



CHALMERS
UNIVERSITY OF TECHNOLOGY



Strategic management competences of top leaders of Scandinavian contractors

Master's Thesis in the Master's Programme International Project Management

GEORGIOS PARDALIS

Department of Civil and Environmental Engineering
Division of Construction Management
CHALMERS UNIVERSITY OF TECHNOLOGY
Gothenburg, Sweden 2015
Master's Thesis 2015:120

MASTER'S THESIS 2015:120

Strategic management competences of top leaders of
Scandinavian contractors

Master's Thesis in the Master's Programme International Project Management

GEORGIOS PARDALIS

Department of Civil and Environmental Engineering

Division of Construction Management

CHALMERS UNIVERSITY OF TECHNOLOGY

Göteborg, Sweden 2015

Strategic management competences of top leaders of Scandinavian contractors

© GEORGIOS PARDALIS 2015

Examensarbete 2015:120 / Institutionen för bygg- och miljöteknik,
Chalmers Tekniska Högskola 2015.

Department of Civil and Environmental Engineering
Division of Construction Management
Chalmers University of Technology
SE-412 96 Göteborg, Sweden
Telephone: + 46 (0)31-772 1000

Cover:
Evan Collins

Chalmers Reproservice
Göteborg, Sweden, 2015

Abstract

This study aims to examine the strategic management competencies of top-level managers in the Scandinavian construction industry. Previous studies, and findings from National Statistics Agencies in Scandinavia and EUROSTAT show a decline in performance productivity of Scandinavian contractors over the last few years. In order to link the aforementioned decline with top-level management, this study examines the management styles that are most common in the Scandinavian construction industry, as well as the way that top-level managers deliver their tasks. Additionally the most important challenges that top-level managers in the construction industry will face in the future are identified. The research method followed was a mixture of qualitative and quantitative analysis, that includes members of the management boards of construction organizations in Scandinavia, CEOs of those organizations and other experts in the Scandinavian construction industry. The study focuses on "Construction of Buildings" (41), "Civil Engineering" (42) and "Specialized Construction Activities" (43) company codes according to the NACE sector group, and it applies to the top companies that belong to those codes in Denmark, Norway and Sweden.

Through the use of a survey questionnaire on members of the management boards and interviews on CEOs and experts on the industry a deeper knowledge of how those managers perform their managerial work, in terms of competencies, managerial tasks, managerial styles, tools, and power base, are examined and additionally a look at how CEOs and management boards interact in Scandinavia is provided. Furthermore top-level managers and experts in the industry discuss about the future challenges they think they will face in the years to come and provide information about the areas of focus that can lead the organizations they represent to achieve better results and performance.

The results show a different perception between members of the management boards and CEOs regarding which strategic management competencies are considered important. The first are more close to the approach of the so-called "Scandinavian management", where credibility, responsibility, interpersonal skills are the most valued, while CEOs follow a more result oriented approach with a high level of trust on their own abilities. Additionally the opinion of experts in the industry brings for discussion new essential competencies with a more technocratic approach, where diplomacy, agile management and entrepreneurial skills come on top of the agenda for a successful top-level manager. Furthermore the managerial approach of CEOs is more aligned to the principles of modern management, while members of the management boards follow a more old school and reserved managerial approach, which is based on strategies that have already been implemented and have produced results. The consequence of it there is a difference in perception of what is needed to change, in order construction organizations to achieve better performance productivity in the future. That put construction organizations in turbulence of ineffective decision-making and prevents true innovation and change. Additionally the experts in the industry bring proposals and areas of focus that will provide construction contractors with the necessary boost they need in order to improve their position in the future.

Keywords: *Scandinavia, top-level managers, competencies, questionnaires, interviews, future challenges*

Acknowledgments

I would like to express my gratitude to all these we have shown their support during the writing process of this study. Special thanks to my tutors for providing me with the necessary knowledge to meet the challenges of such a project, my beautiful nieces who have always been supportive and my source of inspiration, my close friends that have suffered my nagging all this time, and my fellow student, Ivica Glavas, who provided me with an excellent set of comments that helped me improve the content of this study. Last, but not least, I would like to thank all those that have offered me their time, either for an interview session or by completing the questionnaire of this study. Last, but not least, I want to express my gratitude to my supervisor, Professor Christian Koch, for providing me with valuable comments, constructive arguments and an interesting set of discussions around the topic of my study. Without you this project would have been impossible to be completed!

Table of Contents

ABSTRACT

ACKNOWLEDGMENTS

1.INTRODUCTION.....	1
1.1 Background.....	2
1.2 Purpose.....	2
1.3 Disposition.....	3
2.METHOD.....	4
2.1 Selection of Research Strategy.....	4
2.3 Quantitative Analysis.....	4
2.3 Qualitative Analysis.....	5
2.4 Data collection methods.....	5
2.4.1 Questionnaires.....	5
2.4.1.1 Type of Sampling.....	6
2.4.1.2 Type of information collected in the questionnaire.....	7
2.4.1.3 Types of questions.....	7
2.4.1.4 Selection of Sample.....	7
2.4.1.5 Response rate.....	8
2.4.2 Interviews.....	9
2.4.2.1 Selection of sample.....	10
2.4.2.2 Types of questions.....	10
2.4.3 Secondary data.....	11
2.5 Data Analysis Method.....	11
2.6 Limitations.....	12
2.7 Research Quality.....	12
3. THEORETICAL FRAMEWORK.....	14
3.1 Introduction.....	14
3.2 Definition of competencies.....	14
3.3 Competencies for senior management roles.....	14
3.4 Important management tasks for top-level managers today.....	16
3.5 Main competencies of a top manager.....	17
3.6 Managerial style.....	18
3.7 Management board diversity.....	23
3.8 Relationship between CEO and management board.....	23
3.9 Top manager's power base.....	24
3.10 Management tools.....	24
3.11 Main challenges for top managers in the future.....	25
3.12 Conclusion.....	26
4. EMPIRICAL FINDINGS/ANALYSIS.....	28
4.1 Findings from the questionnaire.....	28
4.1.1 <i>Important management tasks</i>	31
4.1.2 <i>Main competencies</i>	33
4.1.3 <i>Managerial style</i>	34
4.1.4 <i>Managers' powerbase</i>	34
4.1.5 <i>Management tools</i>	35
4.1.6 <i>Challenges in the years to come</i>	36
4.2 Findings from the interviews with CEOs.....	36

4.2.1 Managerial style	38
4.2.2 Main Competencies.....	39
4.2.3 Manager's powerbase	39
4.2.4 Challenges for the years to come	39
4.3 Findings from interviews with recruiters/other specialists.....	40
4.3.1 Managerial style	40
4.3.2 Main competencies.....	40
4.3.3 Challenges for the year to come.....	41
4.4 Findings from external/secondary resources.....	42
4.4.1 Governance of construction industry organizations	42
5.DISCUSSION.....	46
5.1 Introduction.....	46
5.1.1 Important management tasks for top managers today.....	46
5.1.2 Main competencies of top managers	47
5.1.3 Managerial style	47
5.1.4 Board diversity	48
5.1.5 Relationship between CEO and Management Board.....	49
5.1.6 Top manager's power base.....	49
5.1.7 Management tools.....	49
5.1.8 Main challenges of top managers in the future	50
6. CONCLUSIONS.....	51
6.1 Key findings	51
6.2 Research questions.....	52
6.3 Recommendations for future research	53
7. REFERENCES.....	54
APPENDICES.....	59
APPENDIX A: Questionnaire	59
APPENDIX B: Interview with CEOs	67
APPENDIX C: Interviews with recruitment consultants and other experts.....	69

List of Figures

FIGURE 1- Calculation of response rate (source: Punch, 2003).....	8
FIGURE 2- World competitiveness ranking for 2014 (source: World Economic Forum).....	21
FIGURE 3- Distribution of participants by business sector.....	28
FIGURE 4- Distribution of participants divided by gender.....	29
FIGURE 5- Respondents age distribution.....	29
FIGURE 6- Size of respondent's organizations.....	31
FIGURE 7- Time spent on management area.....	32
FIGURE 8- Time spent on daily activities.....	33
FIGURE 9- Distribution of interviewees by business sector.....	37
FIGURE 10- Distribution of interviewees divided by gender.....	37
FIGURE 11- Interviewees' age distribution.....	38
FIGURE 12- Distribution of board members by age.....	42
FIGURE 13- Distribution of board members by gender.....	43
FIGURE 14- Distribution of board members by educational background.....	43
FIGURE 15- Distribution of CEOs by age.....	44
FIGURE 16- Distribution of CEOs by gender.....	44
FIGURE 17- Distribution of CEOs by educational background.....	45

List of Tables

TABLE 1- Company of origin and sector.....	6
TABLE 2- Overview of responses.....	9
TABLE 3- Origin and sector of interviewed CEOs.....	10
TABLE 4- "modern companies" VS "traditional companies (source: Rambøll Management 2004).....	19
TABLE 5- Profile of the Scandinavian manager (source: Lindholm, 2004).....	22
TABLE 6- Educational background of board members.....	30
TABLE 7- Managerial experience of respondents.....	30
TABLE 8- Number of employees and number of staff that reports directly to senior manager.....	30
TABLE 9- Most important management tasks.....	31
TABLE 10- Most important competencies.....	33
TABLE 11- Managerial style.....	34
TABLE 12- Factors justifying existence as leader.....	34
TABLE 13- Factors giving penetration in management position.....	35
TABLE 14- Most common and useful management tools.....	35
TABLE 15- Main challenges for the years to come (questionnaires).....	36
TABLE 16- Educational background of interviewees.....	38
TABLE 17- Important managerial skills according to interviewees.....	39
TABLE 18- Main challenges for the year to come (CEOs).....	40
TABLE 19- Main challenges for the year to come (industry experts).....	42

1. Introduction

In this chapter, the background of the research topic is described in brief. Further the purpose and research question are stated and an overview of the disposition is provided to the reader.

1.1 Background

The research regarding strategic competences, which in this study are the underlying attributes of top-level managers, was initially conducted in the USA (McCelland, 1973 & Lamb et al., 1984), and the U.K. followed more than a decade later (Rothwell & Lindholm, 1999, Armstrong, 2003). In the rest of Europe such research gained broader interest at a later point. In Scandinavia, research on the subject has been carried out only in recent years. The interest towards such research has started becoming growing as a secondary of the expansion of the operations of contractors based in Denmark, Norway and Sweden over the last decade. Contractors have made a step forward from their base-country expansion to an expansion all over Scandinavia, with an expansion over the borders of Scandinavia to follow. As Koch and Buhl (2013) identified, that expansion had as a result the restructure in the company organizations and the processes of competency development in senior management.

A study in the statistics provided by EUROSTAT (2013) regarding the construction industry, shows a decline in the performance and productivity of Scandinavian contractors. Signs of that decline have been identified in previous research too (Ingvaldsen et al., 2004). Koch and Buhl (2013) justify this decline with a series of factors, with the fragmentation of the market being one of them. As far as it concerns the decline in performance Zia et al. (2009) have observed that the lack of strategic management competencies among the large construction contractors can be a significant reason for that. Despite the fact though that strategic management competencies are of great importance for the performance of those organizations, as a topic they remain under-researched.

The management model that Scandinavian contractors follow is a part of the so-called "Scandinavian model". The culture of countries in the Scandinavian region has a great influence on how people behave. "Scandinavian management" is influenced by political, economical and social contexts. The expansion though of construction organization over the borders of the Scandinavian region has created a great interest, related to how Scandinavian management can be influenced by management models of other countries, like USA or China.

As it is stated above the market expansion of Scandinavian contractors led naturally to a change of corporate management, that has to face the challenges occurring by a series of complex issues. In order those complex issues to be addressed contractors following a practice of composing management boards with a mixed set of competencies. Löwstedt (2012) emphasizes the experience of operations as an important competency at board level, but it is not the only competence that can create a significant change to the issue described above. The formation and the role of corporate management in other sectors has been the subject of studies in the past (Johri et al., 2013).

Using that previous experience, this study aims to develop the research of corporate management in the construction sector a step forward, and provide a new approach to the role of corporate management in the performance and productivity of construction contractors.

The literature on strategic management competencies keeps on being updated over the years (Hill et al., 2014). As markets become more globalized, a great pressure has been put on managerial skills. That makes strategic management competencies a hot subject of the research agenda. Some of the managers that are on the top-level of organizations take advantage of this globalization, producing successful results while others fail to address the challenges of the globalized environment. What makes though some top-level managers successful while others fail? How top-level managers can actually contribute to the formation of strategies that will improve performance and productivity of the organizations they manage?

The main goals for every organization are to be productive, deliver products that will satisfy their stakeholders, and be profitable and successful. To achieve these, organizations need to be well managed and to form strategies that will promote excellence towards the aforementioned directions. Performing at a globalized environment leads to great competition and organizations are trying to acquire a world-class status. That puts great pressure on top-level managers and management boards, as they are called to acquire new skills that will enable them to respond to a business environment that continuously changes.

In today's business world the real competition is the one that Horton (2000) describes as a "competition over competencies". Horton also states that in some countries an organization's ability to learn and acquire new capabilities and competencies is more important than its current endowment of unique resources or the industry structure it currently faces. That also creates a challenge for top managers in Scandinavia since they have to develop their competencies along with the necessary competencies their organizations have to possess to ensure that they will survive and develop further in the strong competition.

What has been described above forms the situation Scandinavian top-level managers find themselves in. What remains to be found out is whether they are prepared to deal with the competition and the challenges their organizations face, and if they have the right set of competences that allows them to meet the requirements of their role and lead their organizations to better performance results.

1.2 Purpose

The purpose of this study is to examine and evaluate the competencies of top-level managers in the Scandinavian construction industry, with a focus on their strategic competencies. That will contribute in understanding and determining the correlation between strategic management competencies and performance improvement. The objectives are:

- To examine and identify the most important challenges that top managers will face in the years to come.
- To examine the way that top managers deliver their tasks (tasks, time spent on tasks, areas of management focus, personal overview on the ability to deliver those tasks)

- To identify which management styles are the most common in the Scandinavian construction industry.

In order to meet the purpose of this master thesis, as it is described above, we can turn the objectives above into research question that have to be answered. Those questions are:

- What are the tasks in which top managers focus on today?
- What are the main competencies that top managers need to have in order to deliver those tasks effectively?
- What are the managerial style, the manager's power base and which management tools are in use?
- What are the relationships between CEOs and members of the board?
- What are the main challenges that top managers think they will face in the years to come?

1.3 Disposition

In the next chapter the reader is provided with an insight about the way this study has been conducted, through an extended description of the method used. In the method chapter the ways of data collection are described and analyzed and the strategy that has been followed for this study is explained. Additionally a theoretical framework that defends the reliability of this study and its methodology is presented.

The theory chapter aims to cover the theoretical context of interest that supports the study and its analysis. The overall theory on the concept of competencies is presented, by giving a definition to them, and it is followed by a deeper investigation of competencies for senior management roles. On the side the reader gets an overview of the important management tasks top-level managers today, with the addition of the main competencies of top-level managers.

Further in the theory an extended presentation of managerial style is provided, and a brief reference to the Scandinavian way of management is presented. Later on the senior manager's power base is presented from the experts' point of view, to conclude with the management tools that top managers use in the application of their managerial work, and the challenges that top managers will have to face in the future.

In the empirical part the results from the contact with CEOs and members of the management boards from organizations in the Scandinavian construction industry are presented. The set of competencies of the managers are categorized and we also get an overview regarding the soft skills of those managers. Additionally findings deriving from external sources (organizations' websites, press releases, articles in the press etc.) are presented to support further the findings above.

