Aiming for a greener future
- A study within green marketing strategy and subjective performance

Authors: Cecilia Alvén
Marketing Program

Paulina Huhtilainen
Marketing Program

Tutor: Martin Amstéus
Examiner: Setayesh Sattari
Subject: Strategy

Bachelor Thesis
Spring 2013
Acknowledgements

This study was performed during our last semester at the Marketing program in the spring of 2013. The study has significantly contributed to our knowledge within both marketing and our chosen subject field: green marketing strategy and subjective performance. As the study had a quantitative nature we also had the chance to deepen our knowledge in the procedure and analysis of conducting such a study. The insight gained from writing the thesis has inspired us in a way that to this day we consider environmental marketing as an area we would like to work in. There are a number of people we would like to thank, whom without, this study would not have been manageable.

First of all, we would like to thank our examiner Dr. Setayesh Sattari for all the help and support given during our thesis writing. We truly appreciate all the help and advice you have given us during this period of time. Thanks to our supervisor Dr. Martin Amstéus for tutorial and guidance throughout the paper, and Dr. Magnus Hultman for guidance and valuable feedback on the methodology part of our thesis. Furthermore, we would like to thank all the companies that participated in our study and thereby made our study possible to pursue.

Linnaeus University

School of Business and Economics

May 2013

Paulina Huhtilainen & Cecilia Alvén
Abstract
As society’s concern for the natural environment has increased during the last decades, organizations worldwide have been forced to become more environmentally conscious. Just as it is considered important for organizations to take responsibility for the environmental consequences of their actions, sustainability has become a concept that is expected to become a moral obligation in the future. Consequently, green marketing strategy, also known as GMS, has appeared more in academia in recent years. The strategy in itself is referred to as the firm’s desire for developing actions aimed to align corporate and marketing objectives, while at the same time protecting the natural environment. Basically, it is a strategy that can be seen as a way of conducting business while avoiding harm to people and the planet.

Previously conducted studies show that the strategy in itself led firms to improve their profitability by improving marketing performance and reducing costs. However, after conducting a literature review on GMS, firm performance, and subjective performance, a research gap was identified as previous studies focused on objective measures. More knowledge was therefore considered needed regarding the relationship between GMS and subjective performance, hence the purpose of the study has been to assess the relationship between the two.

In order to answer the purpose of the study, a quantitative approach using questionnaires was chosen as the most appropriate method. CEOs, and environmental managers of 183 manufacturing companies in Sweden participated in the study and the findings indicated that there is in fact a relationship between the concepts measured, and that this relationship is medium positive.

Keywords: Green marketing strategy (GMS), environment, environmental, subjective performance, firm performance, and sustainability.
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1.0 Introduction

This chapter discusses the concept ‘green marketing strategy’ and how it has evolved over time. A problematization of the field is presented, delimitations stated, as well as the purpose of the study. The chapter also includes an outline of the thesis.

1.1 Background

Green marketing is an emerging strategy that includes a broad range of activities such as product modification, fair-trade practices, and eco-friendly production process and packaging (Mishra & Sharma 2012). A green strategy originates from a firm’s evaluation of its current marketing, and production practices, and the adjustment of its behavior to reflect an increased level of environmental awareness (Miles & Munilla 1993).

Marketing strategies regarding various environmental issues were given less priority during 1970 - 1985. After these years, companies were forced to narrow their approach and consider regulatory issues in relation to the environment, and include these in their marketing strategies. (Kumar et al. 2012) Due to environmental degradation issues and society’s concern for sustainable development, competitive scenarios have been modified and given companies new challenges to overcome. Designing and commercializing greener strategies will allow companies to project a responsible image in the marketplace, and it will also give firms the ability to achieve higher levels of efficiency. (Fraj et al. 2011)

According to Peattie (1995) the increasing concern for the environment manifested itself in many ways during the late 1980s. Several businesses worldwide started to use concepts such as: ‘green consumers’, ‘green markets’, ‘green products’, and ‘green marketing’. In many cases, these concepts described marketing activities whose aim was to create competitive advantage by convincing consumers that specific brands were in some way or another less harmful to the environment than others. Much of what passed for environmental marketing during the late 1980s had very little to do with the environment and was more of a strategic choice to create competitive advantage. (Peattie, 1995)

Banerjee (2001) states that companies are today paying vaster attention to the various environmental impacts of their business practices. Customers, shareholders, and policy makers are increasingly demanding improved environmental performance from business firms all around the globe. Legislation, public concern and other external pressures, together with
Green marketing strategy (GMS) is a concept that has been given more attention during the last decades and the concept refers to the firms’ desire for developing actions aimed to align corporate and marketing objectives, while at the same time protect the natural environment. GMS is seen as a competitive strategy that permits firms to optimize different dimensions of organizational performance. The concept of green marketing strategy, also referred to as environmental marketing strategy, is a way to conceptualize firms’ responsibility towards environmental issues. GMS does not refer to a secluded strategy that will simply help organizations to address ecological issues, but in fact, it covers all those activities aimed towards meeting customers’ expectations of greener products and services. The concept is also aimed at creating a more sustainable and ethical company behavior. (Fraj et al. 2011)

GMS is said to influence different dimensions of organizational performance, and findings from a conducted study made by Fraj et al. (2011) show that green marketing strategy led firms to improve their profitability by improving their marketing performance and reducing costs. Furthermore, studies show that environmentally oriented firms are in fact more likely to attain superior operational, - and marketing performance from environmental practices. (Ibid)

1.2 Problem discussion

According to Prothero (1990) a change in strategy is needed for companies as consumers are getting more concerned for the environment. During the last decade there has been an increased concern regarding environmental issues. The side effects that arise from production have led to an increased public, - and political focus on the consequences of environmental degradation. Governments have imposed requirements on companies in order to force them to reduce their environmental impact. (Madsen & Ulhøi, 2003)

Due to the increased environmental concern, consumers are more willing to buy environmentally friendly products. Consequently, the concept of green marketing strategy has become widely accepted and applied in companies in recent years. A green marketing strategy may give companies access to new market areas and the possibility to increase profits and develop competitive advantage against their rivals. (Chen, 2010)
In addition to the increased environmental concern among society, there are several reasons to why businesses adopt green marketing practices of various kinds. They might recognize the possibility for cost savings within different areas of the organization, the possibility to gain maximized profits, together with competitive advantages, as well as an improved firm image. (Tzschentke et al, 2005; Fraj-Andrés et al. 2009; Berman et al. 1999; Baker & Sinkula, 2005) Pressure from stakeholders, such as environmental regulations, will increase cost and restrain companies’ competitiveness. The increased costs arise from companies’ additional charges for preventing their pollution and cleanup. (Porter & van der Linde, 1995) Mishra and Shamra (2012) state that green marketing strategy has its own acceptance period for both investors and corporations, and therefore they need to regard the environment as a long-term investment. Green marketing strategy will not show any immediate results and therefore it requires patience from those involved.

As mentioned in the introduction part of the paper, studies show that GMS influences different dimensions of organizational performance. Performance in itself is a common measurement, used not only by managers but also by various stakeholder organizations and congresses. There are several reasons to why firms measure performance. One of the most common reasons is ‘evaluation’, i.e., to evaluate how the firm is doing. Using performance measurements will also give managers the control of knowing what their subordinates are actually doing. Measuring performance can help improve existing business, and motivate employees, - middle managers, and stakeholders to do the right things necessary to improve performance. Promote the firm, celebrate its success, and to learn from setbacks are yet other reasons to why firms use performance measurements. (Behn, 2003) Performance can be measured in several ways, such as long-term and short-term measures (Haber & Reichel, 2007). Financial, operational and effectiveness are other examples of performance measures (Lunnan & Haugland, 2008). Finally, performance can be measured subjectively and objectively (Haber & Reichel, 2007). Subjective measures tend to focus on overall performance, while objective measurements use specific financial indicators (Wall et al. 2004). Subjective performance measures the perceptions that managers have concerning the performance of their firms (Haber & Reichel, 2007).

One of the main issues that has been evaluated whether to be affected by GMS or not, is firm performance (Fraj et al. 2011). However, previous studies, such as the studies made by Fraj et al. (2011) and Kumar et al. (2012), have focused on objective performance measures in
relation to GMS and various sustainable practices. Consequently more knowledge is needed regarding the relationship between GMS and subjective performance. In order to fill the stated research gap questionnaires will be sent to managers at firms working with GMS. Based on the collected information the study’s aim is to assess the relationship between GMS and subjective performance.

1.3 Purpose
The purpose of this study is to assess the relationship between GMS and subjective performance.

1.4 Delimitations
Manufacturing firms are believed to have greater impact on the natural environment than other industries (Banerjee et al. 2003), and based on this fact the study will target Swedish manufacturing firms with 30 or more employees. The survey will target managers since it is believed that they hold the best knowledge to answer the study’s questions.

1.5 Outline of thesis
An illustration of the outline of the thesis is presented below to give an overview of the structure of the paper.

➢ Introduction
Chapter 1 contains an introduction to the field of green marketing and green marketing strategy. Furthermore, a problematization of the field in question is presented, together with the study’s identified research gap, purpose of the paper, delimitations, ending with the outline of thesis.

➢ Literature review
Chapter 2 contains the conducted literature review with the concepts and definitions of green marketing strategy, firm performance, and subjective performance. A further developed research gap is presented at the end of the chapter.

➢ Research model and research question
Chapter 3 contains the proposed research model together with the stated hypothesis and research question.
➤ Methodology
Chapter 4 presents the chosen methodology together with a justification of the methods used.

➤ Data presentation and analysis
Chapter 5 contains the presentation and analysis of the collected data.

➤ Conclusions and implications
Chapter 6 contains a discussion of the study’s main findings and conclusions, together with theoretical contributions and managerial implications, ending with limitations, and suggestions for future research.
2. Literature review

This chapter consists of a summary of the existing literature within the research area of green marketing strategy, firm performance and subjective performance. Definitions and an overview of the concepts will be presented.

