, what are the implications of my results? Suppliers which engaged in the related type of CSR activities were preferred in both participant groups, even if this preference was less evident in group 2. From a strategic perspective, suppliers should therefore engage in the related type of CSR activities, irrespective of what activities the buyer pursues. Further, the results did indicate that it is more important to invest in CSR when the product is credence goods compared to when it is staff clothes, hence does industry matter to suppliers CSR decisions.

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# Appendix 1: Classification of search, experience and credence goods

| Search Goods | Nondurable Experience Goods | Durable Experience Goods | Experience Services | Credence Services |
|---|---|---|---|---|
| Clothing | Health/Beauty | Housing | Advertising | Investments |
| Furniture | Cigarettes | Automobiles | Transportation | Trusts |
| Footwear | Food | Appliances | Vacations | Portfolio Management |
| Carpets | Cleaners | Hardware | Education | Mutual Funds |
| Mattresses | Newspapers | Drugs | Training | Insurance |
| | Office Supplies | Glasses | Tours | Health Care |
| | | Software | Transportation | Weight Control |
| | | Signs | Banking | Car Repairs |
| | | Books | Car Rentals | |
| | | Sporting Goods | Entertainment | |
| | | Hobbies | Direct Mail | |
| | | Utilities | Real Estate | |
| | | | Cargo | |
| | | | Job Placement | |
| | | | Information | |
| | | | Nursing Homes | |
| | | | Sports Clubs | |
| | | | Hotels | |
| | | | Waste Collection | |
| | | | Landscaping | |

Source: Siegel and Vitaliano, 2007, p.780

## Appendix 2: Experimental material

Dear Respondent,

Please carefully consider the information related to each question before making your choice of answer. The situation and conditions described below is intended to be used as a framework for your answers.

You are the purchasing manager of a private owned health care centre, MedCorp, situated in the central parts of Gothenburg. MedCorp is concentrating on occupational health care and provides a wide range of services, such as health checkups, medical examinations and vaccinations. Other than that, MedCorp also offers ergonomic and working environment assessments. MedCorp actively seeks to reduce its environmental impact and spends a hundred thousand dollars yearly to continuously revise and improve routines for maintenance and usage of their buildings and for waste disposal.

At the moment you – the purchasing manager – are in the process of choosing three new suppliers, which from now on, will be included in MedCorp´s supplier base. It is decided to include: a) one supplier for painkillers (for headaches etc.), b) one supplier for staff clothing, and c) one supplier that can be responsible for the growing demand of health checkups. The three suppliers are intended to replace less successful previous suppliers.

You have now narrowed the number of suitable suppliers down to two for each product. In the following text these suppliers are introduced to you. As a purchasing manager, which supplier would you chose for each product?

Please turn the page.

Dear Respondent,

Please carefully consider the information related to each question before making your choice of answer. The situation and conditions described below is intended to be used as a framework for your answers.

You are the purchasing manager of a private owned health care centre, MedCorp, situated in the central parts of Gothenburg. MedCorp is concentrating on occupational health care and provides a wide range of services, such as health checkups, medical examinations and vaccinations. Other than that, MedCorp also offers ergonomic and working environment assessments. **On a yearly basis, MedCorp devotes a significant contribution of a hundred thousand dollars to a fund, which invests in Clean Development Mechanism (CDM) projects in East Africa.**

At the moment you – the purchasing manager – are in the process of choosing three new suppliers, which from now on, will be included in MedCorp´s supplier base. It is decided to include: a) one supplier for painkillers (for headaches etc.), b) one supplier for staff clothing, and c) one supplier that can be responsible for the growing demand of health checkups. The three suppliers are intended to replace less successful previous suppliers.

You have now narrowed the number of suitable suppliers down to two for each product. In the following text these suppliers are introduced to you. As a purchasing manager, which supplier would you chose for each product?

Please turn the page.

## Supplier # 1 – Painkillers

The first supplier of painkillers has a product price of € 1.5, per carton of 60 pills and € 1.0 per carton of 30 pills. The daily amount of painkiller cartons sold is about 20 and 30 cartons respectively. The total product cost is € 60 a day. To this, an administrative cost of € 0.1 per unit is added, resulting in a total cost of € 65 each day. The supplier holds a FDA (Food and Drug Administration) certificate. This supplier organizes a charity event twice a year for the benefit of various environmental causes. The next event will emphasize the problems of chemical pollution. A 10 person committee has been engaged fulltime in the project from January to March.

## Supplier # 2 – Painkillers

The second painkiller supplier also holds a FDA (Food and Drug Administration) certificate. The cost of the larger painkiller carton, 60 pills, is € 1.5, while the cost of the smaller carton is € 1.3. The daily amount of painkiller cartons sold is about 20 and 30 cartons respectively. The calculated daily product cost is therefore € 69. However, a quantity discount of € 4 is given to buyers ordering more than 40 units, resulting in a total cost of € 65 each day. The supplier has changed the way it produces their product and managed to reduce the level of material consumption and therefore also reduced their waste levels. This step was possible to achieve by involving 10 staff for 3 month.

*How large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |   |   |   |   |   |   |   | Very low

## Supplier # 1 – Staff clothes

The supplier produces a product using climate neutral, ecological cotton. The process to change from conventional to ecological cotton took 5 months to complete. Buying from this supplier leads to that an additional charge for handling of € 25 must be taken into account. A weekly purchase of 10 uniforms is estimated to be € 47 if the ability to alter sizes in each buy is included. The total weekly cost is therefore valued to be approximately € 72.