In the analysis that will follow the empirical study is analyzed along with the theoretical framework, in terms of what strategic competencies top managers in the Scandinavian construction industry have according the competencies that presented on theoretical research conducted by others. Thereafter an analysis of how these competencies are applied in the strategy formation of construction organizations and what could change in the future in order the existing performance and productivity of construction organizations in Scandinavia to be improved. The report is settled with a discussion and conclusion of the findings from the research

2. Method

In this chapter the chosen research strategy will be described and the use of quantitative and qualitative analysis will be justified. Further it will elaborate on data collection methods and as closure the quality of the chosen data collection methods regarding the validity and reliability of the study will be reasoned.

2.1 Selection of Research Strategy

The purpose of this study is to evaluate the strategic management competences of top-level managers in the Scandinavian construction industry. In order to meet the needs of this purpose the researcher is required to have a hermeneutic approach on the subject. That means that the researcher needs to understand and examine the thoughts and feelings of people through interpretation and comprehension (Ödman, 2003). As a part of the project, the researcher has had the opportunity to interview the CEOs of some of the major contractors in the Scandinavian construction industry. Through those CEOs sayings and their experience the researcher had the opportunity to understand how those organizations work and the cultural context behind the application of those strategic competencies. Ödman (2003) describes the learning process of the hermeneutic circle, where researchers develop their understanding through interpretation and then understanding of the objects under study in an iterative loop. Additionally a questionnaire delivered to members of the management boards of those contractors, and that gives to this study greater legitimacy as it provides a more comprehensive knowledge to the study subject, and offers a great opportunity to examine the opinion regarding management competencies from a management board's point of view.

2.3 Quantitative Analysis

The research is related to the strategic competencies of top managers and aims to identify sensitive information about them, such as:

- The challenges that those top managers face today and will face in the future
- The content of their job
- Their power base
- The management tools that are mostly used
- The identification of similarities or differences between top management of Scandinavian construction industry and similar industries in other geographical regions

In order to collect the data needed an anonymous investigation is the most optimal solution (Corti et al., 2000). Anonymity is important as those top managers questioned feel freer to consider and answer the questions without the "fear" of leaking important information for their organizations. A questionnaire provides them with an ideal environment in order to the researcher to acquire valuable data for his research.

The reasons above justify the use of quantitative research as it enforces the feeling of safety and anonymity to the participants. It also gives the researcher the opportunity to compare the acquired results to those of similar investigations in other geographical

regions. To ensure the code of anonymity, as it is described above, the questionnaire was sent directly to the top managers' personal e-mails with a link that is valid for each participant individually and which can be accessed only by him/her. In that way the participant could feel safe that he will remain anonymous.

2.3 Qualitative Analysis

Qualitative research analyses data from direct in-depth, open-ended interviews, and written documents (Patton, 2005). Furthermore in qualitative research, theories and analysis are generated during the research process. The epistemological emphasis will differ from the positivistic standpoint developed by natural scientific models and positivism, and that the study will describe ways in which individuals interpret their social world (Bryman & Bell 2007).

2.4 Data collection methods

The data collection methods that have been used for this research project are interviews and questionnaires, which allowed the researcher to be more flexible in the search for information and gave him access to a broader group of top managers, which gives to the project a greater validity. The use of different data collection methods and the mix of qualitative and quantitative research is not something uncommon, and the combination of interviews with questionnaires ensures the participation of a greater number of top managers which will ensure the credibility of the research results and will increase the overall credibility of this study.

2.4.1 Questionnaires

Questionnaires provide the researcher with a quantitative method of data gathering. The advantages from the use of questionnaires, as Popper (2004) describes them are:

- They are practical
- They help the researcher to collect a greater amount of information from a large group of people in a significantly shorter period of time.
- Questionnaires can be carried out with very low affect to their validity and reliability
- Their result can be easily quantified
- Their results can be analyzed in a more scientific and objective way than other forms of research.
- When data has been quantified, it can be used to compare and contrast other research and may be used to measure change
- Quantitative data can be used to create new theories and / or test existing hypotheses

There is no doubt that, as every other method of data collection, questionnaires have some disadvantages too. Ackroyd and Hughes (1981) point out some of those disadvantages.

- There is no way to tell how truthful a respondent is
- There is no way the researcher to know how much thought a respondent has put in
- Respondents may have different interpretations of the questions; therefore there is a level of subjectivity that is not acknowledged

- While developing a questionnaire, the researcher is making own decisions and assumptions as to what is and is not important.

In every questionnaire two different types of questions can be included, depending upon whether the questionnaire is going to be quantitative or qualitative. These two types are closed and open-ended questions. For this study the development of a valid and reliable questionnaire was required. Of course the fact that a questionnaire can only ask questions and not get in an in-depth analysis should not be ignored.

2.4.1.1 Type of sampling

The research sample for the questionnaires is identified as members of the management board in Denmark, Norway and Sweden, coming from the constructions industry and especially from organizations that belong to the codes 41,42 and 43 of the NACE ¹sector group. 41 apply to the "Construction of Buildings", 42 to "Civil Engineering" and 43 to "Specialized construction activities". The company sample was initially generated using the website largest companies.com (Largest companies 2014), which provides data for 100.000 companies in the Nordic region and gives space for national comparison. Out of the whole sample, 41 organizations are primary shareholders companies (with a CEO, Board of Directors and Management Board), which are crucial units for the decision-making process in the corporate structure. The Danish, Swedish and Norwegian multinationals' management elements have been studied along with both a national analysis and multinational analysis, in order to compare competing national and multinational institutions.

This study covers large Scandinavian contractors, measuring the strategic management skills of members of the board of directors. The Gross sample consists of 150 contractor companies: 35 from Denmark, 55 from Norway and 60 from Sweden. Desk research using web resources such as www.largestcompanies.com helped to determine which contractors would be examined. From a closer study in those companies' websites, and with the notification that not all of them provide data about the consistence of their management boards, 200 managers at board level were selected to participate in this study. It is also crucial to notice that the selected sample of companies has been chosen with the assumption that the larger companies are the leaders of the market in terms of strategy.

Additionally the companies examined belong to the codes 41,42 and 43 of the NACE sector group. That has been done in order to select contractors which operations cover a broad amount of earthworks, civil engineering and specialized technical operations. More analytically the identity of the examined sample is presented on the table below:

Country	Group 41	Group 42	Group 43
Denmark	10	12	13
Norway	10	30	15
Sweden	20	15	25

Table 1: Company of origin and sector

The success of the study depends to a great extend on the careful design of the questionnaire. Therefore, contents, structure and language used were carefully selected. For the questionnaire's questions a great effort has been made in order them to be

¹ National Association of Corrosion Engineers (www.nace.org)

oriented towards the direction of ensuring their straight relations to the research questions.

2.4.1.2 Type of information collected in the questionnaire

As Beloucif (2003) proposes, three different types of information can be collected by both interviews and questionnaires. These are:

- Target data
- Classification and analysis data
- Administrative data

It should also be pointed out that the last type applies mostly to information collected from questionnaires.

Target data, are data that has a direct relation with the research purposes. These target data has to do with the competencies of top-level managers, their leadership skills and their management style.

Classification and analysis data refer to data related to personal information about the person asked. They are used to analyze patterns in the target data such as age, education, gender and operating sector.

Administrative data are used to enable potential follow-up studies and refer to information related to the respondent's identification, address etc. Since this study has from the beginning a limitation regarding anonymity of the respondents, no administrative data gathered in that case.

The questions used in the questionnaire, were easy to answer in general and they had no aim to put the respondents out of their comfort zone.

2.4.1.3 Types of questions

In order to obtain high response rate, the questions must be clear, single issued, which will make them easy to be understood and answered by the respondent. The vast majority of the questions used in the questionnaire are closed and structured. Closed questions give to the respondent a number of alternatives from which he/she is instructed to choose (Saunders et al., 2003). Structured questions on the other hand are questions in which alternative answer options are decided beforehand. This is done to ensure consistency in responses, in order the data gathered to be analyzed statistically to reveal patterns. As far as it concerns the interview questions were in their vast majority clear and focused, without providing the respondents with the ability to interpret them in their own way.

2.4.1.4 Selection of sample

As it referred above the investigation is restricted to companies that belong to the codes 41,42 and 43 of the NACE sector group. There is also a geographical restriction so the companies of the investigated sample are located in Denmark, Norway and Sweden.

The sample consists of 150 legal companies. 27 companies have units in all three countries and have a turnover that is more than SEK 1 billion in the three sector groups

that the sample covers. For each company data was gathered from the members of management board.

2.4.1.5. Response rate

With the term response rate scholars refer to the percentage of people who respond to a survey (Punch, 2003). High response rates help to ensure that survey results are representative of the target population. A sample is drawn from the target population and the survey questions are administered to the sample. If we want the results of our survey to be accurate and useful, a high response rate of that sample is needed. The way in which the response rate is calculated is given in the illustration below.

$$\frac{\text{\# of completed surveys}}{\text{\# of people contacted}} = \text{Response Rate}$$

Figure 1: Calculation of response rate (source: Punch, 2003)

There are several factors that determine if the response rate is acceptable or not. Response rates tend to be of higher importance when purpose of a study is to measure effects and of less importance when the purpose is to gain insight.

The way that a survey is administered has an effect on the response rate. Acceptable response rates according to Fleiss et al. (2013) are:

- Mail: 50% adequate, 60% good, 70% very good
- Phone: 80% good
- Email: 40% average, 50% good, 60% very good
- Online: 30% average
- Face-to-face: 80-85% good

Hamilton (2003) provides us with some guidelines in order the response rate to be maximized. Such guidelines are:

- Request participation from respondents in advance (when possible) and provide information about the purpose of the survey, how the results will be used, and the terms of anonymity and confidentiality.
- Give respondents a sufficient amount of time to complete the survey.
 - For online surveys, 7-10 days is sufficient.
 - For mail surveys, provide a self-addressed stamped envelope and allow for transit time.
 - For in-class surveys, provide 1 minute per question and allow a longer response time for open-ended questions.
- Provide clear instructions on how to complete and submit the survey when it is administered
- Design the survey so it is easy to read and follow.

- For mail or online surveys, send reminders during the survey period thanking the respondents who have completed the survey, while reminding others about the deadline for completing the survey. For online surveys, always provide a link to the survey and send a reminder a day before closing the survey.
- Offer an incentive for participating.

In this specific study the potential respondents have been contacted via e-mail. Additional notification e-mail has been sent to them 14 days after the initial contact. The response rate was as it is described from the following table:

	Number	%
Members of the board (including CEOs) received a questionnaire	200	
Members of the board (including CEOs) completing the questionnaire	92	46%
% of completed questionnaires	46%	

Table 2: Overview of responses

Considering the response rates referred above, the response rate of this study is between good and average, so we can say that we have a valid amount of data that can be used in the study.

2.4.2 Interviews

The purpose behind the use of interviews in a research project may vary. In some cases interviews are used in order the researcher to extract useful information from the interviewees, while in other cases the interview allows the researcher to gain deeper understanding on the opinions and beliefs of the person he/she interviews. Denscombe (1998) goes a step further and claims that interviews are more useful for a research project when they are used in order to provide the researcher with answers in more complex problems, like gaining knowledge through individuals' experiences, attitudes and beliefs.

According to Denscombe (1998), there are three different types of forming an interview. These types are structured, unstructured and semi-structured interviews. Each type serves a different purpose. For this project the semi-structured type has been selected, as it provided the researcher with greater flexibility and gave him the ability to dig in the research topics by asking questions that could receive answers that cover areas broader than the predetermined topics, but with great use in terms of understanding better the initial research topics that have been set. For this specific project two different interviews were designed. The first one applied to top managers, and it was structured in a way that would help the researcher to understand the personal views of the interviewees on their strategic management competencies, the ways that they apply those management skills in their working environment and the tools they use to deliver their managerial work. The second one concerned Human Resources Managers and external recruitment agencies specialized in recruiting top level managers in the construction industry, and its aim was to identify what are the required strategic management competencies for top managers in the market and to give an insight about the way that top managers are recruited in the Scandinavian construction industry. Both of the interviews were designed in such a way, so that they include all the areas of

interest, but in some cases questions were added or eliminated depending on the respondent's willingness to answer.

2.4.2.1 Selection of sample

Eighteen interviews were carried out concerning the strategic management competencies of top-level managers in the Scandinavian construction industry, and the recruitment requisites of them. Interviewees were selected in such a way, that the top organizations in the Scandinavian construction industry to be included, together with some of the most high profiled recruitment agencies in the market and organizations that have performed in the past studies regarding the Scandinavian construction industry. Fourteen interviews have been conducted with CEOs of organizations that belong to the codes 41,42 and 43 of the NACE sector group. Those CEOs represent organizations that are in the top-10 of each code. Additionally four interviews have been conducted with recruitment specialists, working for companies specialized in the recruitment to top-level managers in the construction industry and people coming from consultant organizations that have in the past conducted studies regarding the Scandinavian construction industry. That allowed the researcher, according to Denscombe (1998) to have such a sample, which would give results that can be generalized to the whole industry. Due to the fact that interviewees come from three different countries (Denmark, Norway, Sweden) the selected language for the interviews was English. There were some cases though that the interview was carried out in the local languages.

All the interviews were designed to last about an hour and most of them have been recorded. There were four interviewees that preferred to answer the interview's questions via e-mail, as there was no open time slot on their schedule for a face-to-face meeting with the researcher. The researcher also took notes from every interview

The identity of the examined sample is presented on the table below:

Country	Group 41	Group 42	Group 43
Denmark	1	1	-
Norway	2	2	2
Sweden	2	3	1

Table 3: Origin and sector of interviewed CEOs

From the table above we can draw some quite useful conclusions. Denmark is under-represented in the interview sessions as only two CEOs had the time and ability to participate in this study. It is also obvious that the NACE sector group 43 that applies to "Specialized construction activities" is poor represented as only two CEOs of organizations of that sector group have been interviewed for this study. For the rest of sector groups and countries seems to be a balance and according to the needs of this study the sample participating can be termed satisfactory.

2.4.2.2 Types of questions

As in the questionnaires, the questions selected for the interviews were oriented towards the direction of giving answers to the research questions. They were in their vast majority clear and focused, without providing the respondents the ability to interpret them in their own way, but allowing the development of extended discussions on them.

2.4.3 Secondary data

As secondary data we define information gathered for purposes other than the completion of a research project (Dale et al., 1988). The researcher can draw secondary information from a big pool of sources that available to him. The secondary data is used to get either initial insight on the problem that a research or a study examines or in order to get a deeper understanding over it.

Depending on its source of origin, secondary data is either internal or external. Internal is the data acquired within the organization(s) that the study examines. External secondary data can be acquired from a variety of outside sources, such as press publications, other studies, interviews on the electronic and printed press etc.

According to Dale et al. (1988) the advantages of secondary data are related to time and cost savings. Those advantages are:

- The gathering of the secondary data can be completed rapidly at a short time period
- The researcher only has to locate the source of secondary data and extract the required information
- Secondary data does not usually require expenses from the researcher's side, as it is available for the public, or it can be found in open sources.

Secondary data also has some disadvantages, which can be the following:

- Secondary data on the topic of a study might be in insufficient quantities
- The reliability of secondary data might be of questionable accuracy
- Data might be in different format or units than those the researcher requires
- Secondary data might be outdated, so it can be of any help at the time of a current study.

In general secondary data should not be undertaken prior to primary research. Information that derives from secondary data sources can be used as a useful background to a study or as an addition to the findings of primary research.

In this study the sources of secondary data were organization's websites, articles on the press regarding the Scandinavian construction industry and the annual reports of the examined organizations, where available.

2.5 Data Analysis Method

Qualitative data analysis is non-statistical and the researcher bases his approach over the collected data by the concrete material at hand. In general, the goal from the data analysis of qualitative research is to extract rich, detailed and valid data that will help the researcher to gain in-depth understanding of the context of his research (Bryman and Bell, 2007). In the case of this research project the data acquired from the interviews has been processed as following; transcripts from the recorded interviews have been made and the notes taken during the interview's process combined them. The additional notes regarding the interview's behavior during the interview have also been taken into consideration. At a later point answers, from each interview, that were similar have been grouped together. The results were analyzed further with the help of the chosen theoretical framework.