2.1 Defining ‘strategy’

Alfred Chandler, Michael Porter and Henry Mintzberg are three leading strategy theorists that each point at important but different elements of strategy. Chandler puts emphasis on logical flow from the determination of goals and objectives to the allocation of resources. Porter’s theory has its focus on deliberate choices, competition and difference. Mintzberg’s theory says that strategies do not follow a logical plan, but can in fact emerge in more ad hoc ways. All of these definitions of ‘strategy’ encompasses several vital elements, however, according to Johnson et al. (2011) the most appropriate definition of ‘strategy’ is: “the long-term direction of an organization”. This is because of the fact that a long-term direction of an organization can have both deliberate, - logical, - as well as more incremental, and emergent patterns of strategy. (Johnson et al. 2011)

2.2 Green marketing strategy

2.2.1 Definitions of GMS

There are several definitions to what green marketing strategy really is and according to Nair and Ndubisi (2011), green marketing strategy is referred to as ‘environmental marketing’, ‘ecological marketing’, ‘sustainable marketing’, and ‘enviropreneurial marketing’. Banerjee, Iyer and Kashyap (2003) define environmental strategy as the extent to which environmental issues are integrated with a firm’s strategic plans. Fraj et al. (2011) use Hart’s approach to define green marketing strategy. This approach poses GMS as a competitive strategy that will allow firms to optimize different dimensions of organizational performance, and these are viewed as expressions of competitive advantages. Kumar et al. (2012) describe green marketing strategy as the application of different marketing tools that satisfy organizational and individual goals, while at the same time upholding preservation, protection and conservation of the physical environment. The authors claim that green marketing strategy focuses on marketing pull and legislative push towards improved corporate performance by being more environmentally conscious. (Ibid) Integrating green values in a firm’s marketing
strategy will not only help to manage its resources more efficiently, moreover, it will also help improve corporate image and reputation (Fraj et al. 2011).

GMS is not an isolated strategy that will simply help organizations to address ecological issues, but instead it covers all those activities that are aimed towards meeting customers’ expectations of both greener products and services, as well as creating a more sustainable and ethical company behavior (Fraj et al. 2011). Green marketing strategies can also be seen as a way of conducting business while avoiding harm to people and the planet (Cronin et al. 2011). GMS is said to lead firms to improve their profitability, mostly due to the fact that process-oriented activities like eco-design, reverse logistics, and the use of cleaner materials in both products and packaging, seem to contribute to improve efficiency and at the same time, cut costs. The scope of GMS involves much more than simply selling and promoting more environmentally friendly products aimed towards green customer segments. The strategy also involves other areas such as: production, logistics, and administration departments within firms. The essence of GMS is to include proactive environmental actions that aim to respond to various environmental concerns in society. GMS is about the desire to “do the right thing”, and make the right choices, and therefore being able to show consumers that the organizations are aware of the environmental impact of their actions. (Fraj et al. 2011)

Menon and Menon (1997) use a concept called ‘enviropreneurial marketing strategy’ instead of green marketing strategy, to explain the process for formulating and implementing entrepreneurial and environmental marketing activities, all with the goal of creating revenue for firms. The difference with this concept is that it adopts a different kind of perspective that entails a solution with innovation and technology, rather than a legal or public pressure solution. The authors use this new terminology because they believe that environmental movement is in the marketplace to stay. (Ibid)

Many authors bring in the concept of sustainability when discussing green marketing and green marketing strategies. At first, sustainability was only spoken about in an ecological context, and problems regarding environmental changes were the first matter that came to mind. Today, sustainability is the concept in focus and a study conducted by Kumar et al (2012) reveals that sustainability can be implemented in marketing strategies once companies adopt it to their business practices. Moreover, sustainability is said to, as opposed to green marketing strategy, become a moral obligation in the future. (Kumar et al. 2012)
In essence, green marketing strategy contains several proactive activities that result in a more reasonable management of a company’s resources. Organizations around the world have now realized the potential that environmentally friendly actions have on the attitudes amongst consumers. (Fraj et al. 2011)

2.2.2 Why use green marketing as a strategy?

According to Menon and Menon (1997) the environment did not have a significant impact on marketing before the 1970s. The reasons for this were that environmental regulations were limited, and the influence from society was scarce in this matter. Fraj et al. (2011) believe that it is the influence from society that drives companies to use green marketing strategies. According to the authors, green marketing strategy is a subject that has occurred more in academia over the years. The reason for this is the need for firms to take greater responsibility for the environmental impacts of their actions. Cronin et al. (2011) claim that companies have observed the positive outcome that is derived from environmental marketing strategies, and therefore strive towards implementing it into their businesses. The authors also state that there is a growing interest among stakeholders, top management, and academics in implementing and using green marketing strategies to influence the triple-bottom line. (Ibid)

Prothero (1990) states that a change in strategy is needed for companies as consumers are getting more concerned for the environment. Environmental strategy signifies the degree to which the environment and environmental issues are incorporated into an organization’s strategic planning process (Baker & Sinkula, 2005). Henriques and Sadorsky (1996) state that firms that view environmental issues as important are more likely to develop an environmental plan and strategy. As stated by Baker and Sinkula (2005), marketers in an organization might participate in environmental activities related to marketing because they see an opportunity to gain market share, or perceive engagement in environmental marketing as the ‘right thing to do’. Regulatory forces and environmental legislation is an important motivation for developing green marketing strategies (Banerjee et al. 2003). Ghabadian et al. (1995) claim that corporations tend to reactively develop environmental strategies, and this development is mostly dependent on the pressure from regulators. According to the authors, there is little evidence saying that companies actively strive towards engaging in environmental strategies.
Wong et al. (1996) conducted a study that showed that firms’ decisions regarding adoption and engagement in environmental strategies, mainly stemmed from consumer pressure and regulatory forces. However, the authors claim that regulatory forces, as well as the pressure from competitors, are stronger than consumer pressure. Banerjee et al. (2003) state that the main influences to why companies start to use environmental marketing strategies of various kinds are: top management, regulatory forces, public concern, and competitive advantage.

2.2.3 Benefits of using a green marketing strategy

A study made by Fraj-Andrés et al. (2009) showed that by targeting environmentally friendly consumers, firms can maximize their profits since environmental marketing strategies may influence customers’ satisfaction and devotion to the firm. Another research made by the authors presented a similar finding which showed that companies using green marketing strategies improved their profitability by reducing costs, and optimizing their marketing performance (Fraj et al. 2011). Tzschentke et al. (2004) also showed that firms engaging in green marketing strategies perceive substantial savings in areas such as: waste, water, and energy management.

Being proactive regarding environmental concerns and issues can lower the costs of complying with present, - and future environmental regulations. A company’s environmental actions and strategies can enhance the company’s efficiency and lower its operating costs. Another benefit derived from engaging in environmental strategies, is gaining a competitive advantage by creating greener products that are appealing to customers. Finally, the authors state that being environmentally friendly may improve a firm’s image, and enhance the satisfaction and loyalty of its stakeholders. (Berman et al. 1999)

Baker and Sinkula’s (2005) research shows that environmental marketing strategies have a positive impact on a company’s image, which in turn may be translated into increased market share and profitability. However, the study also shows that external pressures do not appear to have an impact on firms’ decisions to adopt environmental marketing strategies. The authors claim that environmental marketing does not have any direct effect on the firms’ competitive advantage. This contradicts with Berman et al. (1999) who stated that a potential benefit derived from environmental marketing strategies was gaining competitive advantage. Banerjee (2001) supports Berman et al.’s findings through conducted research, and states that
corporate management view environmental strategies as a business opportunity that will lead to competitive advantage.

2.3 Firm performance

In the field of business policy, organizational performance, or ‘firm performance’, has come to be an important constituent. Researchers commonly take the performance of organizations into account when investigating the organization’s strategy, structure, and planning. (Dess & Robinson, 1984) Firm performance is frequently used as a dependent measure, and the concept is a relevant construct in strategic management research. Despite its importance, there is no actual agreement on its definition, dimensionality, and measurement, and this is due to its perceived complexity. Firm performance, also referred to as ‘business performance’, is the subset of organizational effectiveness that covers both operational, and financial outcomes. (Santos & Ledur Brito, 2012)

Performance can be divided into two main dimensions: short-term measures and long-term measures. The former reflects the business’ current situation, and the latter indicates the strength of the business and its capability to survive in the long run. Performance can be measured both objectively and subjectively. (Haber & Reicheil 2007) Standard examples of objective performance indicators are financial data such as: sales, profit, or asset values. Subjective measures are based on beliefs, attitudes and perceptions and are helpful in an effort to operationalize a broader and non-economic dimension of firm performance. (Rajan & Reichelstein, 2009; Dess and Robinson, 1984)

Baker and Sinkula (2005) refer to GMS as ‘enviropreneurial marketing’. Their study was limited to product related activities, although other marketing mix variables came into play. The results from their conducted study on environmental marketing strategy and firm performance show that cost advantages was made possible by reduced waste, conserved energy, reused material, and addressed life cycle costs. Using a green strategy may also have a positive impact on overall corporate image, which in turn could be translated into an increased market share and profitability. (Baker & Sinkula, 2005) The results are in accordance to the findings derived from Fraj et. al’s (2011) research that presented GMS as an influencer of organizational performance that may lead firms to increase profits.
2.3.1 Subjective performance

According to Rajan and Riechelstein (2006) subjective performance is a key indicator of managerial performance. Rajan and Riechelstein (2009) define subjective performance as a measurement of performance that is based on beliefs, attitudes, and perceptions. Subjective adjustments can be made to objective performance measures in order to obtain a more precise and correct illustration of managers’ contribution towards the firm’s goals and objectives (Woods, 2012). Subjective measures are suitable when a comparison between two or more companies is made (Ketokivi & Schroeder, 2004). In marketing literature, subjective measures are commonly used. However, this implies that the interpretation of the findings is somewhat limited due to the fact that it is based on managers’ self-reported measures, i.e., perceptions, beliefs, and attitudes. (Ngo & O’Cass, 2012) This is in accordance to Ketokivi & Schroeder’s (2004) statement regarding the use of subjective performance as an indicator, as they argue that the measure is dependent on human perception and knowledge. Therefore the use of subjective performance as an indicator is not free from criticism. (Ketokivi & Schroeder, 2004)

Dawes (1999) explains that subjective measurement is a way of measuring performance in terms of deriving performance scores into a scale by using measurements such as: ‘very poor’ to ‘very good’, or ‘much lower’ to ‘much higher’. Contrary, the objective measurements are a way of measuring actual percentage figures, such as profitability. Wall et al. (2004) state that subjective performance measurements are commonly used much do to the fact that it is cost effective since this type of performance data can be collected through questionnaires and interview surveys. Some companies, like public service and voluntary organizations, do not have proper financial records and therefore this type of measurement may be used instead. (Ibid)

2.4 Chapter Summary

This chapter has reviewed existing literature on GMS, firm performance and subjective performance, and provided definitions of each. Based on the conducted literature review it is evident that green marketing strategies have been given more attention during the last decades much due to society's increasing concern for the natural environment. From previously conducted studies it appears that green marketing strategies may lead firms to improve efficiency and profits, while at the same time creating a competitive advantage towards competitors.
The literature review gives interesting aspects to GMS and what it does for organizations around the globe. The aim of this study is to assess the relationship between GMS and subjective performance, and to find out whether or not there is a positive correlation between the two.
3. Research model and hypothesis
This chapter consists of the study's proposed research model, hypothesis, and research question that lay the foundation for the investigation.