## Supplier # 2 – Staff clothes

The second supplier produces two-piece uniforms in different styles and fabrics. The cost of 10 uniforms, which is estimated to be the weekly supplied quantity, is € 50. Included in the price is the possibility to get any combination of choice of the sizes S, M and L. In addition to this, the supplier adds an extra charge intended to cover their warehouse costs, to the amount of € 22 every week. In total, the cost is therefore € 72. This supplier has created a fund that aims at preserve the tropical forests mainly in Brazil, an investment equivalent to 5 months work.

*How large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |   |   |   |   |   |   |   | Very low

Supplier # 1 – Health checkups

The first supplier is a flexible staffing company that ensures trained staff to reasonable prices. To fulfill the growing demand of health checkups, roughly 4 full time positions are required every week. Since 180 hours are expected, you calculate the total weekly cost to be € 900. Other than the basic salary, each health checkup provided is also connected to flat commission, resulting in a total weekly cost of € 1100. The supplier supports a voluntary organization with a 50 thousand dollar contribution, aiming at increasing the awareness of the impact of deforestation.

Supplier # 2 – Health checkups

This second supplier provides the services through a recruiting centre and guarantee qualified personnel. It has also decided to use public transport to the greatest possible extent, and when not possible, use biofuels for their company cars. This investment is worth 50 thousand dollars a year. The supplier are able to meet the requirements of the increasing need for health checkups, since this company has the capacity of letting out 4 employees on hire, or approximately 180 hours. Commission system and other benefits included, the total cost therefore lie at € 1100.

*How large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |___|___|___|___|___|___|___| Very low

Below you will find questions connected to MedCorp and the potential suppliers. Please rate your answers according to what you know so far.

**Section A: MedCorp**

1. MedCorp´s sustainability activities were mentioned in the background information on the first page.

To what extent do you judge the sustainability activities performed by MedCorp to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

**Section B: Potential suppliers**

1. To what extent do you judge the sustainability activities performed by <u>Supplier # 1 for painkillers</u> to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

2. To what extent do you judge the sustainability activities performed by <u>Supplier # 2 for painkillers</u> to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

3. To what extent do you judge the sustainability activities performed by <u>Supplier # 1 for clothes</u> to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

4. To what extent do you judge the sustainability activities performed by <u>Supplier # 2 for clothes</u> to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

5. To what extent do you judge the sustainability activities performed by <u>Supplier # 1 for health checkups</u> to be related to their core business?

Large extent |___|___|___|___|___|___|___|___| Small extent

6. To what extent do you judge the sustainability activities performed by <u>Supplier # 2 for health checkups</u> to be related to their core business?

Large extent | | | | | | | | | Small extent

## Section C: Product type

In this section you are asked to give your *general* opinion about product types.

1. Prior to a purchasing decision, how difficult do you judge it to be to evaluate a product like <u>painkillers</u> in advance?

Easy to evaluate in advance | | | | | | | | | Hard to evaluate in advance

2. Prior to a purchasing decision, how difficult do you judge it to be to evaluate a product like <u>clothes</u> in advance?

Easy to evaluate in advance | | | | | | | | | Hard to evaluate in advance

3. Prior to a purchasing decision, how difficult do you judge it to be to evaluate a service like <u>health checkups</u> in advance?

Easy to evaluate in advance | | | | | | | | | Hard to evaluate in advance

**Thank you for your time!**

# Appendix 3: Pretest

**Which supplier would you choose?**

You are the purchasing manager of a company and are now about to pick 4 new suppliers. The product and price are similar for all products; instead other criteria must guide your choice. In the following text 2 suppliers of each product A, B, C and D are introduced to you, which supplier would you choose for each product?

### PRODUCT A

*Supplier 1*. This supplier actively seeks to reduce its environmental impact and spends a hundred thousand dollars yearly to continuously revise and improve routines for maintenance and usage of their buildings and for waste disposal.

*Supplier 2*. On a yearly basis, this supplier devotes a significant contribution of a hundred thousand dollars to a fund, which invests in Clean Development Mechanism (CDM) projects in East Africa.

*From an **environmental perspective**, how large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |___|___|___|___|___|___|___|___| Very low

### PRODUCT B

*Supplier 1*. This supplier organizes a charity event twice a year for the benefit of various environmental causes. The next event will emphasize the problems of chemical pollution. A 10 person committee has been engaged fulltime in the project from January to March.

*Supplier 2*. The supplier has changed the way it produces their product and managed to reduce the level of material consumption and therefore also reduced their waste levels. This step was possible to achieve by involving 10 staff for 3 month.

*From an **environmental perspective**, how large do you judge the probability that you´d choose supplier # 1 over supplier #2?*

Very high |___|___|___|___|___|___|___|___| Very low

### PRODUCT C

*Supplier 1*. The supplier produces a product using climate neutral, ecological cotton. The process to change from conventional to ecological cotton took 5 months to complete.

*Suppler 2.* This supplier has created a fund that aims at preserve the tropical forests mainly in Brazil, an investment equivalent to 5 months work.

*From an **environmental perspective**, how large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |___|___|___|___|___|___|___|___| Very low

### PRODUCT D

*Supplier 1*. The supplier supports a voluntary organization with a 50 thousand dollar contribution, aiming at increasing the awareness of the impact of deforestation.

*Supplier 2*. This supplier decided to use public transport to the greatest possible extent, and when not possible, use biofuels for their company cars. This investment is worth 50 thousand dollars a year.

*From an **environmental perspective**, how large do you judge the probability that you´d choose supplier # 1 over supplier # 2?*

Very high |___|___|___|___|___|___|___|___| Very low