On the other hand quantitative data analysis is statistical and takes place in the form of tabulations and provides the researcher with a broader base of insight. In this research project the responses of each individual were automatically grouped via a software based analysis tool (Google survey forms) and numerical data has been acquired. Then the researcher has divided the result in groups regarding country, sex, educational background etc. and analyzed the results further with the use of the selected theoretical framework.

The outcomes from both qualitative and quantitative data analysis were combined together and provided the researcher with more insightful understandings, which are presented later on the discussion and conclusion parts.

2.6 Limitations

This research project involves certain limitations. Due to time limitations there was a strategically planned selection of interviewees, with those within Sweden having a dominant position, which might make it difficult to examine deeper the differences related to different working cultures. This research is not fully segmented into the different streams of the Scandinavian construction industry. All the three researched streams (construction of buildings, civil engineering, specialized construction activities) are represented with interviewees, but in general that does not mean that someone can draw conclusion from this study for the whole construction industry. Some interviews have been carried out in local languages. Since the researcher is not fluent in Scandinavian languages, help from interpreters was asked, so there was no opportunity in those interviews to have a more extended discussion regarding the research topics. The same applies to interviews that have been answered via e-mail, due to the fact that there was no opportunity for further discussion. Anonymity can be also considered as a limitation for this study. And if in the questionnaires it was guaranteed by the nature of this data collection method, in interviews it came as a request by the vast majority of the interviewees. They asked that both their names and the names of the organizations they represent to remain anonymous, and as a result anonymity extended to the whole sample. Another factor related to the interviews that can set limitations, is the fact that some of the interviewed CEOs denied their interview to be recorded. So the only records existing on those interviews are based on the notes that the researcher kept during the process. Last but not least due to time restrictions, only a small sample of the Scandinavian construction industry could be covered. With the use of questionnaires though the researcher managed to limit that barrier to a great extent.

2.7 Research Quality

It should be noted that the researcher comes from a different cultural background from the industry he examines. According to Hofstede (1980) this affects researcher's underlying assumptions. The fact though that the researcher has a working experience in the Scandinavian construction industry, bridges that cultural gap and gives validity to his basic assumptions.

Validity, along with its reliability, are the two most important factors characterizing the quality of a quantitative research (Creswell, 2013). Despite the fact that qualitative research is questioned regarding its validity and reliability, quantitative research is recognized for both these concepts.

The external reliability of this research project is guaranteed by the fact that both quantitative and qualitative research methods were used. Someone could question this

external validity and reliability since the results apply to the individual perspectives or each participant towards the subject. The way this study is designed though allows the researcher to accept the premise of Numan (1999, p.17), who emphasizes on the research design and states that "external validity is ensured when the research design is such that we can generalize beyond the subjects under investigation to a wider population". Having external reliability ensures the ability of this research project to be replicable, but it does not ensure that other researchers on the same topic would come with the same conclusions. The use of different theoretical frameworks might lead to different interpretations and conclusions. It is unquestionable though that all researchers would agree upon the methods used.

External validity as Denscombe (1998) describes refers to which extent the research can be generalized across social settings. Organizational cultures and management applications are different, so the same study on other social settings can lead to different results. The scope of the researcher was however to provide an extensive and detailed insight in the Scandinavian construction industry, so others to have all the data needed to decide whether this study is applicable or not on their social setting. What is also important is to provide the readers with a thorough description of the background of the research. That allows them to have a clear picture of what are the strategic management competencies of top managers in the Scandinavian construction industry and understand better what are the problems derived from those. The fact though that the research is limited to the Scandinavian region, which is known for its unique management culture, limits the transferability of the result from this research to other cases.

3. Theoretical Framework

The theoretical framework starts with an overall presentation on the concept of competencies, with a focus on competencies of senior management roles. It includes the important management tasks of top-level managers today and additionally it is supported by an extended presentation of managerial styles, with a brief reference on the Scandinavian way. Following the senior manager's power-base is presented and the chapter concludes with the management tools that top-level managers use to apply their managerial work, and the challenges that they will have to face in the future.

3.1 Introduction

By definition competence is the ability of an individual to do a job or perform a task properly. A competency is a set of defined behaviors that enables individual employees to differ from one another in terms of evaluation, skills and development. As a term competence appeared in the U.S. in 1959 by R.W. White, and it was a concept of performance motivation. Later, in 1970, Craig Lundberg & Francis Wolek defined this concept in "Planning the Executive Development Program" and took its final form in David McClelland's "Testing for Competence Rather Than for Intelligence" (1973).

The concept of competency became popular through the work of Richard Boyatzis and especially his book, "The Competent Manager". According to Boyatzis competency is "A capacity that exists in a person that leads to behavior that meets the job demands within the parameters of the organizational environment and that, in turn, brings about desired results." (Boyatzis, 1982). The difference in the approach of Boyatzis was that he put forward a person's behavior.

3.2 Definition of competencies

For most of the scholars competence is a combination of practical and theoretical knowledge, individual skills, behavior and values that are used to improve performance.

Competency is an individual's attribute that can be shown in a situation and context that is not necessarily the same every time. It can be said that it is the behavior of an individual in a case that action needs to be taken. An individual is competent when he/she has the ability to interpret a situation or a context and put in use a set of actions, for which has been trained and they are relevant, in order to provide a solution (Gilbert, 1978). Competency does not have a certain meaning and still remains one of the most diffuse terms in management. Competencies are related with the level of success of individuals in their jobs. They include related knowledge, skills, abilities and attributes that form the way every individual performs his job.

3.3 Competencies for senior management roles

Managers are called to play multiple roles, especially when they hold a top-level managerial position within an organization. Apart from roles that are related with functions like finance and personnel management, marketing etc., managers have to play leadership, strategic, operating and other roles (Akhouri, 2002). The performance of the manager is highly dependent on how well he/she performs these different roles.

How well these roles are played is also a factor that influences the overall performance of the organization. The above naturally leads to the question of what are the competencies that senior managers in an organization should have in order to meet the requirements of their different roles. Some of these competencies, according to Akhouri (2002), could be the following:

Competencies related to strategic shift: In a continuously changing business environment, managers at a senior level need to play the role of revising the corporate growth and competitive strategies to meet the needs of the market

Operations change-related competencies: Senior level managers are often required to bring on table changes and improvements in operations that are needed in an organization. The effective performance on that role requires from senior managers to possess a set of competencies, which includes planning skills, understanding of the power structure, team development, advocacy competency etc.

Leadership roles related competencies: Leadership roles relate to setting and visualizing corporate goals (long or short-term), communicate them and get people within the organization excited about them, inspire high level of personnel performance etc.

Another approach that is often adopted from those that believe that organizational performance is influenced by managerial action is the resource-based view (De Wit and Meyer 2010). In this approach senior management capabilities are listed as a part of greater tank of factors that contribute the performance and competitiveness of an organization (Acquaah 2003, De Wit and Meyer 2010). The factors above include a resource base of actual skills and personal traits, in which relational resources and competencies are viewed as being part of the latter (De Wit and Meyer 2010, Dilling-Hansen et al 2009).

In continuation of the resource-based view, De Wit and Meyer (2010), Mintzberg (1973) and Wilson et al. (2006) consider management competencies as a combination of skills that come from personal experience, practical experience, formal education and vocational training. From that we can understand that management competencies is something that a person cannot have per se, but they are built up through years of industrial experience, where the basic education can be the starting point for their development. Literature suggests that the formation and application of strategic processes in contractors, is a work mostly delivered by the higher management levels of the organizational hierarchy (Jarzabkowski and Spee 2009), and that these processes are constantly evolving over longer periods of time (Löwstedt 2012). A number of studies of company performance and competitiveness have adopted the resource-based view, investigating a long series of possible contributory factors. These emphasize the strengths of mixed corporate management and/or boards of directors with managers from various different backgrounds (Acquaah 2003, Adams et al 2005), together with the role of incentives for the CEO (Adams et al 2005), and more. The globalization of companies and their markets, in this context spreading from national to Scandinavian, to Nordic markets and beyond, places further pressure on the resource bases of these companies, while also strengthening them through mergers and acquisitions. This involves the development of managerial skills (Lahti 2010, Söderberg & Vaara 2003).

3.4 Important management tasks for top-level managers today

As Rachlin (2002) point out the new industrial reality is in continuous change. That new reality brings on stage new circumstances in which managers and organizations should fit in.

There is a lack of studies regarding the most important managerial skills in Scandinavia region. If you look though studies for countries like Denmark Sweden and Norway made by Hildebrandt (2005) and Söderlund (2004), the following management tasks seem to be of great importance:

- Motivation of others
- Planning
- Employees' satisfaction
- Employee development
- Co-ordination
- Communicate values
- Coaching
- Controlling of goals and results
- Delegation
- Representing

If we want to interpret the above tasks we could say that tasks related to Human Resources Management seem to have great important in Scandinavian organizations. Additionally the presence of traditional managerial tasks like delegation, co-ordination, controlling of goals and results etc. has a dominant role. It is remarkable though that Scandinavian management uses Human Resource Management to face the challenges of today's industrial environment, since employees remain a crucial capital in an operational environment that continuously changes.

In an older study held by Egbu (1999) the six most important types of management skills and knowledge have been found. Those were:

- Leadership
- Communication
- Motivation of others
- Health & safety
- Decision-making
- Forecasting & planning

The study of Egbu covered only refurbishment organizations in England, with the persons taking part on his study holding senior and mid-level managerial positions). What is important though is the fact that an overlap between this study and studies Hildebrandt's and Söderlund's. Tasks like "motivation others" and "planning" appear in all studies. What Egbu's study brings to the table is leadership. All study also cover a variety of similar issues like "satisfaction and development of staff members", "communication of values" etc. Despite the fact that Egbu's study covers a significantly smaller sample of organizations, it is obvious several similarities can be identified in all studies referred.

What we can conclude as a reflection to the studies mentioned above, is the fact that the most important management tasks in today's business world are more leadership

oriented. Of course we cannot ignore the obvious differences between the studies mentioned above, but the similarities are so important that it is impossible not to point them out. Management behavior and leadership traits are highly valued to managers of all levels. Management tasks remain more or less the same whether we discuss about the late 90's or the mid 00's or about the management environment of our era. Some of those tasks appear to change a bit over time (from traditional management to leadership oriented management), but someone should not forget that managers should be able to respond to the challenges of a continuously changing operating environment.

3.5 Main competencies of a top manager

As it has been referred above internationalization, globalization and politics are important factors that create both limitations and challenges in today's organizations. The pressure on managers, especially those that are on the top of those organizations has been increased, as they have to be successful both for themselves and the organizations they represent in an environment of high competition.

Hildebrandt (2005) pointed out in his study manager's personality and managerial results are the results of inborn personal characteristics and experience in real working conditions. His point of view can be applied also to the level of senior managers and CEOs. For them scholars claimed that their talents and abilities gained through experience can map into organizational performance. Theorists like Murphy and Zabojsnik (2004), and Gabaix and Landier (2007) have modeled CEOs with different qualities and characteristics. Empirical studies, like those of Adams et al. (2005), and Bennedson et al. (2008) confirm that managerial heterogeneity affects corporate actions and performance, and find evidence that the actions of specific senior managers and CEOs matter. However no empirical or theoretical study can provide a solid framework of particular abilities and characteristics that are important for corporate governance and performance.

Hildebrandt (2005a) in his study is referring to some important personal factors, based on the opinions of managers from his study sample. Those factors are:

- Credibility
- Interpersonal skills
- Independence
- Self-confidence
- Resolute
- Will
- Ability to be tolerant in high stress situations

Some of those characteristics can also be found in the theory of Bolton et al. (2009). That theory has a leadership orientation and contrasts managerial resoluteness against communication skills. Resoluteness is connected with the overconfidence that some senior managers and CEOs feel and makes them unresponsive to outside information and precludes communication skills. According to this theory senior managers and CEOs that are more resolute and self-confident can perform better than others who have better communicative skills, in situations that require greater coordination. According to the theory of Bolton et al. (2009) the characteristics of senior managers and CEOs that reflect resoluteness and overconfidence should be positively correlated with organizational performance.

Other studies have focused more narrowly on managerial overconfidence. Heaton (2002) argues that overconfidence in the form of managerial optimism is unambiguously bad, causing either over- or underinvestment. In contrast, Gervais, Heaton, and Odean (2009) present a model where overconfidence can increase value by mitigating moral hazard and aligning incentives.

Empirically, Malmendier and Tate (2005, 2008) find that overconfident top managers and CEOs have higher investment-cash flow sensitivities and are more likely to engage in value-destroying mergers. Graham et al. (2008) provide additional empirical evidence that top managers and CEOs behavior is related to measures of overconfidence, optimism, and risk-aversion. However, it remains an open question how overconfidence relates to subsequent performance.

To summarize, building on Bolton et al. (2009)'s idea that resoluteness is a form of overconfidence, the previous literature assumes that overconfidence and resoluteness on one hand and empathy and team-related skills on the other hand are primary and defining distinctions of managerial characteristics.

3.6 Managerial style

As it has been referred above continuous change is a very important factor that all top-level managers have to deal with. In order change to be successful a change in managerial style within the organization is required (Bogorya, 1988). AS Bogorya (p.10) states "at senior management/executive level the corporate culture and leaderships styles shift and create new norms of behavior and new standards of performance." The context of change, the limitations set and the personal view on the situation are the factors that motivate a senior manager to choose his/her managerial style.

Increasing globalization is creating great challenges for the construction industry and leads the need for change in order the organizations to become truly global. Traditional management approaches seem to have failed towards this direction, as they fail to allow organizations integrate in the global environment. As experts from McKinsey (2012) point out point out that organizations that adopt globalization tactics in their change strategy succeed towards this direction. They also connect these tactics with the economic performance of the organization and the level of global reach that these organizations have.

The adaptation of modern approaches in management and its correlation with an organization's economic performance has been validated by a previous research held by Rambøll Management (2004). According to this study, that used as a sample companies from Sweden, Denmark and Norway, the characteristics of "modern" and "traditional" companies are as presented in the table below:

"Modern" Companies	"Traditional" Companies
Responsibility on own initiative/Delegated responsibility	Delegated responsibility
Non hierarchical organizational structure	Certain level of hierarchy
Project organizing	Project organizing
Review of values (without changing the core ones)	Management based strictly on core values
Active professional board of directors	Board of directors consisting people with no experience from the market
Investment in competence development	Trust on personnel's experience
Young management	Suspicion over young managers
Use of new technologies	Trust on used or internally developed technologies
Mobility of the staff to enrich their competencies	Recruitment based on specific skills
Flexible services	Extremely niche based

Table 4: "modern companies" VS "traditional companies (source: Rambøll Management 2004)

From the table it becomes obvious that organizations that follow a modern management approach have made small but really important changes that improved their position over those that use a more traditional approach. The behavioral competencies of senior managers, like personal values, responsibility on own initiative etc. plays a significant role in the modernization of a company and it validates the opinion that modern managers can contribute greatly in the obtainment of a higher modernization rate of the companies they work at.

In Scandinavia a unique style of management exists, that has many times become an example to be followed by other countries. This style is characterized by a network oriented approach and continuous motivation and empowerment of employees by managers, whether they are on junior, minor or senior level. In Scandinavia companies manage with goals and values rather than control and strict chain of commands (Eriksen et al., 2006). That provides the companies with competent employees, which potentially can create opportunities for further development of these companies in terms of economical and operational growth. This way of managing is considered effective for the competitiveness of organizations, since the employees are an active capital which contributes with ideas and proposals that can improve the image and performance of those organizations.