3.1 Proposed research model
Based on the conducted literature review it appears that there are several definitions to what green marketing strategy is and what it entails, as well as several benefits and influences to why organizations choose to adopt green marketing strategies. Based on the gathered material, it is evident that performance is highly influenced by green marketing strategies. The study’s proposed research model (Figure 3.1), illustrates the two concepts focused on in the study: GMS and subjective performance. GMS influences different organizational dimensions (Fraj et al. 2011), and due to the stated research gap the focus of the study is on subjective performance measures.

Figure 3.1 Proposed research model

![Proposed research model](GMS -> Subjective performance)

3.2. Hypothesis
H1: There is a positive correlation between GMS and subjective performance.

3.3 Research question
RQ1: How does GMS influence subjective performance?

3.4 Chapter Summary
This chapter presents the paper’s proposed research model together with a hypothesis and a research question. The hypothesis and the research question facilitate the investigation of GMS and subjective performance and thereby allow the purpose of the study to be met.
4. Methodology

This chapter consists of a discussion and justification of the study’s chosen research approach, research design, data sources, research strategy, data collection method, data collection instrument, including operationalization, - questionnaire design and pretesting, as well as sampling with a defined study population, data analysis method, and quality criteria.

4.1. Research approach

4.1.1 Inductive versus deductive research

There are two types of theories, or approaches, within research methodology that consider the relationship between theory and research. These theories are known as deductive and inductive theory. The former represents the most commonly held view of the relationship between theory and research, and is associated with quantitative research approaches. The theory is based on logic, and the process of deduction is using already existing theories to lay ground for formulating hypotheses or research questions. Within deductive theory, conclusions are drawn through logical reasoning. Meaning, it does not have to be true in reality, but it is considered logical. The latter is often associated with qualitative research and refers to working in the opposite direction, starting off with observations and findings that later on lay the basis for formulating a theory. In other words, general conclusions are drawn from empirical observations. (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010)

Figure 4.1 Inductive and deductive research (Bryman & Bell, 2011).

**Deductive research: Theory → Data**

**Inductive research: Data → Theory**

Inductive and deductive theories are not exclusive of each other and most researchers believe they use both theories when conducting research. For instance, induction includes elements of deduction and vice versa. (Ghauri & Grønhaug, 2010)

The study is based on previously conducted research within the same subject field and therefore the nature of the study will be deductive. The research question developed will be based on theory presented in the literature review chapter, which will give the study a deductive nature.
4.1.2 Qualitative vs. Quantitative research

Research methods are the systematic, focused, and methodical gathering of data for the purpose of obtaining information, and to solve a particular question or research problem. The methods differ in their techniques for data collection. (Ghauri & Grønhaug, 2010)

Many writers who work with methodological issues often distinguish between quantitative and qualitative research. Quantitative research entails a deductive approach and can be seen as a research strategy that focuses on quantification, while qualitative research emphasizes words rather than quantification in the collection and analysis of data. A quantitative approach is considered most appropriate when the researcher’s aim is to generalize the findings to the population. (Bryman & Bell 2011) Which method and technique most suitable for a research project depends on the stated research problem and its purpose. Qualitative and quantitative research methods are not exclusive from one another due to the fact that some of the data collected in a research project may be quantified, but the analysis in itself is qualitative. (Ghauri & Grønhaug, 2010)

Considering the previously mentioned facts regarding the two research methods, our stated research question and purpose, this study will be exclusively quantitative. The research will also be based on numbers instead of words, and the findings will be generalized to the population.

4.2 Research Design

Research can be classified based on purpose or technique. Classifying the research by its purpose shows how the characteristics of a decision-making situation influence the research method. There are three types of research designs: exploratory, descriptive, and causal. (Kent 2007) The different research designs are most often so called ‘building blocks’, which build the foundation for each other (Zikmund et al. 2010).

*Exploratory* research builds the foundation for descriptive research, which establishes the basis for the causal research (Zikmund et al. 2010). Exploratory research is about getting familiar with a topic and try out preliminary concepts about it. It also aims at determining what concepts to measure and how to measure them effectively. (Pinsonneault & Kraemer, 1993) According to Kent (2007), the intention with exploratory research is to generate ideas, hypotheses, and insights. The concept is sometimes recognized with specific research
methods, such as qualitative research, assessing secondary data and observation. The most important aspect is that the end product of the research is the generations of insights, understanding, and information. (Ibid) Exploratory research is often a first step in the research process and it is about discovering ideas and identifying problems. The main aim of *descriptive research* is describing the characteristics of people, groups, objects, organizations, and environments. To describe it further, it is compared to “painting a picture” of a situation by dealing with *who, when, where, and how* questions. Studies that are descriptive are conducted after the process where the researcher gains an understanding of what is being studied. The purpose of *causal* research is to identify a cause-and-effect relationship. (Zikmund et al. 2010) Furthermore, this type of research analyzes the degree of influence of an independent variable on a dependent variable (Kent, 2007). Before starting the casual research it is important that the researcher has a basic understanding of the phenomena studied, this is in order for the researcher to be able to make a proper prediction regarding the causal relationships (Zikmund et al. 2010).

Given the previously mentioned information regarding the different research designs, together with Zikmund et al.’s (2010) statement concerning the fact that surveys tend to be of a descriptive nature, the study’s data collection method will be *surveys*, and the study will be exclusively descriptive.

### 4.3 Data sources

Secondary data are often the starting point of research projects, and it is information that has been collected by someone else before the actual project sets of, therefore it does not require access to respondents (Zikmund et al. 2010). Secondary data are therefore useful when the purpose is to solve a problem, and/or to gain a deeper understanding of the study’s explained research problem. Secondary data are usually collected for some other purpose than help solving the problem at hand. The advantages of using secondary data are many, it saves time and money, the reliability of the information, and conclusions drawn are greatly enhanced, and it usually helps the researcher in segmenting and sampling the target group. (Ghauri & Grønhaug, 2010)

When secondary data are not available or do not help in answering the research questions of a study, primary data are collected (Ghauri & Grønhaug, 2010). Therefore, primary data are
Based on the study’s research gap, no research has been conducted with both GMS and subjective performance, therefore using secondary data would be insufficient. Primary data will therefore be used and collected through the use of surveys. As the study also has a stated hypothesis to guide the research, the approach considered most appropriate is collecting primary data.

4.4 Research strategy

Below, a table made by Yin (2009) is presented. The table consists of the five major research methods: experiments, surveys, archival analyses, histories, and case studies. Furthermore, the figure displays the three conditions: a) the posed research question, b) the amount of control an investigator has over behavioral events, c) the degree of focus on current, - as opposed to historical events, and lastly, how these conditions relate to the different research methods used. (Yin, 2009)

<table>
<thead>
<tr>
<th>Method</th>
<th>Form of research question</th>
<th>Requires control of behavioral events</th>
<th>Focus on contemporary events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How, why?</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, what, where, how many, how much?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>Who, what, where, how many, how much?</td>
<td>no</td>
<td>yes/no</td>
</tr>
<tr>
<td>History</td>
<td>How, why?</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Case study</td>
<td>How, why?</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>

From the table above, the researcher can see which of the different research strategies that is most appropriate for the study that is to be conducted. For example, if the stated research
question contains: who, what, where, how many, and how much?, both survey and archival analysis are appropriate research strategies to follow. (Yin, 2009)

Since the study’s aim is to collect primary data through the use of questionnaires, survey is considered most suitable as research strategy.

4.5 Data collection method
As previously mentioned there are two different research methods available for collecting data: qualitative and quantitative. Within these approaches there are different data collection methods (Bryman & Bell, 2011). Bryman and Bell (2011) discusses five main methods: focus groups, interviews, content analysis, ethnography/observations, and surveys.

Focus groups are group interviews where several participants discuss a topic, or their attitudes, perceptions and thoughts about a certain phenomena. Interviews can be both structured, semi-structured, and unstructured. Structured interviews are used in quantitative research, while semi-structured and unstructured interviews are used in qualitative research. (Bryman & Bell, 2011) Interviews are mainly about communicating with individuals in person (Zikmund et al. 2010). Content analysis is a quantitative research method that analyzes documents and texts, and categorizes the content. Ethnography, or observations, is where the researcher observes a specific social setting over a longer period of time. The final data collection method discussed is surveys, where the respondents complete the questionnaire themselves by answering the written questions. (Bryman & Bell, 2011)

As the aim of the study is to generalize the findings to the population, a quantitative research method is used in this study and survey is the data collection method that has been chosen to answer the purpose and research question. An additional reason for conducting a survey is the possibility to reach a larger amount of respondents.