Scandinavian management can be characterized as a democratic one. It is result-oriented and its major characteristic is that enters into discussions with subordinates to achieve consensus. It is also characterized by a high level of equality between generations, genders etc. Managers are relation and goal oriented and they achieve better employee satisfaction, collegiality among the staff, but still the results in terms of productivity do not show a clear increase of it. What managers achieve though, is to empower staff's efficiency and at the same time they are allowed to adopt a more risk-taking strategy and a feeling of accomplishment.

According to Phillips-Martinson (1992) the management style reflects the culture of the country you are in and in support of it Jönsson (1996) adds that the Scandinavian style of management is highly dependent to the Scandinavian culture and that Scandinavian managers try to bring this style even when they operate outside the borders of Scandinavia. The flat structure has the strength of breaking down the borders between management and staff. What is maybe especially Scandinavian is that the low power

structure is often followed up with great interest and consideration for the staff. The manager achieves to communicate to his employees that they are important to the company, and that their values have meaning.

The core values in Scandinavian management are care and trust, and trust is at the same time an expression that great responsibility is delegated to the individual employee (Copenhagen Institute for Future Studies, 2006). The prerequisite for delegating responsibility is the generally high education level and that Scandinavians from childhood are taught to think independently and critically. Nordic employees have developed their professional skills out of personal interest and not from the likelihood of getting a job or good salary. That gives a high level of competence and some of the world's most motivated workers. That combination is particularly important because research into creativity shows that the combination of strong qualifications and motivation is required for creativity and, in the end, innovation.

In a number of areas, the Scandinavian culture is thought to promote a more creative workplace. The short distance from top to bottom strengthens the flow of ideas through the organization. In Scandinavia, it is not so much the position in the organization as it is the arguments that decide what is right or wrong. That means there is greater possibility for more and freer debates. The strongly relation-oriented management styles strengthen openness and trust in the company, which again helps promote well-being and motivation, both critical for creativity.

Privacy plays a great role in the Scandinavian way of management. Managers distinguish their personal from their working life and that creates great disadvantages when they are called to operate in a different cultural environment. Additionally Scandinavian managers tend to be very careful when it comes to decision-making. Even in operational environments where quick decisions can lead to a competitive advantage, Scandinavians prefer to analyze and consider different scenarios. That conflict avoiding and overly careful approach has in many cases created a great downside when Scandinavian companies were called to expand or operation other countries.

In defense of the Scandinavian model is the position of countries like Denmark, Norway and Sweden in the world competitiveness ranking (figure 1). These countries are among the ten most competitive nations in the world in 2014. Despite the fact that the minimum wage rate, the taxation rate etc. are high, those Nordic countries are very competitive and this is credited to the way companies in those countries are managed.

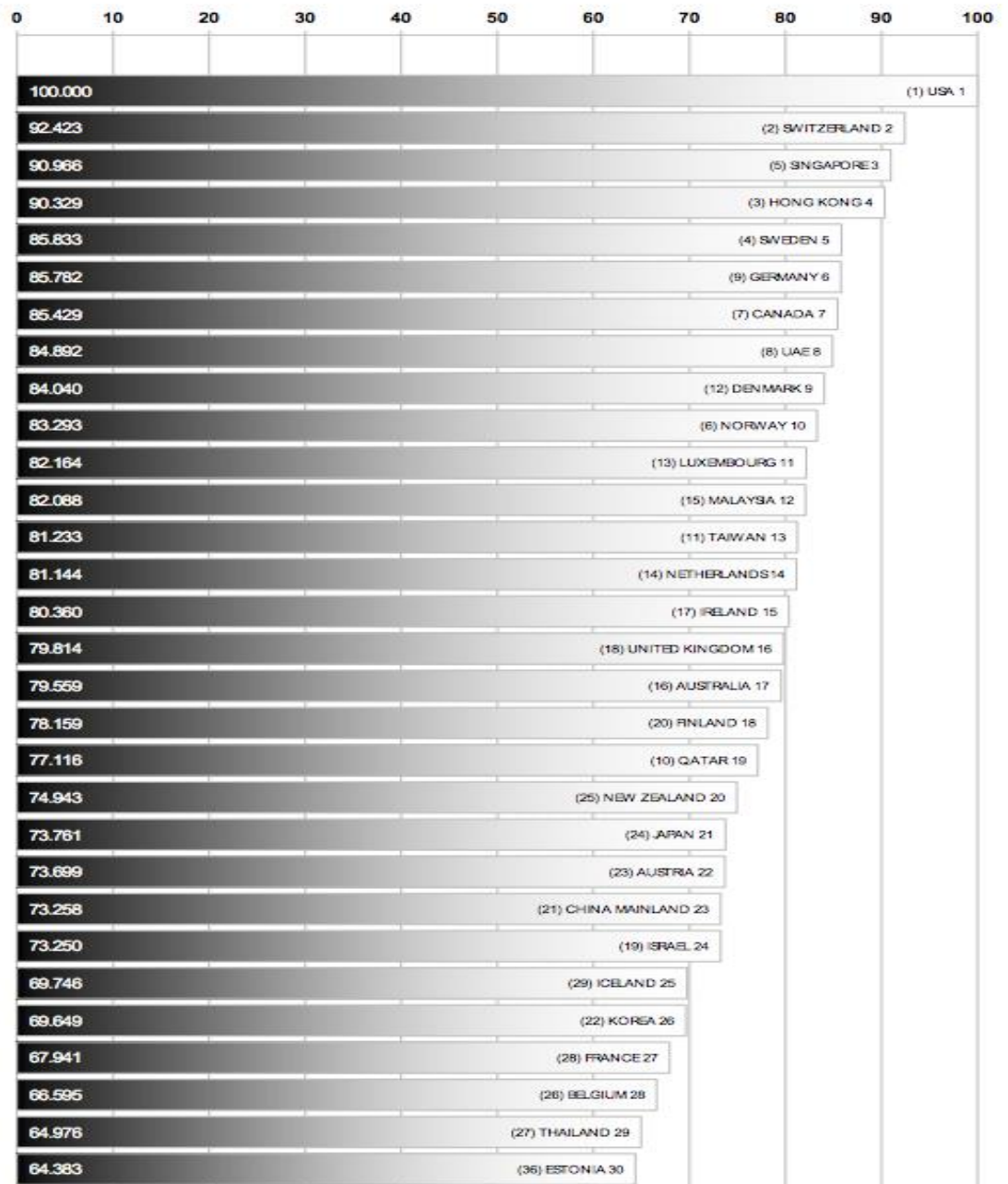


Figure 2: World competitiveness ranking for 2014 (source: World Economic Forum)

The Scandinavian manager is considered the role model for every modern manager. A typical Scandinavian manager keeps a low profile, delegate responsibilities over the employees and focuses on professionalism. Lindholm (2004) in his report “Den skandinaviske leder” (“The Scandinavian manager”) asked managers in Denmark, Norway and Sweden to characterize themselves as managers. The results are presented in the table below.

The Scandinavian Manager	
Professional Skills	36%
Result Oriented	35%
Reliable	35%
Honest	33%
Ambitious	29%
Effective	26%
Good to Communicate	25%
Attentive	20%
Enterprising	19%
Short-term Horizon	18%
Ethical	17%
Socially Oriented	16%
Considerate	14%
Long-term Horizon	13%

Table 5: Profile of the Scandinavian manager (source: Lindholm, 2004)

It is obvious that for Scandinavian managers the soft values are of great importance. That is complete alignment with the whole structure of Scandinavian societies.

Researchers like Holt (1998) and Hildebrandt (2005) point out that the emphasis of the management in Scandinavian countries is given in policies that promote participation of the employees, which leads to efficiency, organizational stability, self management of the employees, open dialogue and coaching etc. Hildebrandt (2005) focuses on the Danish industry and points out that the most common management styles there are:

- Management through co-operation and participation
- Management through dialogue and coaching
- Management through attitude and values
- Management through self-governing
- Management through acknowledgement and rewards
- Management through follow-up and supervision
- Management through order and instructions and
- Management through rules and incentives

Those different management styles are proven to provide managers with the necessary flexibility, that allows them to take the best results from their employees all the time and as an extension they lead to better economic results.

In conclusion we can say that the Scandinavian management style is somehow unique compared to the international experience. The collaborative model that the Scandinavian management style promotes has allowed to countries like Denmark, Norway and Sweden to be amongst the ten most competitive countries in the world, and it seems to be a style that can help Scandinavian companies to respond to the challenges of the present and future industrial environment. Previous studies also have proven that companies that follow a more modern management approach have better economic performance than companies that keep on following traditional management approaches.

3.7 Management board diversity

As it has been obvious above, Scandinavian management provides successful results because it promotes a completely different approach from the traditional approaches over management. Another essential element of Scandinavian management is the promotion of diversity, which has a certain effect on the composition of management boards.

In the context of corporate governance Van der Walt and Ingley (2003) refer to diversity as "the composition of the board and the combination of the different qualities, characteristics and expertise of the individual members in relation to decision-making and other processes within the board." Other studies, conducted by Catalyst (2007) and McKinsey (2007) promote gender diversity in the management boards as an important factor that can affect the performance of an organization. In support of this a study by Jocks et al. (2013) showed that companies with at least 30% women on their board have managed to achieve better performance. Of course there are those who oppose that opinion, like Ahern and Dittmar (2012) whose study in Norwegian firms showed that mandated female board representation led to deterioration in the operating performance of those firms.

According to some scholars like Kang et al. (2007), diversity has a positive effect to the exchange of ideas, effective communication paths within the board and performance of the organizations. There are others though, like Rose (2007) who claim that management boards with diversity can be delayed in terms of decision-making, that other, more heterogeneous, management boards.

Since though this study is focused in the Scandinavia region and taking under consideration the fact that the gender diversity in corporate management is on top of the discussion agenda in the countries on that region, we can claim that the strong representation of women on management boards can be a significant factor for improved performance.

3.8 Relationship between CEO and Management Board

Board structure in Scandinavian countries has many common features. According to the company law in Denmark, Norway and Sweden there must be both a CEO and a board in each company. Those boards are mainly consisted of non-executives and majority shareholders elect it. CEOs are responsible of the day-to-day business of the company and together with the board they participate in all major decisions and the formation of strategy of the organization. The board though has to approve all major decisions to be taken (Nordic Innovation Centre, 2009).

Traditionally company boards in Scandinavia are composed by people between the age of 50-60 years old, with an educational background related to business, law and engineering (Edling et al., 2012). Most of them tend to have similar managerial background, similar political views and in their vast majority are men. Edling et al. (2012) characterizes them as an "old boys network". Despite the fact that organizations become more international, and despite the fact that women starting entering the boards, this "old boys network" remains dominant in Scandinavian organizations.

Since according to the national statistics, the average age of CEOs in Scandinavia is between 42 and 47 years old, and taking under consideration the close cooperation between CEOs and members of the board, this age gap has an effect on the organizations' decision-making and performance.

3.9 Top manager's power base

Top managers have legitimized power, which is conferred by the position by they have as executives in an organization or the influence they have in board of directors. Their power depends on what power the board of directors' gives to them. Storable (2004) provides us with an overview in four basic types of governance of the board of directors, which are:

- Audit
- Supervising
- Coaching
- Steering

These types are highly dependent on the board's perspectives, roles and behaviors. Additionally those roles depend on the effectiveness of the management. Inside those limits senior managers are provided with a liberty of actions. This is the point from where they have to navigate and prove or evolve their abilities. Managers' ability to apply their power is partially derived from their personality and partially from the people they manage.

Even though professional competencies are important for the application of the power from a senior manager, personal qualities seem to have a rather greater importance. That can be considered as an indicator that the ability of a top manager to act as a leader is above his professional competencies.

In past studies, like that of Hildebrandt (2005) senior managers consider their "persona qualities" and "own attitudes and values" as the most important power base. According to them these two factors provide them with the power of penetration in their position. Their professional competencies, management experience and monitoring of results give them, according to them, power of penetration in their job.

In conclusions senior managers justify their existence as leaders as a result of their personal qualities. Those personal qualities are more important than the results that they are able to achieve. This is an indicator that top managers value their soft skills more than their hard skills. Personal qualities, attitude and values are obviously factors that give to top-level managers the power of penetration. Management power is of great importance for both the interplay between senior management and employees and the organizational development.

3.10 Management tools

The role of a manager, especially at a senior level becomes more demanding as years pass by. That increase on demands has led to the increase of the management tools used. Literature is full of formulas about effective management techniques, but they are completely useless as long as they don't give answers to the specific challenges that a manager faces. The assumption that there are universal solutions for every management problem is per se fault and it can be proven dangerous. Every situation and problem that

a manager has to deal with has a unique management approach that can provide solution.

Hildebrandt (2005) provides us with an insight of the most frequently used management tools in the private sector. Such tools are:

- Plans of actions
- Strategic planning
- Financial management tools
- Education planning
- Project management tools
- Production operating systems
- Quality systems
- Process management tools
- Staff Investigation

Implementing a new management tool into a company can be a rather expensive investment as it includes training, development, consultancy and other connected to these tool actions. As Rigby (2001) claims, usually management tools promise more than they actually offer, but there are tools that have received global recognition. Such tools are strategic planning and statements related with mission and vision.

To conclude management tools are more related to specific situations and there is not a formula that provides solution to every problem. Management tools are expensive and are possible not to provide the results that they promise. There are tools though that have been praised all over the globe and are connected with the strategy and the mission and vision of each company.

3.11 Main challenges for top managers in the future

The future is unpredictable and it is difficult, if not impossible, for someone to predict what will bring. Therefore, flexibility and gathering of knowledge can provide help to cope with those uncertainties. The construction industry at a global level faces today challenges that are critical for organizations. The global financial crisis has created a difficult environment for the construction industry, but CEOs are confident that despite the crisis there are opportunities for further growth of the productivity of the sector. According to a survey conducted by PWC (2014), CEOs from the construction industry have pointed out some of the challenges that the industry will have to face in the closest future. Those challenges are:

- How governments will react towards this crisis
- Customer growth
- Investments in new technologies
- Find channels to new markets
- Investments in production capacity
- Corporate governance
- Creation of strategic alliances in the market
- Change in the organizational structure
- Talent strategies

Those challenges bring to CEOs and other executives great responsibility. For them there is no alternative than taking them seriously and cope with them as they are

challenges that affect them too and they can be a potential threat for their status and position.

According to McKinsey Quarterly (2014) the main challenges that top management will face in the future, among others, will be:

- Train, develop and retain good employees and talents
- Ensure the organization's competitiveness
- Raise knowledge and competence level
- Develop strategies to make organizations more global
- Improve productivity and customer satisfaction
- Uncertainty
- Regulation
- Problem Solving & Risk Management

In a study that held in Denmark by Redington et al. (2006), top executives, recruitment agents and investors have described the challenges for the Danish project-based organizations in the future. Those challenges that are closely related with the management approach were the following:

Diversity (language, culture, religions and thoroughly political flair in relation to external interests)

Knowledge heavy (great educational ballast with interdisciplinary and international knowledge base)

Innovation (new business procedure, products and concepts developments in continuous development. Competency in innovation and innovation management extremely important)

Changeability (be able to see changes in technology, market preference, political streams, legislation and stakeholder interests)

As we can see those challenges are contained to the important challenges that top managers have to face in the future.

In conclusion as the business environment changes the top management challenges will change. Aghazadeh (2003) stated that: "The most successful organizations will be the ones which can attract, develop and retrain individuals who have the ability to manage a global organization that is responsive to customers and the opportunities being presented by technology" (p. 206).

3.12 Conclusion

Despite the fact that there is no clear definition about what competencies are, all the professionals know how important that content is. The vast number of definitions can lead to the problem that this important issue will be underrepresented due to the lack of clarity for managers and other professionals.

The Scandinavian way of managing is unique. It is a collaborative model and is based on attitudes and values, which is embedded in the Scandinavian culture. Central for this leadership is respect for the individual human being and the society. Furthermore, it is distinguished by flat organizations, a short distance between management and staff together with involvement of the employees in the decision-making. This motivates staff and encourages them to participate and contribute with good ideas. The clearest evidence of this method of managing being successful is that the Nordic countries are among the most competitive in the world.

The question though that rises is if this unique way of management can be applied in a globalized environment, where organizations need to expand and operate in countries with completely different business culture and managerial approach. Can this lack of flexibility in the managerial approach, that Scandinavian organizations seems to have, have an effect to their productivity, when they are called to operate outside Scandinavia? The answer on those questions lay upon the way top managers govern those organizations and how they can lead and adopt a modern approach and strategies. After all organizations that adapt modern strategies to be organized, are those that are more productive and more profitable.

4. Empirical Findings/Analysis

In this chapter the findings from both the questionnaire and the interview, accompanied from data gathered from external secondary sources are presented. Statistical calculations and descriptions, from all the data gathering methods, are provided.

4.1 Findings from the questionnaire

The presentation of findings will start with the demographic background of those that answered the questionnaire. In order the reader to have a more clear view of which these respondents are figures, charts and tables will be provided. Below a distribution of the respondents on specific business sector, gender and age is presented.

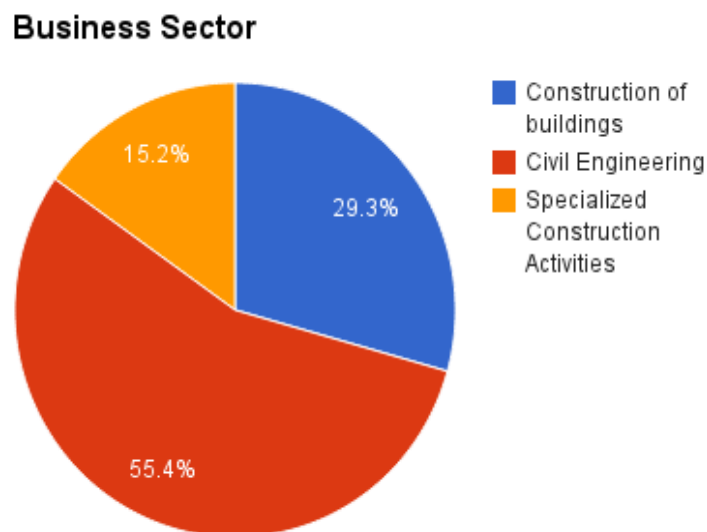


Figure 3: Distribution of participants divided by business sector

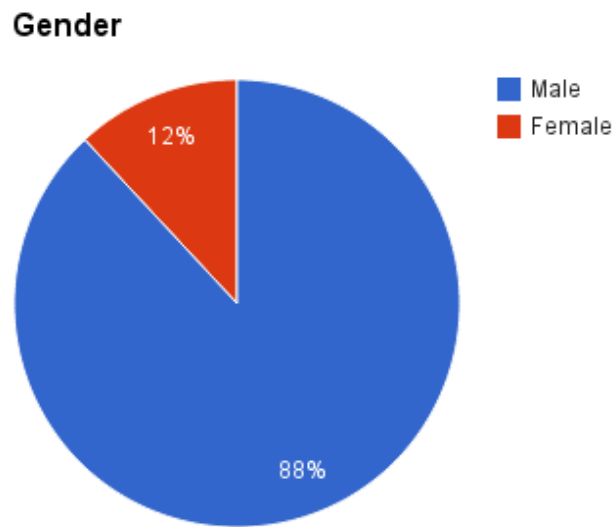


Figure 4: Distribution of participants divided by gender

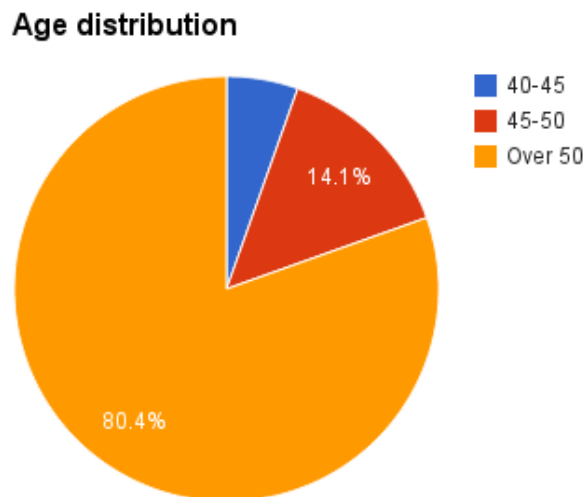


Figure 5: Respondents age distribution

From figure 4 we can see that only 12% of the respondents are female while the male representation reaches 88%. It is also interesting to see that the age group "over 50" is represented by 80.4% of the respondents, while age groups "45%-50%" and "40%-45%" have significant lower representation (figure 5). This indicates that the vast

majority of people holding a Board member position in Scandinavia are people over 50 years old.

From the people responded on the questionnaire all of them have been identified as members of the board of directors. The following table provides the reader an insight about those people's educational background. It should be noted that the most recent education is the one that counts.

Education	No. Of Respondents
Engineer MSc	25
Engineer MSc and MBA or business training	8
Engineer BSc	9
Craftsman	4
Business administration MSc	31
Law MSc	6
Academic, others BA and Non-academic	9

Table 6: Educational background of board members

From the table above it appears that when it comes to the board members, there is a balance between engineering education and non-engineering educational background. Those with a Business administration MSc (non engineers) are in dominant position.

If we take a look at the managerial experience of the respondents the data reveals the following (see table 7).

	How many managerial jobs?	How many years in total as a manager	How many years in your present job	How many years in this job
Answers	92	92	92	92
Average	2.7	15.8	12.4	14.3

Table 7: Managerial experience of respondents

The above table shows that the respondents have folded a managerial position for an average of almost 16 years. On an average they have changed 2.7 managerial jobs and they have been on the same company for 12.4 years. The fact that the respondents have been in the business for an average of 14.3 years is significant of their experience.

Table 8 shows the staff members in the organizations that the respondents' work and the number of staff members that report directly to them.

	How many staff members in the company?	How many staff members report directly to you?
Answers	92	92
Average	285	14.26
Minimum	70	7
Maximum	>1000	172

Table 8: Number of employees and number of staff that reports directly to senior manager

From the table above we can see that the average of staff members employed by the researched organizations is around 300. The smallest organization has 70 employees and the largest over 1000. Each senior manager has around 14 employees reporting directly to them, with a minimum of 7 and a maximum of 172.

The figure below shows the size of respondent's organization measured by employees.

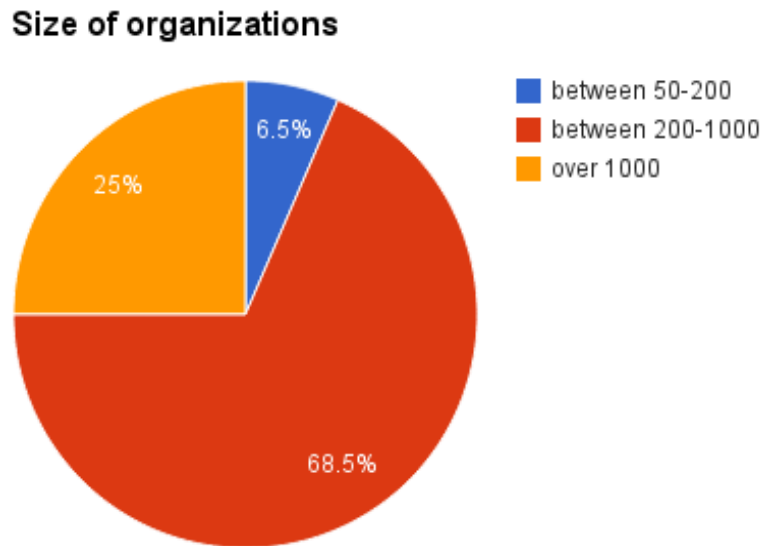


Figure 6: Size of respondent's organizations

From the figure we can see that a small amount of respondents comes from small organizations, when a 68.5% comes from mid-sized organizations and a smaller 25% comes from large size organizations.

4.1.1 Important management tasks

People participating in the study we asked to rank the importance of 27 predefined tasks that are important in their management position. The ten highest, based on characterized of great or very great importance by the respondents, are presented on the table that follows:

1	Motivation of others	94.4%
2	Organizing	91.0%
3	Staff satisfaction	90.5%
4	Business development	87.5%
5	Coordinating	84.0%
6	Delegating	83.5%
7	Monitoring goals and results	83.0%
8	Formulation of vision and strategy	80.0%
9	Planning	78.0%
10	Communicate values	76.0%

Table 9: Most important management tasks

There is no surprise staff satisfaction and motivation of others is high on the list, as they are typical elements of the Scandinavian way of management. It is surprising though that, tasks as monitoring goals and results, planning and formulation of vision and strategy are low in this top-10 list, especially when the aim for the organizations is to expand and compete in a globalized environment.

The leadership oriented management tasks seems to be more dominant than the business oriented tasks. It is also important to point out that, tasks such as “conflict handling” or “instruction and training of staff” seem to be of less importance for managers on that level.

In order to gain a better insight on the everyday working life of managers and in order to examine the coherence between managerial focus and efficient use of time, the participants were asked to indicate the amount of the working hours they spend on four specific management areas and on four daily activities.

The amount of working time that senior managers spend on tasks connected to management areas, such as staff development, goals and result monitoring, business development and administration and organization are presented on the figure below:

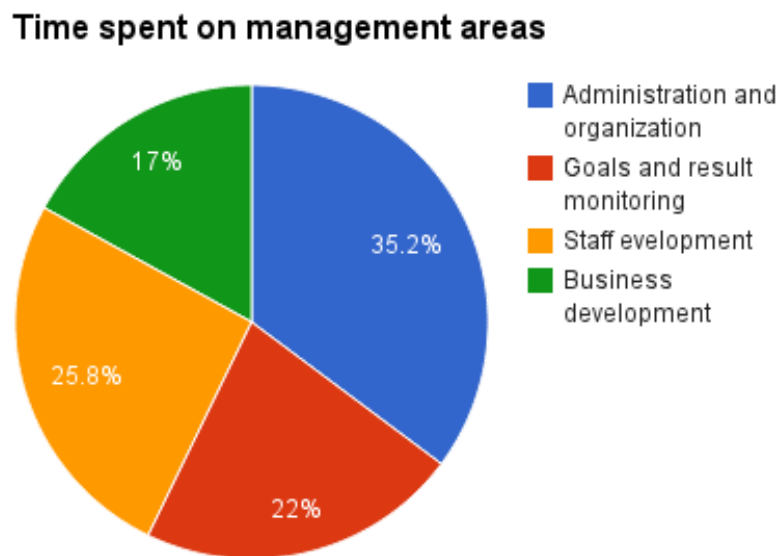


Figure 7: Time spent on management areas

The figure above shows that senior managers spend most of their time on administration and organization, followed up by staff development. Goals and result monitoring and business development seem to occupy a smaller amount of their working time.

The amount of working time that senior managers spend on four daily activities is presented on the following figure:

Time spent on daily activities

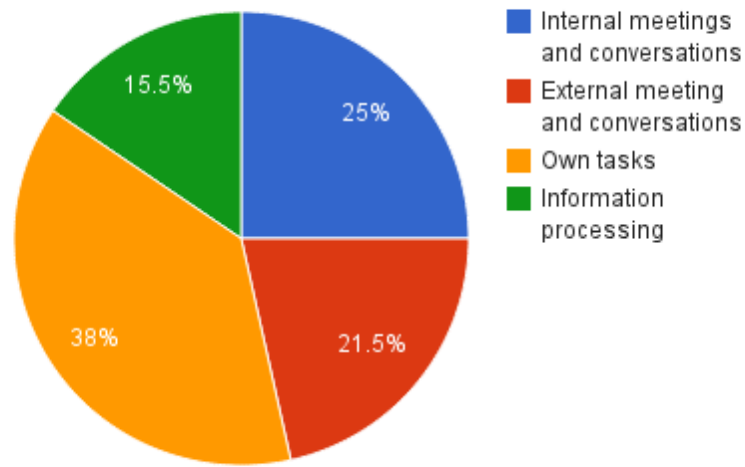


Figure 8: Time spent on daily activities

The figure above shows that managers spend most of their time completing own tasks followed by internal meeting. Information processing occupies a small amount of their time and the same we can say for external meetings and conversations.

4.1.2 Main competencies

The participants were asked to assess the value of 29 predefined personal factors and abilities. The 10 most important are listed on table 10 below. It should be remarked that the list was made based on respondents' assessment as great and very great importance. (Appendix A)

1	Credibility	98.0%
2	Responsibility	96.0%
3	Interpersonal skills	92.5%
4	Results-oriented	90.5%
5	Independence	88.0%
6	Self-confidence	87%
7	Confidence in others	86.8%
8	High stress tolerance	83.0%
9	Persistence	81.5%
10	Will	79.0%

Table 10: Most important competencies

"Credibility" as it was expected plays a significant role at that high managerial level. "Responsibility" and "Interpersonal skills" also hold top positions on that listed along with the "results-oriented" managerial approach are the competencies, which are

supported by over 90%. The first nine competencies are supported by over 80%, followed by "will" that holds the tenth position with almost 80% support as well.

"Persistence", "high stress tolerance" and "independence" are of great importance in the private sector and along with "self-confidence" are fundamental competencies for a person to hold a high level managerial position.

4.1.3 Managerial style

One of the questions that participants were asked was how they perform their management job. Eight predefined styles were given to them and the results from their choices are presented on table 11. It should be remarked that the ranking has been made based on respondents answering highly and very highly (Appendix A)

1	Through co-operation and participation	85.0%
2	Through self-governing and self management	71.0%
3	Through dialog and coaching	64.0%
4	Trough follow-up and supervision	33.0%
5	Through acknowledgement and rewards	17.0%
6	Through attitudes and values	15.0%
7	Through order and instructions	12.0%
8	Through rules and directives	8.0%

Table 11: Managerial style

Co-operation and participation plays a significant role for the top managers in the Scandinavian construction industry that's why is the most commonly used management style with a percentage of 85%. Self-governing and self-management have a quite high percentage too, as well as the management style that promotes dialog and coaching.

Those results allow us to assume that Scandinavian top managers in the construction industry have an approach towards management that allows their employees to take initiative, while at the same time are open to discuss and coach them too. In such an environment the culture of co-operation is cultivated and everybody participates in the evolution process of the organization.

4.1.4 Managers' powerbase

In the questionnaire, the participants were given four predetermined factors to help them justify themselves as leaders. They were asked to assess their importance and the results are presented on table 12, with the remark that the ranking is based on the participant's answering great and very great importance (Appendix A)

1	My management competencies	89.0%
2	My results	85.0%
3	My personal qualities	84.0%
4	My professional competencies	67.0%

Table 12: Factors justifying existence as a leader

As Table 12 presents managers on top level, considering as the most significant factor for their existence as leaders their management competencies with result and personal qualities to follow in close distance. Almost all of them agree that the professional competencies are not having high values for their existence as leaders. In a continuously changing operational environment personal qualities and strong management competencies are very important, while the need for production of good results keeps managers on top level always alerted.

In order to get a better overview of the managers' powerbase, the participants were additionally given nine predefined factors, that give them power of penetration in their management position. The results are presented on the table below and they are ranked based on the participants answering highly and very highly: (Appendix A)

1	My personal qualities	82.0%
2	My attitude and values	80.0%
3	My management experience	76.0%
4	My results	71.0%
5	My relationship with others	71.0%
6	My professional competencies	63.0%
7	My power over resources	40.0%
8	My job and position	38.0%
9	My power to punish and reward	7.0%

Table 13: Factors giving penetration in management position

Personal qualities and attitude and values are factors that give to top managers the maximum level of penetration in their management position. Their experience and results are considered important too. The power to punish and reward seems not to be that popular factor of penetration, but still the existence of a 7% supporting it needs to be examined further.