4.5.1 Questionnaires
To be able to get a picture of the current state of a community, group, organization, or a set of corporations, a survey may be used (Janes, 1999). Furthermore, it may be used to acquire attitudes, opinions and to capture relationships (Ghauri & Grønhaug, 2010). The first step in the process of constructing a questionnaire is about developing appropriate questions. Once this step is completed the next step is to create the actual questionnaire. (Janes, 1999)
According to Sanchez (1992), it is vital to construct the questionnaire properly, otherwise the risk for measurement errors will increase. The layout and the graphics that are incorporated in the format of the questionnaire therefore play a fundamental role when communicating the questions to the respondents. (Ibid) When creating the questionnaire, it is considered good to start off with general information about for example the authors, and/or the purpose of the study. Besides that, the authors should be specific about the length of time it will take the respondents to complete the questionnaire, as well as how in-depth answers the authors are looking for. (Janes, 1999) From the operationalization, different variables will have been developed, and when writing the questions, three questions for each variable or concept is required in order to make the concept measurable (Eliasson, 2010).

The order of the questions may also have an impact on the answers that are collected. Janes (1999) suggests starting off with the most interesting questions that will raise the interest of the respondents, and make them motivated to proceed answering the stated questions, following with the more problematic questions, and ending with the general information about the respondent (age, gender, etc.) The following step is to decide in what way the questionnaire should be carried out, and for this, there are several available methods, such as by telephone, face to face, or by mail/online or handout. (Ibid)

In this research, an online survey that is e-mailed to the respondents is chosen. There are several benefits with such a survey, one of them is that there is global reach, therefore it is easy to get information from respondents from different parts of the world at a low cost. Online surveys are besides from low at cost, also time saving, as the time for the survey to get to the respondents and back to the researchers is minimized. Another benefit is that it is convenient for the respondents, as they are able to answer the questionnaire at any time. (Evans & Mathur, 2005)

Questionnaires may be considered for many different types of research, for example, a study regarding organizations commitment to the environment. This type of data collection method is also used mainly for descriptive research designs. With this in mind, and due to the fact that questionnaires are effective to use when capturing relationships, this study will use questionnaires as data collection method. (Zikmund et al. 2010; Ghauri & Grønhaug, 2010)
4.6 Data collection instrument

4.6.1 Operationalization and measurement of variables

Operationalization is a process to make the concepts within a study measurable (Zikmund et al. 2011). In order to examine the concepts used in a study, the concepts have to be measurable, and this is why operationalization is important. However, for the concepts to be measurable, a decision must be made with regards to how they should be measured in the study. That decision is made through different types of definitions. (Eliasson, 2010)

There are two types of definitions: conceptual and operational. These two definitions are used within the operationalization process. Conceptual definitions are definitions that describe concepts by using other concepts. (Ghauri & Grønhaug, 2010) Operational definition is the definition of a concept in terms of the activities that are to be carried out when measuring the concept under question (Bryman & Bell, 2011). It can also refer to the questions that are used to collect data (Zikmund et al. 2011). Each definition must be clearly stated to ensure that all respondents understand the questions (Eliasson, 2010). The first step in the operationalization process is to start defining the conceptual definitions (Ghauri & Grønhaug, 2010). It is crucial to define the concepts as clearly as possible, and all concepts have to cohere with the theory that is being used. Once the concepts have been defined, and the different variables developed, the questions can be constructed. (Eliasson, 2010)

In order to measure GMS, questions were designed and developed on the basis of previously conducted studies within the field. Due to the difficulty of finding pre-developed questionnaires, the questions were developed based on variables measurement from three different articles. (Fraj et al. 2011; Banerjee, 2001; Banerjee, 2002) To measure subjective performance, questions were developed from a study made by Chamanski and Waagø (2011). Based on a conducted study made by Chamanski and Waagø (2011), market share, profitability, and sales, have been chosen as dimensions to measure subjective performance. Two of these dimensions are, according to the literature review, benefits that may be derived from using GMS in an organization (Fraj et al. 2011; Baker & Sinkula, 2005).

To estimate companies’ use of GMS, the respondents were asked to score the position of their company according to different statements related to GMS. A five-point Likert scale was designed, where 1 equaled strongly disagree, and 5 equaled strongly agree. The subjective
A performance measure was obtained in a way that was in accordance to Chamanski and Waago’s study (2011), where the degree of importance regarding companies’ market share, profitability and sales, and the respondents’ degree of satisfaction regarding the same items were measured. To obtain the subjective measures, the importance scores were multiplied with the corresponding satisfaction scores, and then averaged to get subjective performance measures of organizational performance. (Ibid) A five-point Likert scale was used to estimate subjective performance, and the questions regarding importance was graded from 1 to 5, where 1 equaled \textit{not at all important}, and 5 equaled \textit{extremely important}. The questions regarding satisfaction was also graded on a one to five point scale, where 1 equaled \textit{not at all satisfied}, and 5 equaled \textit{extremely satisfied}.

A table containing the study’s operationalization, with the identified concepts, the conceptual definition, and operational definition is presented below.

Table 4.2 Operationalization

<table>
<thead>
<tr>
<th>Concept</th>
<th>Conceptual definition</th>
<th>Operational definition/Question</th>
<th>Five-point Likert scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green marketing strategy</td>
<td>GMS covers all those activities that are aimed towards meeting customers’ expectations of both greener products and services, as well as creating a more sustainable and ethical company behavior (Fraj et al. 2011)</td>
<td>1. Our firm has integrated environmental issues into our strategic planning process. (GMS1) 2. Our marketing strategies for our products and services have been influenced by environmental concerns. (GMS2) 3. Our company use environmental considerations in product design. (GMS3) 4. Our company use environmental considerations in distribution. (GMS4) 5. Environmental preservation is a high priority activity in our firm.</td>
<td>1 = strongly disagree 5 = strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GMS5</th>
<th>6. Our firm sets environmental goals every year. (GMS6) 7. Engaging in environmental activities is vital to our firm’s success. (GMS7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS7</td>
<td>8. How important is market share for your company? (SUB1) 9. How important is profitability for your company? (SUB2) 10. How important is sales for your company? (SUB3) 11. How satisfied are you with the company’s achieved market share? (SUB4) 12. How satisfied are you with the company’s achieved profitability? (SUB5) 13. How satisfied are you with the company’s achieved sales? (SUB6)</td>
</tr>
</tbody>
</table>

Subjective performance: A measurement of performance that are based on beliefs, attitudes and perceptions. (Rajan & Riechelstein, 2009)

A five-point Likert scale was used.

**Questions: 8-10**
1 = not at all important
5 = extremely important

**Questions 11-13**
1 = not at all satisfied
5 = extremely satisfied

**Question 8-13:**
Chamanski and Waagø, 2011

### 4.6.2 Questionnaire design

An online questionnaire was considered most suitable for the study since it would make it possible to reach as many respondents as possible in a short matter of time. An e-mail was sent out to all respondents, together with a cover letter and the link to the questionnaire. The cover letter held general information about the students conducting the study, contact information, together with a motivation to why the respondents should participate in the study. The cover letter also briefly discussed the topic of green marketing and how it has come to be an attractive strategy for companies as several studies show that it increased profits, market share, and sales. According to Bryman and Bell (2011), respondents usually
wish to keep their anonymity, and because of this, the cover letter also held information saying that all respondents participating in the study would be anonymous.

The respondents were given two to three days to answer the questionnaire and all questions were mandatory, this way eliminating the risk of missing values. The questionnaire was also given in Swedish as the authors of the study considered it to be easier for the respondents to answer. As an incentive, and a motivation for all respondents to complete the questionnaire, the authors offered the respondents the finished paper with the results of the study, and the paper would then be e-mailed to them.

The study’s developed questionnaire encompasses 13 questions, where the first seven questions concern GMS, and the last six ones covers subjective performance. (See appendix A) For full cover letter, see appendix B.

4.6.3 Pre-testing
Pre-testing, in terms of questionnaires, is the procedure where the questionnaire is written, revised, shared with others for feedback, and then revised again. It is an important tool for the researcher since it tells him/her if some questions are difficult for the respondent to understand. (Zikmund, 2010) It also tells the researcher if the respondents interpret the questions differently and if any response options are missing (Ejlertsson, 2005). Bryman and Bell (2011) state that pre-testing is especially important when conducting surveys since an interviewer will not be present to help avoid confusion regarding the questions. Those that will revise the questionnaire should be as close to the actual sample or target group as possible, this to be able to get as accurate responses regarding the questionnaire as possible. (Ejlertsson, 2005)

With the aim towards a refined and improved questionnaire, the survey was sent out to four respondents in total, as a part of the study’s pre-test phase. Two of the respondents were managers at manufacturing firms, and the other two were experts with knowledge in the subject. The pre-test phase was conducted with the hope of receiving feedback regarding the stated questions, the language used, and the questionnaire in whole. Furthermore, a back-translation was performed in order to test the accuracy of the translation. Douglas and Craig (2013) state that back-translation is commonly used within survey research as it provides insight into potential errors. Chen and Boore (2009) also claim that it is important that the translation is performed with a translator that is able to speak the original and target language.
equally well. The back-translation of this study was conducted with a bilingual academic, fluent in English and Swedish.

4.7 Sampling
Sampling is a need that is almost invariably encountered in quantitative research. This is with regards to the fact that it would be impossible to interview or send out questionnaires to the entire population in a quantitative study. Sampling is also the next step in the research process and it is about selecting those elements from which the information will be collected. (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010)

Sampling procedures can be split into two broad categories: probability and nonprobability samples. In probability samples each individual unit has a known, non-zero chance of being included in the sample, which allows for statistical inferences. Findings derived from a sample can therefore be generalized to the population. By using probability sampling, it is also possible to assess the amount of ‘sampling error’. However, in nonprobability samples, it is not possible to make inferences about the population, and these samples are therefore not valid for statistical testing of hypotheses. (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010; Zikmund et al. 2010)

The important issue with regards to sampling is selecting companies that can represent the whole population. Population in this sense refers not only to people, but also to firms, products, and so on. Deciding on which population most suitable for a study is not an easy task. The key question is knowing who or what one wants information about. (Ghauri & Grønhaug, 2010) When it comes to sampling terminology, a sample survey or a census survey may be used. Census survey is sampling from the entire population, while sample survey is a subset, or some part, of a larger population. (Bryman & Bell, 2011; Zikmund et al. 2010)

When conducting the study, a probability sample was used since all respondents had an equal chance of being selected, hypotheses were tested, statistical inferences made, and findings were generalized to the population. This study was exclusively aimed at CEOs and managers at manufacturing companies, and a sample survey was used since it would be impossible to target the entire population of CEOs and managers.
4.7.1 Sampling frame  
A sample frame is basically a listing of all units from which the sample will be drawn (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010). Another term for ‘sample frame’ is *working population* since these units will eventually provide units involved in analysis (Zikmund et al. 2010).