4.1.5 Management tools

The participants were given twenty predefined tools that they use in order to accomplish their managerial work and they were called to assess their value. The ten most frequent tools used, with the remark that the respondents assessed them as of great or very great value, are: (Appendix A)

1	Strategic planning	69.0%
2	Plans of action	67.6%
3	Financial management tools	63.2%
4	Customer investigation	56.3%
5	Goal and results monitoring	55.5%
6	Contract management	52.0%
7	Staff/satisfaction investigation	47.8%
8	Project management tools	45.5%
9	Production operating systems	43.2%
10	Process management tools	41.2%

Table 14: Most common and useful management tools

As Table 14 presents the most common and useful management tools are "strategic planning", "plans of action" and "financial management tools". These are followed by "customer investigation" and "goal and results monitoring", revealing a tendency of top managers towards more management-oriented tools (hard tools), which means that leadership oriented management is not a top priority for them.

4.1.6 Challenges in the years to come

As far as it concerns the challenges that top managers oversee for the years to come, those participated in the study were asked to select out of 30 predefined challenges those that they think they have to deal with in the future. The fifteen most frequent answers, with the remark that the respondents answered that they are of great or very great importance, are: (Appendix A)

1	Develop and retain qualified staff	95.5%
2	Recruitment of qualified staff	93.0%
3	Raise knowledge and competence level	90.5%
4	Ensure company's/institution's competitiveness	88.5%
5	Social responsibility	83.5%
6	Make working processes more effective	83.0%
7	Value-based management	82.3%
8	Product or service development	80.3%
9	Adopt new technology	79.0%
10	Improve co-operation across the organization	78.5%
11	Risk and safety management	75.0%
12	Quality development and quality management	74.3%
13	Co-operation with other companies, Institutions etc.	73.3%
14	Goal and results monitory/contract control	63.1%
15	Improvement of customer satisfaction or customer loyalty	62.3%

Table 15: Main challenges for the years to come

As table 15 shows the challenge of retaining and recruiting qualified staff is on the top of the agenda for top managers in the Scandinavian construction industry. Additionally the concern to raise knowledge and competence level of their organizations and to ensure the competitiveness of them seems to be among the top challenges that top managers will have to deal with in the close future. Challenges like "social responsibility", "value-based management" and "product or service development" have mostly to do with the overall Scandinavian approach towards how an organization should operate. It is obvious that overall business issues are of main importance, without though forgetting to prioritize matters related with the employees.

4.2 Findings from the interviews with CEOs

Before presenting the findings from the interviews with CEOs from organizations in the Scandinavian construction industry, a presentation of the demographic background of them is required. Initially a distribution of the interviewees on business sector, gender and age is presented.

Interviewees by business sector

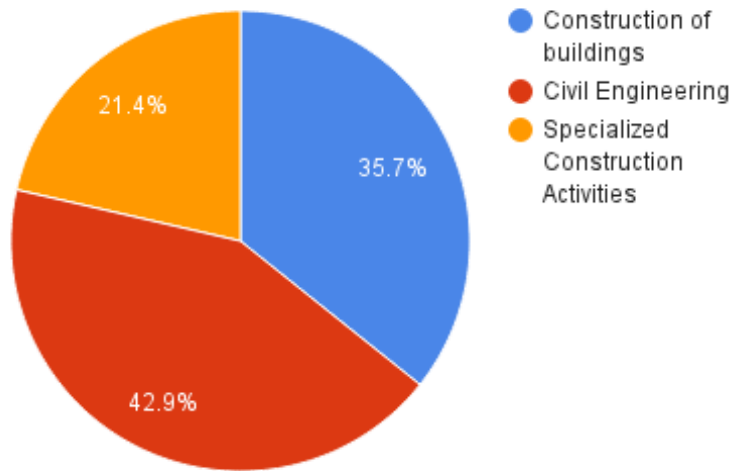


Figure 9: Distribution of interviewees by business sector

Interviewees by gender

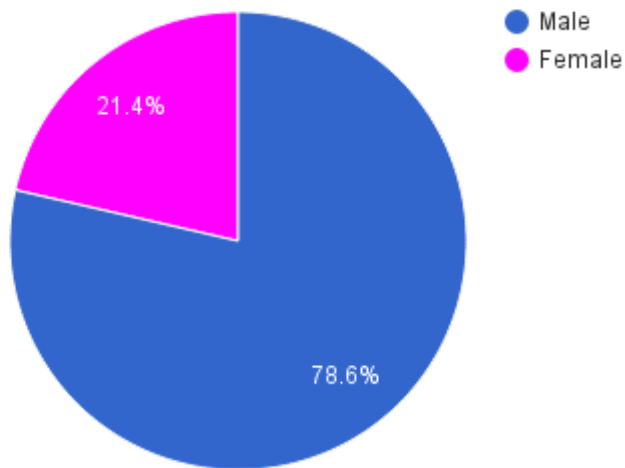


Figure 10: Distribution of interviewees divided by gender

Interviewees age distribution

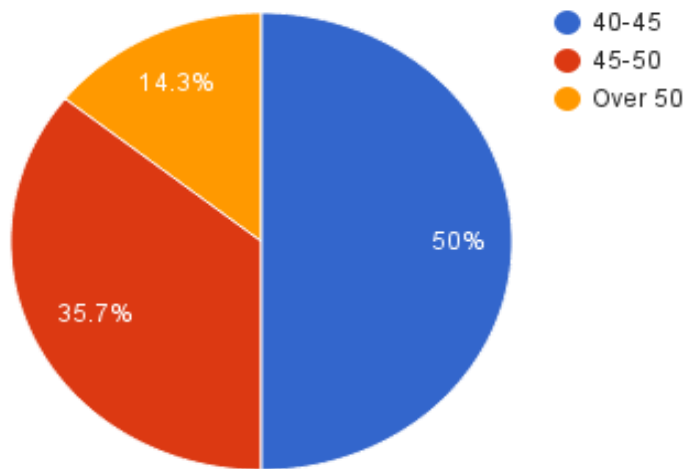


Figure 11: Interviewees' age distribution

Despite the fact that the sample of interviewees is not that big, it shows that the age of those holding a CEO position have an age that does not exceed 50 years. It is also obvious that a small but important number of women hold a CEO position as well.

By external research on the profiles of those executives, the following table regarding their educational background is presented.

Education	No. Of Interviewees
Engineer MSc	4
Engineer MSc and MBA or business training	8
Business administration MSc	2

Table 16: Educational background of interviewees

4.2.1 Managerial style

On the questions related to their managerial style most of the interviewees answered that they cannot put their style under a certain definition. The questions though that asked for a more detailed description of how they handle situations within their organizations revealed that most of them have a managerial style that is a mix of participative management, employee empowerment and management by objectives. Satisfaction of the employees, motivation and delegation of tasks are high on their agenda. The goals that they set though have a more short-term perspective (according to their sayings) as it is easier to produce better and more visible results. The CEOs may act as a liaison between line managers and the board, but they allow a high degree of decision-making and self-management from top to bottom.

There were though an important number of CEOs (five) that referred to Total Quality Management as the center of their managerial style. Those CEOs come from "Specialized Construction Activities" business sector and the "Civil Engineering" business sector. For them high quality of product is important and they form their whole strategy towards this direction. In their organizations staff satisfaction and empowerment plays a significant role for the successful delivery of their goals and they are those that pointed out continuous innovation as the goal that has to be set in order to remain competitive in the market.

4.2.2 Main Competencies

The interviewees were asked to give three of their managerial skills that they consider as the most important. The following table presents those managerial skills.

1	Result-oriented	12/14
2	Negotiation	5/14
3	Innovative thinking	2/14
4	Trust on myself/abilities	10/14
5	Operating under pressure	4/10
6	Interpersonal skills	14/14

Table 17: Important managerial skills according to interviewees

"Interpersonal Skills" seems to a skill that plays a significant role for those holding a CEO position. It is also quite important for a CEO to produce results and have a high level of trust on him/herself and abilities.

On the other hand "Innovative thinking" seems not to be considered as a required skill for CEOs in the construction industry. The same applies to "Operating under pressure", despite the fact that the construction industry offers a highly stressful working environment.

4.2.3 Manager's powerbase

With questions related to their management powerbase, The CEOs have been called to explain how they can act as leaders. They have been asked about how they used their leadership skills to achieve goals, motivate and inspire others and they have been also called to answer if they have ever gone against policies and principles or against the decisions of the board to support their opinion and vision.

Almost all of them referred to two success factors that allow them to act as leaders in their role. Those factors are "personal qualities" and "management competencies". It also important to point out what they meant by management competencies. Their experience and their personal relationships with the employees of members of the board was prioritized and as an addition to their personal values they added the high level of professionalism that they show due to their position.

4.2.4 Challenges for the years to come

What causes interest, is the fact that in the question about the future challenges that CEOs in the construction industry have to face in the years to come, all of them recognized that the future will be rather challenging for the industry, but despite the fact

they know the areas that need focus, very few of them have started developing strategies for those.

A list with the challenges for the years to come, given by CEOs can be presented on the table below:

1	Customer growth and retention strategies	13/14
2	Effective talent management	11/14
3	Organizational structure and design	11/14
4	R&D and innovation capacity	10/14
5	Technology investments	11/14
6	Use and management of data	8/14
7	Creation of strategic alliances/joint ventures	8/14
8	Access to people with key skills	7/14

Table 18: Main challenges for the years to come

4.3 Findings from interviews with recruiters/other specialists

As it has been referred at the method chapter the choice of interviewing experts coming from recruitment and consultant agencies was part of the strategic planning of this study. Those people have the necessary skills to evaluate the competencies of top-level managers and executives in the construction industry and additionally the organizations they represent have conducted in the past studies for specific business sectors of the construction industry and for the industry as a whole. Their opinion is of high importance as they can provide the study with a more spherical approach around the subject.

4.3.1 Managerial style

As far as it concerns the managerial style of top-level managers in the Scandinavian construction industry all the "external" experts agree that the approach is in perfect harmony with the overall "Scandinavian approach" towards management. According to them responsibilities in those organizations are highly delegated and top-level managers usually do not deviate from the strict core values of each organization. That can be explained easily as the vast majority of top-level managers and executives comes from the deep core of those organization, and they are employees that have made their way to the top of the hierarchical scale, so they are people that gained momentum through those values. The employees are an integral part of the organizations and their opinion has an effect on the decision-making. The dialog is highly developed and self-management policies are promoted.

4.3.2 Main competencies

Experts propose a series of skills and competencies that managers on top level should have in order to respond to the challenges of their position. Those skills and competencies come from a greater pool of characteristics that successful executives in the market have. Those skills and competencies are the following:

- Diplomatic skills
- Business entrepreneurial skills
- Agile management skills

- Interest in new technologies
- Efficient management of knowledge capital
- Analytical skills

Experts also provided information about the skills and competencies that organizations in the Scandinavian construction industry prioritize when they ask agencies to recruit top-level managers and executives. Those are:

- Personal integrity
- Proven technical competencies
- Personal values in agreement with the organizational values
- Mindset that fits the corporate culture of the organizations

From the above we can understand that organizations stick on a more traditional approach of how they want their top-level managers to be, when successful stories from the industry provide us with a more broad pool of skills and competencies.

Additionally recruiters and other experts, based on their experience, made an evaluation on the strengths and weaknesses of CEOs and top-level managers in the Scandinavian construction industry.

The main strengths identified are:

- There is an increasing number of CEOs and top-level managers that have entrepreneurial skills
- Strong technical and business knowledge
- They engage/empower their employees
- They have strong communicative skills

The main weaknesses identified are:

- Their managerial approach is traditional to a great extent
- They have difficulties applying strategies towards real change
- They seem trapped to a male dominated corporate environment that does not actually promote diversity
- They have difficulties to understand today's business logic

Furthermore, recruiters and other experts point out that there is a shortage of people in the Scandinavian construction industry that can fill top-level management positions. They reason that shortage due to the fact that construction organizations follow a completely inflexible corporate strategy. They deny revising their values and they cannot understand that they need to make a change in their business logic in order to develop further. It is also pointed out that organizations in the construction industry have a very narrow minded approach towards the people needed in their CEO and management board positions.

4.3.3 Challenges for the year to come

As in the previous data collection sections, experts from recruitment agencies and consultant agencies were asked to predict the challenges that top-level managers will have to face in the years to come. Those challenges are presented on the following table

1	Try to be competitive in an increasing global competition
2	Attract the right people to the sector
3	Connect more with academia to improve competencies
4	Formulate more efficient HR strategies
5	Revise the formation of their management boards
6	Formulate strategies towards true innovation and change
7	Exploit technological advance for their profit

Table 19: Main challenges for the years to come

4.4 Findings from external/secondary resources

As it has been referred in the method section, secondary data sources are considered the organizations' websites, articles in the press or past studies related to this study's subject. The use of this data aims to provide the researcher with a more detailed data regarding the formation and the consistency of the management boards in the Scandinavian construction industry and the background of their members. Information regarding the challenges that the management boards will face in the future is also provided, mostly through analyses and articles from experts in the press.

Additionally statistics for the Scandinavian construction industry deriving from EUROSTAT are presented to show the declined productivity of Scandinavian construction companies compared to companies of the sector in the rest of Europe.

4.4.1 Governance of construction industry organizations

From the organizations examined in this study 57 of them provide on their websites detailed information about their management boards. Those boards consist by an average of eight members. Those members come from different backgrounds (Figure) and their age and gender distribution can be presented in the figures below:

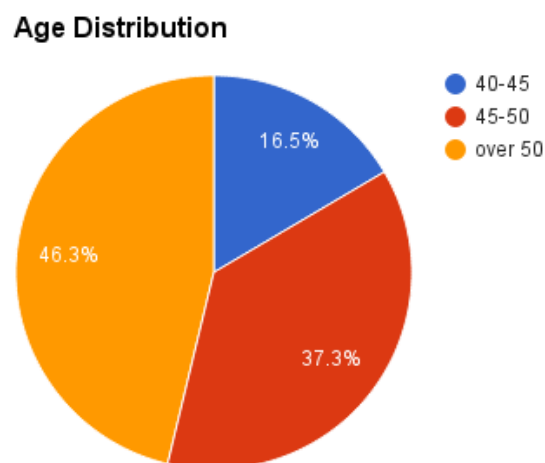


Figure 12: Distribution of board members by age

Gender Distribution

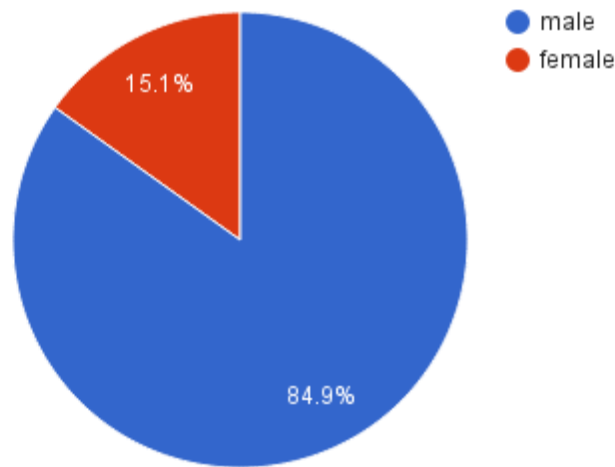


Figure 13: Distribution of board members by gender

Educational Background

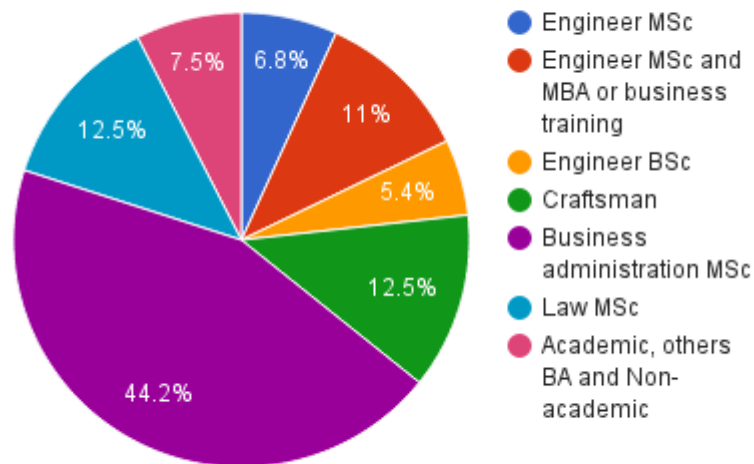


Figure 14: Distribution of board members by educational background

It is interesting to point out that despite the fact that Nordic countries have developed policies that promote equality, women still cannot find their way to the management boards in construction industry organizations. It is also interesting to see that comparing to the answers on the questionnaires the age of management board members seems to have a better distribution. As far as it concerns the educational background of the management board members, those with business related background keep on dominating boards.