The sample frame was selected from affarsdata.se, which is labeled as a ‘company search engine’. This website contains company information and is said to help companies gather information about other companies while at the same time promoting their own companies. (affarsdata, 2013) 2634 companies within the manufacturing industry was chosen as the study’s population. The main criteria for these companies were chosen with regards to number of employees, which had to be 30 or more. CEOs and managers was selected because they were considered the most suitable respondents due to their experience and knowledge in the implementation of various strategies, and also due to their knowledge of the various consequences of environmental management (Fraj et al. 2011).

CEOs and managers were the target of the study. For smaller companies the questionnaire was sent out to CEOs due to the fact that a lot of them do not have an environmental manager. For larger companies that have environmental managers, the study targeted these managers since it was believed that they were most suitable to answer the study’s questions.

4.7.2 Sampling selection and data collection procedure  
The desired *precision* from estimation as well as the degree of *confidence*, are important factors to consider when determining the sample size needed for a study (Ghauri & Grønhaug, 2010).

Fraj et al. (2011) conducted a study with the aim to analyze how green marketing strategy influences different dimensions of organizational performance, as well as how the integration of the environmental values within the firm’s internal culture determines the effect of green strategies on performance. The authors used a quantitative approach in their study and conducted questionnaires that were sent to manufacturing firms in Europe. 361 respondents were obtained from the conducted study. With regards to this background information, questionnaires were sent out to 693 manufacturing firms with the hope of obtaining a minimum of 100 answers.
4.7.2.1 Data collection procedure
The data collection procedure began with collecting a telemarketing list with a total of 2634 manufacturing companies from affarsdata.se (2013). With help of the telemarketing list, all companies’ websites were searched through in order to find either CEOs’ or environmental managers’ email addresses for each company. A total of 693 companies were found and the questionnaire was sent out by email to all, together with an attached cover letter with explanation and motivation to why the respondents should participate in the study. The respondents were asked to rate their attitude and/or belief regarding 13 statements, all concerning their respective businesses. All respondents were given two to three days to complete the questionnaire. A total of 183 answers were obtained.

4.8 Data analysis method
The analysis of quantitative data consists of several stages. The three first stages are editing, coding, and data file. In each of these stages the data is prepared for the analysis phase and examined for errors. Editing is the process of verifying and adjusting data for consistency and completeness, and the process of making the data ready for coding and analysis by a computer. If an inconsistency is found, the researcher should adjust the data to make it consistent and more coherent. Coding is the process of assigning numerical scores or some other symbol to the raw data that has been edited. This process allows the transfer of data from questionnaires to a computer. The third stage in the analysis of quantitative data is the data file, which is the file that stores the data obtained from the research. The data is often transferred to a spreadsheet, like Excel, which is an acceptable way of storing data. A statistical program, such as SPSS is a way to work with the data files. (Zikmund et al. 2011) SPSS is according to Bryman and Bell (2011) perhaps the most commonly used computer software for analyzing quantitative data.

4.8.1 Analysis approach
When the data has been prepared, an analysis approach must be chosen. According to Zikmund et al. (2011) there are four approaches to choose from: descriptive analysis, univariate analysis, bivariate analysis, and multivariate analysis. Descriptive statistics is the most basic statistical analysis approach, and it enables the researcher to summarize data in an effective way (Zikmund et al. 2011; Ghauri & Grønhaug, 2010). The descriptive statistics analysis transforms data in such way that it describes the basic characteristics like distribution, central tendency, and variability. Central tendency represent the center of the
data set, i.e., the specific value that all the other data appear to gather around. The mean, median, mode, and standard deviation are the most commonly used descriptive statistics that describe central tendency. (Zikmund et al. 2011) The mean is the total of a distribution of numbers divided by the number of items collected. Standard deviation is a measure of dispersion around the mean. (Bryman & Bell, 2011) Univariate analysis is the test of hypotheses that only involves one variable (Zikmund et al. 2011). Frequency tables, diagrams, measures of central tendency, and measures of dispersions, are the most common approaches of univariate analysis (Bryman & Bell, 2011). Bivariate analysis is the test of hypotheses that involve two variables in order to discover whether or not the two variables are related to each other (Ibid). Multivariate analysis tests hypotheses that involve more than three variables (Zikmund et al. 2011).

Since the purpose of this study was to assess the relationship between GMS and subjective performance, bivariate analysis was considered most appropriate. A descriptive statistics analysis was conducted to summarize the collected data.

4.8.2 Bivariate analysis
According to Zikmund et al. (2011) there are two types of bivariate analysis: differences between two variables and measures of association. Differences between two variables, also referred to as test of difference, is a test where one variable is dependent and the other variable is a classification variable. Measures of association, is measuring the strength of a relationship between two variables, and the two most appropriate analysis approaches for these are either correlation analysis or regression analysis. (Ibid) A correlation analysis is a measure of association and the relationship between two variables. For this type of analysis, either the Spearman rank correlation coefficient, also known as Spearman’s rho, or the Pearson correlation coefficient, may be adopted. (Zikmund et al. 2011; Zou et al. 2003) The former is considered most appropriate to use when the data are skewed or have outliers, and the latter is used when the data are not skewed and when no outliers exist (Zou et al. 2003). Both Pearson correlation coefficient, \( r \), and Spearman’s rho, \( \rho \), reaches from -1.0 to + 1.0 (Zikmund et al. 2011; Zou et al. 2003). If \( r/\rho \) equals 1.0 there is a perfect positive relationship. If \( r/\rho \) equals -1.0, a perfect negative relationship exists. If one variable goes up, and the other variable follows, a positive relationship is said to exist. If one variable goes up and the other variable goes down the relationship is said to be negative. Regression analysis is a procedure for measuring an association between a dependent and an independent variable. (Zikmund et
According to Bryman and Cramer (2003) the main idea of regression is to summarize the relationship between two variables through creating a line and a scatterplot that closely fits the data. The line is called the “line of best fit”, where the dots will appear above, below, and on the line. If a perfect regression exists, the dots will be on the line. (Ibid)

Significance level, also known as p-value, is associated with a hypothesis test that shows how likely it is that an inference supporting a variance between an observed value and a statistical expectation is true. A low significance level, i.e., a value that is less than 0.05 (0.01, 0.0001, etc.) indicates that there is a high possibility that the hypothesis can be supported, meaning that the independent variable is making a significant unique contribution to the prediction of the dependent variable. A significance level higher than 0.05 indicates that there is a great possibility that the stated hypotheses can be rejected. (Zikmund et al. 2011; Pallant, 2010)

R-square is a result derived from a regression analysis. The number given indicates the degree of correlation between the dependent and independent variable. For example: if R-square is 0.800 it means that the variance in the dependent variable accounts for 80 percent of the independent variable. (Ghauri & Grønhaug, 2010; Nolan & Heinzen, 2012) The Beta value is also a result that is derived from the regression analysis. The number indicates the predicted change on the dependent variable in terms of standard deviations for an increase of one standard deviation in the independent variable. (Nolan & Heinzen, 2012)

The regression analysis was chosen as data analysis method in order to establish whether or not there was a relationship between the two concepts, and in order to test the stated hypothesis. To test the results of the regression analysis, a correlation analysis was conducted. The correlation analysis indicates whether the relationship found is positive or negative. Both analyses were conducted in order to better ensure that the regression did in fact give the right results in the first place, and to better assess the relationship between the two concepts.

4.8.3 Factor analysis

Factor analysis is used in order to determine whether groups of indicators, tend to group together into clusters, also referred to as factors (Bryman & Bell, 2011).
This type of analysis is often employed when a Likert scale is used in order to determine how far there is a natural structure to the large number of items that compose such measures (Bryman & Bell, 2011). Factor loading is a measure that specifies how strongly correlated a measured variable is with the factor (Zikmund et al. 2011). A variable that correlates less than 0.3 with a factor is omitted from consideration since it accounts for less than nine percent of the variance (Bryman & Cramer, 2003).

4.9 Quality criteria

There are three most prominent criteria for the evaluation of business and management research, and these are: reliability, replication, and validity. Reliability refers to the stability of the measure and whether the results of a study are repeatable. The term is frequently used when assessing the question of whether or not the measures that are devised for various concepts in business and management are consistent. (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010) Replication is with regards to researchers being able to replicate the findings of others, i.e., in order to assess the reliability of a measure, another researcher must be able to replicate the procedures that constitute that measure. (Bryman & Bell, 2011) Validity is the term used for assessing whether a concept measures what it is intended to measure (Bryman & Bell, 2011; Ghauri & Grønhaug, 2010).

4.9.1 Reliability in quantitative research

With regards to reliability in quantitative research, there are three prominent factors involved when considering whether a measure is reliable or not. The first factor is stability and entails whether the measure is stable over time. This factor should be considered in order for the researcher to be confident that the results of a measure do not fluctuate. Internal reliability is the second prominent factor and relates to the consistency of the indicators measured. The third and last factor is inter-observer consistency and has to do with subjective judgment in relation to structured observations. (Bryman & Bell, 2011)

In order to measure reliability in quantitative research Cronbach’s alpha is used. An alpha coefficient will vary between 1 and 0, where 1 indicates perfect internal reliability and 0 denotes no internal reliability. (Bryman & Bell, 2011) An alpha coefficient with a value between 0.60 - 0.70 indicates fair reliability, and values between 0.70 - 0.80 indicates good reliability. 0.80 - 0.95 are considered to have a very good reliability. A value under 0.60 is considered poor with regards to reliability. (Zikmund et al. 2011)
4.9.2 Validity in quantitative research
There are several ways to establish the validity of a measure and three of these are known as: face validity, factorial validity, and construct validity. Face validity, also known as content validity, is to determine whether or not, on the face of it, the measure reflects the concept concerned. Therefore, face validity is an intuitive process that is established by asking people if they perceive the measure to be getting at the concept that is the focus of attention. (Bryman & Bell, 2011; Bryman & Cramer, 2003) Latent constructs, or latent variables, are concepts that cannot be measured directly, such as perceptions and beliefs (Grefen & Straub, 2005). Therefore, in order to assess the factorial validity for such concepts, a factorial analysis may be conducted. This type of analysis is also crucial when establishing the validity of latent constructs. The factorial validity tells us to what extent the study’s questions seem to measure the same concepts or variables. (Bryman & Cramer, 2003) Construct validity is defined as ‘the extent to which an operationalization measures the concept which it purports to measure’ (Ghauri & Grønhaug, 2010). This is where hypotheses are deduced from theory that is relevant to the concept (Bryman & Bell, 2011). According to Nolan and Heinzen (2012) a correlation analysis can be used to calculate the validity in a study. If the constructs correlate, there is evidence that they study is valid (Campbell & Fiske, 1959).

4.10 Chapter Summary
In this chapter a justification of what methodology to use in the study has been motivated and presented. In summary, this study has a deductive and quantitative approach and the research design is descriptive. Furthermore, this study’s research strategy is survey and primary data is collected through questionnaires. The methods used for data analysis are: descriptive statistics, factor analysis, and regression, - and correlation analysis. To test the reliability of the study a Cronbach’s alpha test was conducted. Furthermore, the validity of the study was tested through a correlation, - and a factor analysis. Table 4.3 shows a summary of all the choices made in the methodology part of the paper.
Table 4.3 Research methodology

<table>
<thead>
<tr>
<th>Research methodology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Research approach</td>
<td>Deductive</td>
</tr>
<tr>
<td></td>
<td>Quantitative</td>
</tr>
<tr>
<td>Research design</td>
<td>Descriptive</td>
</tr>
<tr>
<td>Data sources</td>
<td>Primary</td>
</tr>
<tr>
<td>Research strategy</td>
<td>Survey</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Questionnaires</td>
</tr>
<tr>
<td>Sampling</td>
<td>Probability sampling</td>
</tr>
<tr>
<td>Data analysis method</td>
<td>Descriptive statistics, Factor analysis, Regression, Correlation</td>
</tr>
<tr>
<td>Quality criteria</td>
<td>Reliability, Validity</td>
</tr>
</tbody>
</table>
5. Data presentation and analysis

This chapter presents the empirical data collected from the survey together with an analysis of the material. The chapter begins with presenting the descriptive statistics, followed by a factor analysis, reliability, - and validity test, and ending with hypothesis tests carried out through a regression, - and correlation analysis.

5.1 Subjective performance measurement procedure

The importance scores were multiplied with the corresponding satisfaction scores, and averaged to obtain the subjective performance measures of organizational performance (Chamanski and Waаг, 2011). The final subjective performance measure was used in order to perform the regression and correlation analyses. For the descriptive statistics analysis and factor analysis the multiplied subjective performance measurement was not included since the discussions involve all of the separate variables.

Below a table with a summary of the importance and the satisfaction questions is presented (See the operationalization, 4.6.1, to see the complete questions). As mentioned in the section above the scores were multiplied to get a subjective performance score for each measure (SUB1*SUB4, SUB2*SUB5, SUB3*SUB6) and then averaged to get the final sum of subjective performance.

Table 5.1 Subjective performance measurement procedure

<table>
<thead>
<tr>
<th></th>
<th>Questions regarding importance</th>
<th>Questions regarding satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market share</strong></td>
<td>SUB1</td>
<td>SUB4</td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td>SUB2</td>
<td>SUB5</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td>SUB3</td>
<td>SUB6</td>
</tr>
</tbody>
</table>

5.2 Outlier test

At the start of the analysis phase, an outlier test was conducted. From the table given, it was evident that about eight outliers were inconsistent with regards to the other respondents’ answers. However, when removing the outliers Cronbach’s alpha did not increase as expected and therefore it was not considered useful to remove them.
5.3 Descriptive statistics

The study targeted 693 manufacturing companies and obtained a total of 183 answers, resulting in a response rate of 26.4%.

Descriptive statistics is a way for the researcher to summarize and organize the collected data in an effective and meaningful way (Ghauri & Grønhaug, 2010). A table with the descriptive statistics is presented below (Table 5.2).

Table 5.2 Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS1</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.56</td>
<td>1.122</td>
<td>-.452</td>
<td>.180</td>
</tr>
<tr>
<td>GMS2</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.58</td>
<td>1.045</td>
<td>-.461</td>
<td>.180</td>
</tr>
<tr>
<td>GMS3</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.54</td>
<td>1.161</td>
<td>-.633</td>
<td>.180</td>
</tr>
<tr>
<td>GMS4</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.55</td>
<td>.992</td>
<td>-.333</td>
<td>.180</td>
</tr>
<tr>
<td>GMS5</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.91</td>
<td>.939</td>
<td>-.588</td>
<td>.180</td>
</tr>
<tr>
<td>GMS6</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>4.15</td>
<td>1.222</td>
<td>-1.192</td>
<td>.180</td>
</tr>
<tr>
<td>GMS7</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.45</td>
<td>1.062</td>
<td>-.308</td>
<td>.180</td>
</tr>
<tr>
<td>SUB1</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>4.13</td>
<td>.984</td>
<td>-1.061</td>
<td>.180</td>
</tr>
<tr>
<td>SUB2</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>4.83</td>
<td>.459</td>
<td>-4.062</td>
<td>.180</td>
</tr>
<tr>
<td>SUB3</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>4.75</td>
<td>.554</td>
<td>-3.163</td>
<td>.180</td>
</tr>
<tr>
<td>SUB4</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.40</td>
<td>.770</td>
<td>-3.13</td>
<td>.180</td>
</tr>
<tr>
<td>SUB5</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.05</td>
<td>1.007</td>
<td>-2.62</td>
<td>.180</td>
</tr>
<tr>
<td>SUB6</td>
<td>183</td>
<td>1</td>
<td>5</td>
<td>3.26</td>
<td>.892</td>
<td>-.436</td>
<td>.180</td>
</tr>
</tbody>
</table>

The table above shows that the N value is 183, and this is the number of respondents who answered the study’s questionnaire. As for the minimum and the maximum, the minimum is numbered 1, which equaled strongly disagree for all questions regarding GMS, and not at all important/not at all satisfied for the question regarding subjective performance. The maximum for the scale used is 5, and for GMS this number equaled strongly agree, and for the subjective performance questions number 5 equaled extremely important/extremely satisfied.
For central tendency, the most commonly used measure is the mean, which is simply an average (Zikmund et al. 2011). The fifth column in the table holds the mean for each question stated in the questionnaire. To give an example, GMS6 had a mean of 4.15, which indicates that many respondents had a high rating on this question. SUB2 had a mean of 4.83, which implies that many respondents had a high rating on this question as well.

The sixth column shows the standard deviation for all questions, and the higher the number, the higher the variability of the responses among the sample. A lower score for the standard deviation indicates that the answers given by the respondents are more similar. Questions SUB2 and SUB3 have significantly lower standard deviation than the other questions, this shows that the majority of the respondents answered similarly.

Skewness explains how much one of the tails of the distribution is pulled away from the center, and kurtosis indicates the degree to which a curve’s width and thickness of its tails diverge from a normal curve. (Nolan & Heinzen, 2012) As given by the table above, the data for a number of items are skewed, and as mentioned in the methodology part of the paper, Spearman’s rho is considered the most appropriate correlation coefficient to use when the data are skewed.
5.4 Factor Analysis

A factor analysis was used in order to determine whether the items were grouped into factors or not. (See table 5.3 below)

Table 5.3 Factor analysis

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS1</td>
<td>.842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS2</td>
<td>.772</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS3</td>
<td>.696</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS4</td>
<td>.594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS5</td>
<td>.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMS6</td>
<td>.515</td>
<td>.649</td>
<td></td>
</tr>
<tr>
<td>GMS7</td>
<td>.757</td>
<td>.857</td>
<td>.860</td>
</tr>
<tr>
<td>SUB1</td>
<td></td>
<td>.863</td>
<td></td>
</tr>
<tr>
<td>SUB2</td>
<td></td>
<td>.824</td>
<td></td>
</tr>
<tr>
<td>SUB3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB4</td>
<td></td>
<td></td>
<td>.870</td>
</tr>
<tr>
<td>SUB5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUB6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As the table above shows, seven items are loaded on component one, three items on component two, and three items on component three. The seven items loaded on component one are all related to GMS and therefore they group together into factors. The three items on component two and three group together since the three questions are connected to each other, and all relate to subjective performance. The grouping of the different factors tells us to what extent they seem to be measuring the same concepts or variables, and therefore the analysis enables us to assess the factorial validity of the questions (Bryman & Cramer, 2003). Based on this stated fact, the study’s factors measure what they intended to measure.

Items that correlate less than 0.3 with a factor are omitted from consideration since they account for less than nine percent of the variance (Bryman & Cramer, 2003).
5.5 Reliability test

A Cronbach’s alpha test was conducted for the study’s two concepts in order to test the reliability of the study. For exact numbers see table 5.4 below.

Table 5.4 Reliability test

<table>
<thead>
<tr>
<th>Concept</th>
<th>Cronbach’s alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS</td>
<td>0.836</td>
<td>7</td>
</tr>
<tr>
<td>Subjective performance</td>
<td>0.690</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

The reliability for GMS was reported as 0.836 for the seven items measured, and according to Zikmund et al. (2011) this score indicates very good reliability. The reported reliability score for subjective performance was 0.690 and this indicates fair reliability. The study is therefore considered reliable according to the numbers. (Ibid) As the table above shows, both concepts had very good, - and fair reliability. As noted, the alpha score for subjective performance is somewhat lower than for GMS, and a possible reason to this might be that a significantly large share of respondents had a high score on the questions related to importance.