When it comes to CEOs the information acquired from the organizations' websites is much more efficient. 124 companies provide detailed info about their CEOs and that information, which is related with their educational background, age and gender is presented in the figures below:

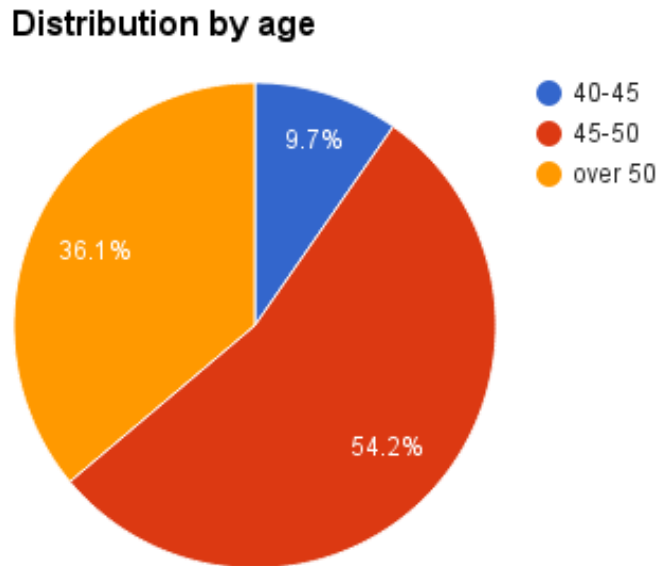


Figure 15: Distribution of CEOs by age

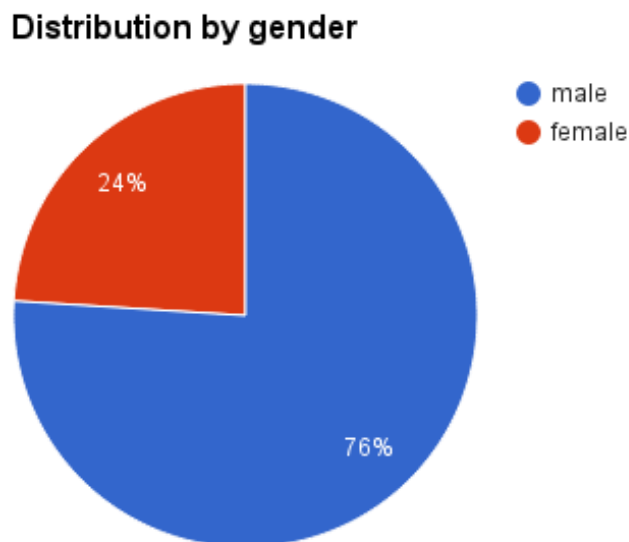


Figure 16: Distribution of CEOs by gender

Distribution by educational background

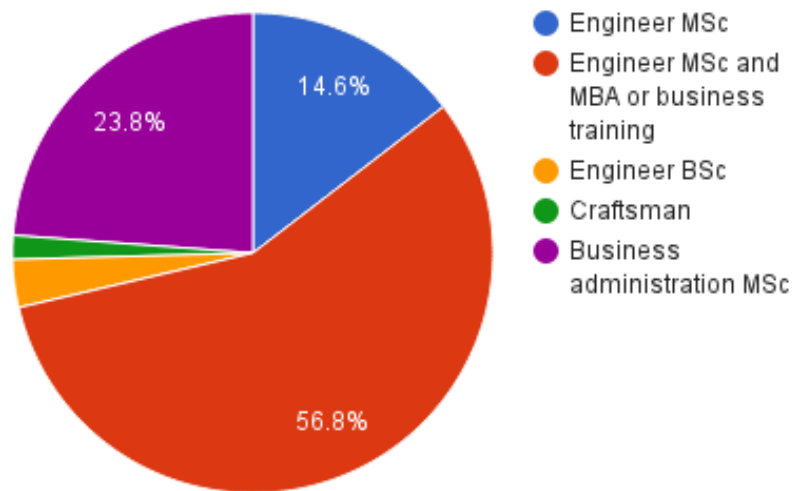


Figure 17: Distribution of CEOs by educational background

As far as it concerns age, the overwhelming majority of CEOs in Scandinavian construction organizations are around the age of 50. From the 54.2% of those belonging to the age group "45-50" the majority of them are 50 years old. As far as it concerns gender we can see an increasing number of women CEOs, but still this number is small compared to the number of men CEOs in the construction industry. The educational background of CEOs is more or less as shown at the sample of the interviews. A business studies background seems to be a requisite for a CEO position in the Scandinavian construction industry.

5. Discussion

In the analysis chapter, the findings presented on the empirical part of this study are evaluated based on the theoretical framework in order to draw conclusion about the strategic management competences of top-level managers in the Scandinavian construction industry. Firstly the correlation of the existing strategic competences compared to theory is discussed, followed by an analysis of the important strategic management competences and how this can be further developed in order the productivity of organizations in the Scandinavian construction industry to be improved.

5.1 Introduction

Since the subject of the study was referring to both members of the management boards and CEOs the participating sample in questionnaires and interviews can be considered representative for the goals that the study initially sets. Furthermore, CEOs seems to have more compact views regarding the different sections of the study, while members of the management boards show a greater diversity in their opinions. Additionally the opinions of recruiters and other experts seems to be closer to the opinions of CEOs, but they also bring on table more innovative views on the study's topic.

In the following paragraphs the above-discussed results are discussed further, they are compared in order mutual relations to be identified and they are compared with issues presented in the literature review.

5.1.1 Important management tasks for top managers today

The members of the management boards were asked to select out of 27 predefined tasks the 10 most important management tasks for top managers. The answers given show a high level of agreement on which tasks are valued higher on top management level. As the study sample is located in the region of Scandinavia it was expected the personal management element to be highly valued. Business matters though are not less valued and they hold a rather dominant position.

In table 9 (p.34) the ten most important management tasks are ranked. Figure 7 (p.35) shows the amount of time that top managers spend on different management areas. Comparing these results shows not great difference between time spent on management areas and importance of managers' tasks. The Scandinavian approach on management becomes obvious when we see the time spent on areas and tasks related to administration and organization and staff development. It can be observed though that despite the fact that "motivation of others" and "staff satisfaction" are highly ranked by members of the management boards, the time spent on staff development is not in complete coherence with that ranking.

For the rest of the management areas the comparison between the time spent on them and the related management tasks ranking shows a balanced result.

When comparing these results with previous studies, we can see a great similarity on studies that are referred to the same region (Hildebrandt, 2005), and some slight differences, which mostly have to do with the greater value of business related tasks, with studies that are referred to countries outside the Scandinavia region (Egbu, 1999).

5.1.2 Main competencies of top managers

When it comes to the examination of the most important management competencies, the results gained from the answers of members of the management boards, CEOs and other experts show a significant diversity.

When it comes to members of the management boards (table 10, p.36) the results are quite similar with those that previous studies have presented (part 3.5, p.31). Manager's attitude to persons has greater value than having access to the necessary management tools. "Credibility", "responsibility" and "interpersonal skills" are on the highest-ranking positions. Those results are consistent with the results that Hildebrandt (2005) provides us in his study.

When it comes though to the opinion of CEOs and other experts new competencies are brought on table as important. For CEOs being "result-oriented", having "trust on themselves/abilities" and having "interpersonal skills" are the most highly valued competencies. And if "interpersonal skills" are aligned with the opinion of members of management boards, the rest two bring a more personal and business oriented element on CEOs approach. Additionally experts on the industry bring on table more technocratic competencies with "diplomatic skills", "business entrepreneurial skills" and "agile management skills" to be on top of the list.

Comparing the above one can see that that CEOs and experts value competencies that are more fitting to a modern business environment, while members of the boards are stuck in more "traditional" competencies that make a good manager. Taking under consideration the age difference that the empirical results showed, that difference on the evaluation of the management competencies can potentially cause inefficiencies when it comes to decision-making regarding strategies and further business development, and can also bring conflicts in matters related to how an organization is managed and how it proceed to the modern business era.

5.1.3 Managerial style

The majority of the members of management boards agree on which managerial style they prefer to perform. As it presented on table 11 (p.36), the most frequent managerial types are "through co-operation and participation", "through self governing and self management" and "through coaching and dialog". The preference of those styles should not be surprising since it is fully harmonized with the most important competencies and management tasks, as it has been referred above. Additionally if one examines the factors that justifies the members of management boards as leaders (table 12, p.38), the factors that give them the power of penetration in their management position (table 13, p.41), and the challenges that they foresee for the future (table 15, p.38), it can be fully understood that they are completely coherent with the major choices of managerial style. What can be questionable though, is the fact that when it comes to the managerial tools they use (table 14, p.38), it is obvious that those are management oriented and not at all coherent with the foregoing managerial styles.

When it comes to CEOs there is no clear managerial style that is preferred. A mix of participative management, employee empowerment and management by objectives is preferred as it allows them to have greater flexibility, keep their employees satisfied and produce better and more visible results on a short-term perspective.

The literature review comes to give explanations to the findings above. Scandinavian management model is per se unique and has offered to countries in Scandinavia high ranking in terms of competitiveness. Delegation of responsibilities and people oriented approach creates a good overall impact within the organizations but still there are weaknesses on the Scandinavian approach. Members of the management boards seem to have an approach that is more fitting to the management style of "traditional" companies. That can be explained since those people belong to a certain elder age rate, they have been nurtured during their career in a certain management model, and since this model has been proven effective they are not willing to make changes. On the other hand CEOs have a better connection with modern managerial theories and technologies and they have formed a managerial style that is closely to the one that "modern" companies adopt. It keeps the main core of the infamous Scandinavian approach in management, but it brings on table a way more flexible approach that allows them to be always up to date when meeting the challenges of their role.

5.1.4 Board diversity

Literature suggests that Scandinavian management reflects the culture of its countries and it is highly dependent on them (Phillips-Martinson, 1992 and Jönsson, 1996). Gender equality and diversity are part of the culture in Scandinavian countries. Studies coming from well-known organizations like McKinsey (2007) and Catalyst (2007) showed that gender diversity, on management boards, can affect positively the performance of organizations. Countries in the Scandinavia region have promoted laws and policies that enable women to have better access on top management positions. Denmark and Norway lead the way with Sweden following closely.

According to the findings of this study though, the Scandinavian construction industry seems to still be male dominated. The number of women in management boards and CEO positions is significantly low, and women seem to be excluded from decision-making positions.

Taking under consideration the past studies which suggest that organizations with high percentage of women participation on their management boards have managed to achieve better performance (Jock et al., 2013) and that diversity has a positive effect on exchange of ideas and effective communication (Kang et al., 2007), and by extension to the overall decision-making processes, a change on the composition of management boards in the Scandinavian construction industry would probably have a positive effect on their performance. After all this change in the composition of management boards is something that experts in the industry suggest.

Of course diversity on boards is a more complex than just a gender issue and there are scholars, like Ahern and Dittmar (2012) that doubt that positive effect of diversity on them. The different qualities, personal characteristics and competencies of each individual member of the board are in direct relation with the decision-making processes of the board. The way that the role of management board is formulated in Scandinavia puts on table the matter of age diversity as well. The interests of the so called "old boys network" and the agenda they set is not always aligned with the perceptions of CEOs towards decision-making. Most of the interviewed CEOs have pointed out the need of more liberty in the decision-making process regarding their role, so it seems that the subject of potential conflict of interests between boards and CEOs to arise.

5.1.5 Relationship between CEO and Management Board

When it comes management boards in Scandinavia, literature suggests we refer to a very homogenous group of people, with very strong bonds in terms of age, experience, sex and political views. The homogeneity of those groups along with the fact that they have an active role in the decision-making within organizations provides them with great power over a variety of subjects.

Boards' members have a more reserved view when it comes to the future of construction organizations. They seem to prefer the security of old tested and with proven results methods towards true innovation and they keep on being stuck to the core of values of the organizations they represent. On the other hand CEOs and other experts in the construction industry suggest the strong need for innovation, change in the organizational structure and a change in the formation of management boards. The conflict of interests in that case is more than obvious, since the view of CEOs and experts for the future of construction organizations directly affects the status quo of management board members. Additionally the different managerial approach that those two groups have and the different agendas they set on table for the future of construction organizations, can be considered as a factor that causes delays on the decision-making processes and puts obstacles on true innovation.

5.1.6 Top manager's power base

When it comes to the factors that legitimize the power of top managers, the members of the management boards agree that "my management competencies", "my results", and "my professional qualities" are equally important. That proves that the power of penetration of their management role has a person-based element.

When the factors that give to top managers the power of penetration are examined "my personal qualities", "my attitude and values" and "my management experience" are placed at the top of the ranking. "My results" and "my relationship with others" are also important as they are closely evaluated to the first three factors. The results from this study have slight differences with similar studies conducted in the past, differences that have to do with the change on rankings of the most important penetration factors.

When members of the management boards are called to justify themselves as leaders a more business-oriented element appears as "my management competencies" and "my results" are highly valued. The person-based element is also strong as "my personal qualities" is almost equally valued with "my results".

The above show that there haven't been significant changes comparing to past studies concerning the important factors to the manager's power-base.

5.1.7 Management tools

As the literature suggests there is a great variety of management tools that help top managers to meet the challenges of their roles. Past studies (Hildebrandt, 2005) showed that the most frequently used management tools are plans of actions, strategic planning and financial management tools.

The results of this study did not show any change in the use of those tools. The aforementioned tools are the same, which shows that a decade after the compared

study, leadership oriented management is still not on top of priorities for members of the management boards.

5.1.8 Main challenges of top managers in the future

When it comes to discussing the potential challenges that top managers will have to face in the years to come, opinions of members of management boards, CEOs and experts in the industry appear to have a certain amount of diversity. There are though challenges that are similar, even if they are expressed in a different way, in all the three different samples.

Competitiveness and expansion in new markets is a common concern for CEOs and members of the management boards. Another commonplace for everyone is the attraction of the right people in the construction sector, either by more effective HR and talent management strategies, which will allow construction organizations to gain access to people with key skills and competencies, or by training and enforce the competencies of the existing employees. Experts refer to academia as a potential source of high-qualified personnel that could help the construction sector to improve its productivity

While members of the management boards seem to have a more reserved view over the future challenges, CEOs and experts in the industry promote the need for broader use of new technologies and the enforcement of R&D and innovation capacity. They both also agree on the need to be changes in the organizational structure of construction organizations, with experts suggesting there should be a revision in the formation of management boards. Furthermore CEOs point out the need for the creation of strategic alliances and joint ventures, that will allow construction organizations to expand more effectively in new markets, and the need for managing in a more effective way the knowledge and data gained from past projects.

The above show that the most important challenges that top managers have to face in the future require from them strong leadership skills. CEOs have understood the needs of strong leadership, while members of the management boards keep on sucking in a more management-oriented approach for the future. What can be questioned though is the willingness of CEOs to lead the way towards change and innovation. Of course the sample of this study is not enough to provide a strong argument towards this direction, but the sense given by a great amount of the interviewed CEOs is that despite the fact they understand the need for change, either in the organizational structure or the formation of boards, they seem to be quite reluctant to lead those changes. Of course this cannot be attributed to a potential lack of leadership skills, but it can be said that it mostly has to do with the way that decision-making paths are formed within the construction organizations in Scandinavia.