5.6 Validity test

5.6.1 Construct validity

A correlation analysis was conducted for the study’s two concepts in order to test the construct validity of the study. For exact numbers, see Correlation matrix below (table 5.6).

If the correlation coefficient is higher than 0.8 the concepts measured overlap each other. This means that the two concepts are measuring the same items. Two variables that correlate above 0.8 might pose problems in the analysis. (Katz, 2011) As given by the table above, the correlation coefficient for the study is 0.327, which indicates that the two concepts measure different items, and the study is therefore valid.

5.6.2 Face validity

The content validity of this study was assessed by having experts within the subject evaluate whether or not they perceived the measure to be getting at the concept that is the focus of attention.
5.6.3 Factorial validity

In this research, latent constructs that measured perceptions and beliefs was used, and in order to assess the factorial validity of the study, a factor analysis was conducted. As the factor analysis in table 5.3 showed, the questions that grouped together into clusters, measured the same concepts or variables. With that stated the study has factorial validity.

5.7 Hypothesis test

To test the study’s stated hypothesis, a regression, - and correlation analysis was conducted, and the following subheadings discuss the output of the analyses.

5.7.1 Regression analysis

To assess the relationship between the independent variable (GMS) and the dependent variable (subjective performance), and to test the study’s hypothesis, a regression analysis was conducted. Followed, a table with the results is presented, along with a discussion.

Table 5.5 Regression analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>R-Square</th>
<th>B (Unstandardized coefficients)</th>
<th>Beta (Standardized coefficients)</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.070</td>
<td>9.513</td>
<td>.266</td>
<td>3.705</td>
<td>.000</td>
</tr>
<tr>
<td>GMS</td>
<td>.070</td>
<td>1.440</td>
<td>.266</td>
<td>3.705</td>
<td>.000</td>
</tr>
</tbody>
</table>

$H_1$: There is a positive correlation between GMS and subjective performance.

The significance level of 0.000 indicates that the null hypothesis is rejected, and our hypothesis ($H_1$) is supported since the independent variable is making a significant unique contribution to the prediction of the dependent variable.

R-square of 0.070 shows a low correlation between the dependent and the independent variable. This means that GMS affects subjective performance with 7 %, and the remaining 93 % are explained by other factors affecting subjective performance. A possible reason for the low score is that the study only measures two concepts. Beta value of 0.266 shows how strongly the independent variable influences the dependent variable and indicates that there is a positive correlation. B value of 1.440 shows how strongly the independent variable
influences the dependent variable and indicates that there is a positive correlation. (Gravetter & Wallnau, 2013)

5.7.2 Correlation analysis

To measure the relationship between the study’s two concepts and to test the stated hypothesis, a correlation analysis was conducted. As stated in the methodology part of the paper, Spearman’s rho is considered most appropriate to use when the data is skewed, and when outliers are found, therefore the correlation analysis is based this type of correlation coefficient.

All separate variables were removed from consideration in the correlation analysis, and the variables analyzed are those best suited for testing the hypothesis. GMS SUM is the total of all GMS variables and SUB SUM is the total of all subjective performance variables. The scores related to market share (SUB1 and SUB4) were multiplied to obtain the subjective performance measure for market share, and in the table below this score is named SUB Market Share. The scores related to profitability (SUB2 and SUB5) were multiplied to obtain the subjective performance measure for profitability, and in the table below this score is named SUB Profitability. The scores related to sales (SUB3 and SUB6) were multiplied to obtain the subjective performance measure for sales, and in the table below this score is named SUB Sales. SUB SUM Multiplied comprises all multiplied subjective performance variables (SUB Market Share, SUB Profitability, and SUB Sales) and is averaged to obtain the final subjective performance measure. A table with the results from the analysis is presented below. (Table 5.6)
Table 5.6 Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>GMS SUM</th>
<th>SUB SUM</th>
<th>SUB Market share</th>
<th>SUB Profitability</th>
<th>SUB Sales</th>
<th>SUB SUM Multiplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS SUM</td>
<td>1.000</td>
<td>.342**</td>
<td>.289**</td>
<td>.166*</td>
<td>.331**</td>
<td>.327**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.025</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.342**</td>
<td>1.000</td>
<td>.839**</td>
<td>.787**</td>
<td>.831**</td>
<td>.992**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.289**</td>
<td>.839**</td>
<td>1.000</td>
<td>.482**</td>
<td>.589**</td>
<td>.809**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.166*</td>
<td>.787**</td>
<td>.482**</td>
<td>1.000</td>
<td>.585**</td>
<td>.825**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.025</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.331**</td>
<td>.831**</td>
<td>.589**</td>
<td>.585**</td>
<td>1.000</td>
<td>.848**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.327**</td>
<td>.992**</td>
<td>.809**</td>
<td>.825**</td>
<td>.848**</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.327**</td>
<td>.992**</td>
<td>.809**</td>
<td>.825**</td>
<td>.848**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
- Spearman’s rho

**H₁: There is a positive correlation between GMS and subjective performance.**

As given by the table above, the correlation coefficient, Spearman’s rho (ρ), for GMS SUM and SUB SUM Multiplied is 0.327. The Spearman’s rho score of 0.327 also indicates a medium positive relationship between the two concepts (Nolan & Heinzen, 2012). The hypothesis stated that there is a positive correlation between GMS and the organization’s subjective performance, and based on the given score for the Spearman’s rho the hypothesis is supported. The significance level of 0.000 also implies that the hypothesis is supported. With ρ = 0.327 and p < 0.001 there is only 1 chance in a 1000 that no correlation exists in the population (Bryman & Bell, 2011).

Other relationships that are interesting to look at are those between GMS and the subjective performance measures. The correlation between GMS and SUB Market Share is 0.289, which indicates a weak positive relationship (Nolan & Heinzen, 2012). The correlation between GMS and SUB Profitability is 0.166, which implies that there is a weak but positive
correlation. A medium positive correlation is found between GMS and $SUB Sales$, with Spearman’s rho correlation coefficient of 0.331.

As evident from the table presented below (table 5.7), the stated hypothesis is supported by both the regression, - and the correlation analysis.

Table 5.7 Hypothesis test

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Analysis</th>
<th>Beta</th>
<th>Significance level</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$ There is a positive correlation between GMS and subjective performance</td>
<td>Regression</td>
<td>.266</td>
<td>0.000</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>-</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

5.8 Chapter summary

This chapter has presented an analysis of the collected data. The study’s hypothesis was supported by both the regression, - and correlation analysis. As for the reliability of the study all variables were accepted, and the correlation, - and factor analysis tests showed that the research is valid.
6.0 Conclusions and implications

This chapter presents the main findings and conclusions from the collected data, together with a discussion of the material. Theoretical contributions and managerial implications are presented, accompanied by the limitations of the paper, and suggestions for future research.

6.1 Discussion

After reviewing the existing literature on GMS it was evident that previously conducted studies have mainly focused on objective measurements of performance in relation to GMS. This is where the actual research gap was found as no studies have been conducted concerning GMS in relation to subjective performance, hence the purpose of the study has been to assess the relationship between GMS and subjective performance. Moreover, the research question stated has been to investigate how GMS influence subjective performance.

In order to answer the study’s purpose with related hypothesis and research question, descriptive statistics, and regression, - and correlation analysis were conducted. From the correlation analysis it is evident that the level of association between GMS and subjective performance is at a medium level at 0.327, which indicates that there is a positive relationship between the two concepts. Based on the regression analysis the Beta value is 0.266 and this indicates that the relationship found is positive. The regression, - and correlation analysis showed a significance level of 0.000 which supports the stated hypothesis. Ketokivi and Schroeder (2004) stated that criticism regarding the use of subjective performance as an indicator is that it depends on human perception and knowledge. Therefore, the slightly low correlation may be due to the fact that the study is based on the respondents’ own perception, attitudes, and beliefs.

The three items measured for subjective performance: profitability, market share, and sales, were entered into a correlation analysis with GMS in order to establish whether the three items correlated with GMS or not. The correlation analysis also made it possible to establish whether this relationship was positive or negative. Previously conducted studies argue that GMS lead companies to increase profits (Fraj et al. 2011; Fraj-Andrés et al. 2009). However, the correlation between GMS and profitability was 0.166. This slightly low score indicates that managers do not perceive profitability as a factor that is influenced by engaging in green
marketing strategies. This finding is contrary to the previously conducted study made by Fraj et al. (2011), and this might be due to the fact that this research was measured subjectively, and Fraj et al’s research used objective performance measures. A higher correlation was anticipated as the assumption regarding the fact that managers would perceive profitability to be highly affected by GMS was made. Baker and Sinkula (2005) claim that GMS also has an influence on firms’ market share, and results from the study demonstrates that the relationship between GMS and market share is at a weak positive relationship with a score of 0.289. This result indicates that managers perceive GMS to affect market share to 28.9%. The Spearman’s rho correlation coefficient between GMS and sales was 0.331, and this score is slightly higher than the other subjective performance measures and indicates a medium positive relationship. This shows that managers believe sales to be affected by GMS to a larger extent than the other two factors.

In the research conducted by Henriques and Sadorsky (1996), the authors state that firms who view environmental issues as important are more likely to develop an environmental plan and strategy. As given by the descriptive statistics table in the data presentation and analysis chapter, the mean for all seven questions related to GMS is relatively high. This indicates that companies perceive environmental issues as an important aspect to consider when formulating various strategies. With regards to the questions related to subjective performance, the importance scores all have a mean above 4.00 (with maximum being 5.00), and the satisfaction scores all end up around 3.00 (with maximum being 5.00). The means for subjective performance indicate that the respondents do consider the factors measured important, but that they are not completely satisfied with the results generated from their respective companies.

To summarize the main findings of the study it is evident that the hypothesis is supported by both the regression, - and the correlation analysis as the significance level was 0.000. The correlation for GMS and subjective performance was medium positive, and by that said the purpose and research question are both affirmed as a relationship between GMS and subjective performance is found, and that this relationship is of positive nature.

6.2 Theoretical contributions
The main contribution of the study is, as opposed to what a qualitative study would give, its generalizability, as the study’s results is in fact applicable on all manufacturing firms in Sweden.
The study also contributes with a new aspect to GMS as it puts the strategy in relation to subjective performance, which means that it actually takes the beliefs, perceptions, and attitudes of the managers into consideration when assessing the relationship between the two. As opposed to previously conducted studies within the area of GMS, where the focus has been on objective performance measurements, this study gives theoretical contributions to the field as it shows that GMS does in fact influence subjective performance.

As the findings indicate, the two measured items for subjective performance: market share, and profitability were both positively affected by the use of GMS. This is in line with previously conducted research made by Fraj et al. (2011), Fraj-Andrés et al. (2009), Baker and Sinkula (2005), as they all claim that GMS influences profitability and market share.

6.3 Managerial implications
Protecting the environment and aiming for sustainable development is crucial as it highly affects the future, and therefore we believe that it is an inevitable aspect that needs to be taken into consideration when developing various business strategies. Based on the findings of the study, some managerial implications can be given.

As Johnson et al. (2011) stated, the most proper definition of ‘strategy’ is: “the long term direction of an organization” (Ibid), and as GMS has its own acceptance period for both investors and corporations, we advise managers to regard the environment as a long-term investment. And by that said, continue working with environmental degradation issues despite the fact that the strategy might not immediately show the results desired. (Mishra & Shamra, 2012)

Aiming for sustainable development will become more of a moral obligation in the future (Kumar et al. 2012), and therefore a suggestion is for managers to consider implementing green strategies to a larger extent than they do today. Companies operating in B2B will probably find themselves forced to comply with the increased environmental pressure that is put on them.

As studies show, organizations that are aiming towards being environmentally friendly may enhance the satisfaction and loyalty of its stakeholders, as it improves their firm image (Berman et al. 1999). Therefore our suggestion and managerial implication is for managers to strive towards creating environmentally friendly products and services in order to position themselves as an organization that takes responsibility for the consequences of their actions,
and by this become more attractive to consumers. This is also with regards to the fact that society’s concern for the natural environment has increased during the last decades (Fraj et al. 2011), and therefore it is especially important to think about the future and regard GMS as a long-term strategy.

Studies also show that businesses need to first adopt sustainability to their various business practices before they can implement it to their strategies (Kumar et al. 2012). Thus, another managerial implication that can be given is for managers to start implementing ‘green thinking’ within their everyday practices, making the concept of sustainability and green marketing an exiting subject that will motivate employees to actually strive towards a greener environment, and thereby end up developing green strategies suitable to their specific activities.

6.4 Limitations

The major limitations of this study are related to the time span, the lack of previously conducted studies, and the criticism of using subjective measures as a performance indicator.

- Since the study has been conducted in a relatively limited time frame the respondents were only given two to three days to answer the questionnaire, and this might have affected the response rate. With a longer time frame available it would have been possible to collect data from more respondents during a longer period of time. Reminders could then have been sent out and this might have increased the response rate further. A longer time span available would also have enabled more time and effort being put on reviewing existing literature and finding additional theories to use, as well as finding even more suitable scientific articles within the chosen theories.

- The lack of previously conducted literature about GMS in relation to subjective performance is also considered a limitation since a replication of previously conducted studies was not an option.

- Marketing literature also claim that even though subjective performance measurements are commonly used, they are not free from criticism (Ngo & O’Cass, 2012; Ketokivi & Schroeder, 2004). Since the study is based on subjective measures,
it is dependent on managers’ perceptions, attitudes, and beliefs, and therefore it is considered difficult to interpret the results.

6.5 Suggestions for future research

Green marketing strategy is according to Fraj et al. (2011) a subject that has occurred more in academia over the years, and it is believed that the reason for this is society’s increasing concern for sustainable development. Some interesting suggestions are put forward for those interested in conducting further research within the field.

- Firstly, a suggestion is for researchers to conduct a similar study with a larger population, tentatively in other countries to get an even more generalizable result. This would also increase the accuracy and reliability of the study since it would make the study applicable to several additional organizations around the globe. This together with a longitudinal approach might give yet another indication to how various environmental strategies affect companies’ subjective performance, and all through a long-term perspective.

- This study targeted the manufacturing industry because of its obvious impact on the natural environment. However, targeting other industries would raise the opportunity to uncover differences industry wise. For instance, studies within for example retailing, with a business to consumer approach, would be an interesting aspect to consider doing research in.

- We also suggest that further research within the area could be conducted with a qualitative approach in order to gain deeper insight about GMS and its influence on organizations’ subjective performance.

- Furthermore, assessing the relationship between GMS, subjective performance, and objective performance is yet another suggestion made since a possibility to uncover differences in the two performance indicators might be found.
6.6 Chapter summary

This chapter has presented the answers to the study’s purpose and stated research question, as well as a discussion concerning the theoretical contributions and managerial implications, together with the limitations of the study, and suggestions for future research. This study contributes with a new approach as it puts GMS in relation to subjective performance, two concepts, whose relationship to one another has not been assessed in previous research. The study also contributes with a quantitative approach and therefore the results of the study can be generalized to the population. Finally, suggestions for further research were made with regards to replicating the same study within other industries to uncover differences industry wise, and also conducting the study with a qualitative approach to gain deeper insight into the relationship between GMS and subjective performance.
**List of references**


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Appendix A: Questionnaire

1. Our firm has integrated environmental issues into our strategic planning process.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

2. Our marketing strategies for our products and services have been influenced by environmental concerns.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

3. Our company use environmental considerations in product design.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

4. Our company use environmental considerations in distribution.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

5. Environmental preservation is a high priority activity in our firm.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

6. Our firm sets environmental goals every year.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

7. Engaging in environmental activities is vital to our firm’s success.

   1  2  3  4  5
   |   |   |   |   |
   Strongly disagree × × × × × Strongly agree

8. How important is market share for your company?

   1  2  3  4  5
   |   |   |   |   |
   Not at all important × × × × × extremely important

9. How important is profitability for your company?
10. How important is sales for your company?

1 2 3 4 5
not at all important [x] [x] [x] [x] [x] extremely important

13. How satisfied are you with the company’s achieved market share?

1 2 3 4 5
Not at all satisfied [x] [x] [x] [x] [x] Extremely satisfied

12. How satisfied are you with the company’s achieved profitability?

1 2 3 4 5
Not at all satisfied [x] [x] [x] [x] [x] Extremely satisfied

13. How satisfied are you with the company’s achieved sales?

1 2 3 4 5
Not at all satisfied [x] [x] [x] [x] [x] Extremely satisfied
Appendix B: Cover letter (English version)

Hello,

We are two marketing students from Linnaeus University conducting a study for our bachelor thesis.

Environmental marketing, and the use of green marketing strategies, is regarded as a hot topic today and many studies have been conducted in order to find out how companies around the globe take a stand to these. Studies show an increased profitability, market share, and sales associated with environmental commitment. The survey provides answers to what view Your company has towards questions regarding the environment and whether they have an impact on how Your company performs.

We greatly appreciate that You’ll take the time to answer the questionnaire as it not only brings us one step closer to graduation, but also increases the credibility of our study, and gives us a better chance to receive a higher grade.

The questionnaire contains 13 questions and will only take three minutes of Your time. The questionnaire is anonymous. We appreciate Your answer by the 26/4 at latest. The link to the questionnaire is provided below:

https://docs.google.com/a/student.lnu.se/spreadsheet/viewform?formkey=dF9CY1RhVlVHc2xZFZLM2tuNUx2SlE6MQ

If You have any questions regarding the questionnaire, or wish to obtain a copy of the finished paper, You are welcome to contact us through the e-mail addresses below.

Thank you for Your cooperation.

Best regards,

Cecilia Alvén  
cecilia_alven@hotmail.com

Paulina Huhtilainen  
paulina.huhtilainen@hotmail.com

Linnaeus University
Appendix C: Följebrev (Swedish version)

Hej.

Vi är två marknadsföringsstudenter vid Linnéuniversitetet i Växjö som just nu utför en studie till vår c-uppsats.

Miljörelaterad marknadsföring, - och strategi är ett hett ämne idag och många studier har gjorts i syfte att ta reda på hur företag världen över ställer sig till dessa. Många studier påvisar en ökad lönsamhet, marknadsandel och försäljning i samband med miljöengagemang.

Enkäten ger svar på hur Ni ställer Er till miljörelaterade frågor och om dessa har en påverkan på hur Ert företag presterar.

Vi sätter stort värde på att Ni tar er tid att svara på denna enkät då den inte bara för oss ett steg närmre examen, men även ökar trovärdigheten i vår studie och ger oss bättre förutsättningar till ett bra slutbetyg.

Enkäten innehåller 13 frågor och tar endast tre minuter av Er tid. Ni är givetvis anonyma. Vi uppskattar Ert svar senast den 26/4. Länken till enkäten finner Ni nedan:

https://docs.google.com/a/student.lnu.se/spreadsheet/viewform?formkey=dF9CYIRhV1VHc2xzZFzLM2tuNUx2SIE6MQ

Om Ni har frågor angående enkäten, eller önskar ta del av den färdiga studien, är Ni välkommen att kontakta oss via e-mailadresserna nedan.

Tack för Er medverkan,

Vänliga hälsningar,

Cecilia Alvén
cecilia_alven@hotmail.com

Paulina Huhtilainen
paulina.huhtilainen@hotmail.com

Linnéuniversitetet
Linnaeus University – a firm focus on quality and competence

On 1 January 2010 Växjö University and the University of Kalmar merged to form Linnaeus University. This new university is the product of a will to improve the quality, enhance the appeal and boost the development potential of teaching and research, at the same time as it plays a prominent role in working closely together with local society. Linnaeus University offers an attractive knowledge environment characterised by high quality and a competitive portfolio of skills.

Linnaeus University is a modern, international university with the emphasis on the desire for knowledge, creative thinking and practical innovations. For us, the focus is on proximity to our students, but also on the world around us and the future ahead.

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Linnaeus University
SE-39182 Kalmar/SE-
35195 Växjö