6. Conclusions

On this final chapter the key findings are summarized. Additionally the author reveals whether the research questions set have been answered and if the objectives of this study have been fulfilled. Furthermore future research topics are proposed.

This study aims to explore the strategic competencies of top-level managers in private organizations in the Scandinavian construction industry. The area of focus is how top-level managers perform their managerial work and to which extent the way they perform their work can affect the way that their organizations perform. On the theory section, a brief reference of the multiple roles that top-level managers are called to perform in organizations has been presented. Further information about top-level managers' main competencies, managerial style, power base and tools used has been provided and through the eyes of other scholars that have examined the subject on previous studies, the way that those factors above influence the overall performance of organizations has been given. As it has been referred above, this study tried to examine those factors in the Scandinavian construction industry. A questionnaire based on the research questions was sent to 200 members of management boards from organizations that belong to codes 41,42 and 43 of the NACE sector group. The gross sample consisted of 150 contractor companies, which are the biggest in the construction industry in Scandinavia. 92 of them responded on the questionnaire, which applies to an acceptable response rate of 46%. Additionally a set of interviews with CEOs and experts in the industry was scheduled in order to cover a broader range of top-level managers in the Scandinavian construction industry, and get the opinion of external experts, which can provide a more distant overview in the industry.

The key findings deriving from the study are that members of the management boards are on their vast majority over 50 years old, and those that have an engineering and non-engineering educational background are almost equal in numbers.. They have an average of almost 16 years of experience in managerial positions and almost 12.5 years of presence in the same organization. On the other hand the age of CEOs is in large percentage below 50 years, with their average age to be between 45-47 years old, and their educational background is more engineering oriented.

The most important management tasks of members of the management boards are in complete accordance with the Scandinavian way of management and they are employee oriented. Those top level managers spend more time in administration and staff development related tasks, paying much more attention to tasks that have a more short-term perspective rather than tasks related to business development and more. They also spend, on a daily basis, most of their time in own tasks and internal meetings. CEOs have a more modernized approach towards management, but again they are employee oriented. Furthermore they set themselves goals with short-term perspective that can produce better and more visible results.

Taking a look at the main competencies, one can see that members of the management boards value greater manager's attitude towards persons, while CEOs bring on table a personal and business oriented approach. Experts add that technocratic skills are required in order top-level managers to meet the requirements of their role.

When it comes to board diversity, it is obvious that the Scandinavian construction industry is differentiated from the typical Scandinavian approach. The industry remains significantly male dominated, with women being excluded from decision-making positions. One can assume that a better level of diversity in the boards could potentially improve the productivity of construction organizations, and if we take under consideration the opinions of experts in the industry, that propose a change in the formation of management boards, that assumption seems valid. Furthermore diversity can be achieved by making radical changes in terms of age. There seems to be a different agenda between goals and interests of managers with those of the so called "old boys network" that dominates management boards. Since both sides play an important role in the decision-making in construction organizations that age and perceptions' gap should be somehow bridged, creating in that way effective communication paths and better and quicker decisions.

Management boards' members have a reserved view for the future of construction organizations, and insist on following secure paths and methods that have already provided proven results. Core values are important to them, but they seem to remain attached to them ignoring true innovation. On the other hand CEOs strive more towards innovation, questioning directly the status quo of the old-fashioned members of the management boards. The different agendas that those sides bring on table causes delays in the decision making and puts obstacles in moves and changes that can bring construction organizations towards a more innovative future. Experts' opinion is aligned with that of CEOs and see organizational restructure as important factor for the development of construction organizations.

The power base for both CEOs and members of the management boards has a person-based element. Furthermore, when top-level managers are called to justify themselves as leaders a business-oriented element comes forward as an important penetration factor of their role.

No change can be observed in the management tools used by top-level managers despite their role in the organizations. Following a leadership-oriented management approach is still not an important priority for top-level managers

The views towards the future changes for top-level managers in the future reveal a great difference between CEOs and members of the management boards. The first promote the use of new technologies, effective knowledge management strategies and enforcement of R&D and innovation capacity as factors that can improve productivity, and additionally they address the need for market expansion through joint venture and strategic alliances. Members of the management boards are concerned about competitiveness and expansion of market, but instead of trying to attract the right people that can produce more effective results they insist in the continuous development of the existing personnel, by enforcing their competencies. The future though seems clearer to the experts on the industry as they suggest a set of strategic moves, that includes attracting the right people to the market from external resources, like academia, change in the HR strategies followed and greater investment on R&D and new technologies. Additionally they point out that CEOs need to acquire leadership skills as they see them as those who will lead innovation in the construction industry.

7. Recommendations for future research

Scandinavian construction industry is a very large industry to be examined by a single study. Future studies could focus in all the organizations included to codes 41,42 and 43 of the NACE sector group and they can expand to other parts of the construction industry. Furthermore a study that could examine a greater number of CEOs and members of management boards could add value to that present study.

Another focus area could be the diversity in the management boards. There are studies referring to the role of women in the management board, sometimes on a positive way and other on a negative one. The role of women in the Scandinavian construction industry, and especially how can they contribute in the production of better results in the organizations they participate, should be further examined, in order to have a more solid base of findings. Additionally a research on the potential positive effect that a reformation of management boards, in terms of age specialties etc., can be proposed as those factors were discussed a lot, especially during the interviews' sections.

Finally as this study gives an overview on the future challenges on the construction industry in Scandinavia, a separate study for each of those challenges can be done in order to get a deeper understanding of how meeting those challenges can lead construction organizations achieving better results in an operational environment that continuously changes.

8. References

- [1] Ackroyd, S., & Hughes, J. A. (1981). *Data collection in context*. London: Longman.
- [2] Acquaah, M. (2003) Corporate Management, Industry Competition and the Sustainability of Firm Abnormal Profitability. *Journal of Management & Governance*, 7(1), 57-85.
- [3] Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and their impact on corporate performance. *Review of Financial Studies*, 18(4), 1403-1432.
- [4] Ahern, K. R., & Dittmar, A. K. (2012). The changing of the boards: The impact on firm valuation of mandated female board representation. *Quarterly Journal of Economics*, 127(1), 137-197.
- [5] Akhouri, N (2002). "Aligning HRM Strategies with Competitiveness," in Singh, S (ed.), *High Performance Organizations*, New Delhi: New Age, 333-343.
- [6] Armstrong, M. (2003). *A Handbook of Human Resource Management Practice* (9th edition). Kogan Page, London.
- [7] Bennedsen, M., Kongsted, H. C. and Nielsen, K. M. (2008) The causal effect of board size in the performance of small and medium-sized firms, *Journal of Banking & Finance*, 32, 1098-1109
- [8] Bogorya, Y. (1988). A Multi-Level Approach to Training. *Industrial & Commercial Training*, Jan/Feb. 1988, Vol. 20 Issue 1, p. 10 – 12.
- [9] Bolton, P. , Brunnermeier M. and Veldkamp, L., (2008). *Leadership, Coordination And Mission-Driven Management*, working paper Columbia University.
- [10] Boyatzis, R.E. (1982). *The competent manager*. John Wiley & Sons, Inc., New York.
- [11] Bryman, A. and Bell, E. (2007) *Business research methods*, Oxford University Press, Oxford.
- [12] Catalyst. (2007). *The bottom line: corporate performance and women's representation on boards*
- [13] Corti, L., Day, A. & Backhouse, G.,(2000). Confidentiality and Informed Consent: Issues for Consideration in the Preservation of and Provision of Access to Qualitative Data Archives [46 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 1(3), Art. 7. (Revised 7/2008)
- [14] Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- [15] Dale, A., Arbor, S., & Proctor, M. (1988). *Doing Secondary Analysis* (Contemporary Social Research Series No. 17). London: Unwin Hyman Ltd
- [16] De Wit B. and Meyer R. (2010) *Strategy Synthesis*. Cengage Learning. Andover.

- [17] Denscombe, M., (1998) .The Good Research Guide: For Small Scale Research Projects, Buckingham: Open University Press
- [18] Dilling-Hansen, M., Madsen, E.S., Smith, V. (2009) Top management, education and networking, in Bjuggren P-O., Mueller D. C. .The Modern Firm, Corporate Governance and Investment. Edward Elgar Publishing. Massachusetts.
- [19] Edling, C., Hobdari, B., Randøy, T., Stafstudd, A., & Thomsen, S. (2012). Testing the “old boys’ network”: diversity and board interlocks in Scandinavia. *The Small Worlds of Corporate Governance*, 183-202.
- [20] Egbu, C. O. (1999). Skills, knowledge and competencies for managing construction refurbishment works. *Construction Management and Economics*, Jan1999, Vol. 17 Issue 1, p29-43.
- [21] Eriksen, T. T., Kruse, M., & Larsen, G. (2006). *The Scandinavian Way*. Copenhagen Institute for Future Studies.
- [22] Eurostat (2013). *NACE Rev. 2 - Statistical Classification of Economic Activities in the European Community, Rev. 2 (2008)*. Luxembourg: Office for Official Publications of the European Communities,
- [23] Fleiss, J. L., Levin, B., & Paik, M. C. (2013). *Statistical methods for rates and proportions*. John Wiley & Sons.
- [24] Gabaix, Xavier and Augustin Landier, 2008, *Why Has CEO Pay Increased So Much?* *Quarterly Journal of Economics*, 49-100.
- [25] Gervais, S., J.B. Heaton, and T. Odean, 2009, *Overconfidence, Compensation Contracts, and Labor Markets*, working paper, Duke University.
- [26] Gilbert, T.F. (1978). *Human Competence. Engineering Worthy Performance*. New York: McGraw-Hill.
- [27] Graham, J., C. Harvey, and M. Puri, 2009, *Managerial Attitudes and Corporate Actions*, working paper, Duke University
- [28] Heaton, J. B. 2002, *Managerial Optimism and Corporate Finance*, *Financial Management*, ??
- [29] Hildebrandt, S. et al (2005a). *Det danske ledelsesbarometer. Dansk ledelse anno 2005 -Statusrapport (“The Danish management barometer. Danish management in the year of 2005- Status report”)*. Handelshøjskolen I Århus (Aarhus School of Business) & Ledernes Hoved organization (The managers central organization).
- [30] Hill, C., Jones, G., & Schilling, M. (2014). *Strategic management: theory: an integrated approach*. Cengage Learning.
- [31] Hofstede, G.H. (1980), *Culture Consequences: International Differences in Work-related Values*, Sage Publications, London.
- [32] Holt, D.H. (1998), *“International Management”*, Fort Worth, Texas: Dryden Press.

- [33] Hook, J. (2014). Fit for the future: 17th Annual Glocal CEO Survey. Key findings in the engineering and construction industry. PWC, February 2014. [ONLINE] Available at: <http://www.pwc.com/ceosurvey>. [Accessed 17 April 15].
- [34] Horton, S. (2000). Introduction – the competency movement: its origins and impact on the public sector. *The International Journal of Public Sector Management*, Vol. 13, no. 4, 2000, pp. 306-318.
- [35] Ingvaldsen, T., Lakka, A., Nielsen, A., Bertelsen, N. H., & Jonsson, B. (2004). Productivity studies in Nordic building-and construction industry.
- [36] Jarzabkowski, P. and Spee, A. P. (2009) Strategy-as-practice: A review and future directions for the field. "International Journal of Management Reviews" 11, 69-95.
- [37] Joecks, J., Pull, K., & Vetter, K. (2013). Gender diversity in the boardroom and firm performance: What exactly constitutes a "critical mass?". *Journal of business ethics*, 118(1), 61-72.
- [38] Jönsson, S. (1996) Perspectives of Scandinavian management, Gothenburg School of Economics and Commercial Law: Göteborg
- [39] Kang, H., Cheng, M., & Gray, S. J. (2007). Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance*, 15(2), 194–207.
- [40] Koch, C., & Buhl, H. (2013). Strategic Management Competences in Scandinavian Contractors. In Proceedings of the 29th Annual Conference. Association of Researchers in Construction Management (ARCOM). (pp. 645-654).
- [41] Lahti A (2010) Globalization & the Nordic Success Model. Ventus Publishing. Bookboon.com.
- [42] Lamb, R., (1984). Boyden Competitive strategic management, Englewood Cliffs, NJ: Prentice-Hall
- [43] Largest companies (2015) website Largestcompanies.com accessed in spring 2015.
- [44] Lindholm, M.R. (2004). Skandinavisk ledelse er en konkurrencefordel ("Scandinavian management is a competitive advantage"). *Manadag Morgen*, No. 43, December 2004, pp. 36 – 38.
- [45] Lundberg, C. C., & Wolek, F. W. (1970, August). CHANGING EXECUTIVE STYLE: A MODEL FOR PROFESSIONAL DEVELOPMENT. In *Academy of Management Proceedings* (Vol. 1970, No. 1, pp. 186-207). Academy of Management.
- [46] Löwstedt M. (2012) Exploring the concept of strategy using a practice lens: The case of a large construction company. Thesis for Licentiate degree. Chalmers. Göteborg.
- [47] Malmendier, U., and Tate G.. (2005). CEO overconfidence and corporate investment. *Journal of Finance* 60 (6): 2660-2700.
- [48] Malmendier, U., and Tate G.. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics* 89 (1): 20-43.

- [49] McClelland, D. C. (1973). Testing for competence rather than for "intelligence". *American psychologist*, 28(1).
- [50] McKinsey (2012). *Manufacturing the future: The next era of global growth and innovation*. McKinsey Global Institute and McKinsey Operations Practice, November.
- [51] McKinsey & Company. (2007). *Women matter. Gender diversity, a corporate performance driver*. Paris: McKinsey & Company, Available at: http://www.mckinsey.com/locations/swiss/news_publications/pdf/women_matter_english.pdf.
- [52] Mintzberg H. (1973) *The Nature of Managerial Work*. Harper and Row. New York.
- [53] Nunan, D. (1999). *Research methods in language learning*. Eighth printing. Cambridge: CUP
- [54] Patton, M. Q. (2005). *Qualitative research*. John Wiley & Sons, Ltd.
- [55] Phillips-Martinsson, J (1992). *Svenskarna som andra ser dem*, Studentlitteratur; Lund
- [56] Popper, K., (2004). *The Logic of Scientific Discovery* (1959). Reprinted by Routledge, Taylor & Francis
- [57] Rachlin, S. (2002). De bedste topcheferes kendetegn: Rekordresultater og personlig ydmyghed ("Best top managers characteristic: record results and personal humility"). *Mandag Morgen* No. 3, January 2002, pp. 29 – 33.
- [58] Rambøll Management (2004). *Det betaler sig at være en moderne virksomhed* ("It is worth the effort to be a modern company"). Rambøll Management April 2004, Copenhagen.
- [59] Rigby, D. (2001). *Management Tools and Techniques: A SURVEY*. *California Management Review*, Winter 2001, Vol. 43 Issue 2, pp. 139 – 160.
- [60] Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance*, 15(2), 404–413.
- [61] Rothwell, W. J. and Lindholm, J. E. (1999), Competency identification, modelling and assessment in the USA. *International Journal of Training and Development*, 3: 90–105. doi: 10.1111/1468-2419.00069
- [62] Strebel, P. (2004). *The Case for Contingent Governance*. MIT Sloan Management Review, Winter 2004, Vol. 45 Issue 2, pp. 59 – 66.
- [63] Sørderberg A.M., Vaara E. (2003) *Merging across borders: people, cultures and politics*. Copenhagen Business School Press. Copenhagen.
- [64] Söderlund, J. (2004a), "Building theories of project management: past research, questions for the future", *International Journal of Project Management*, Vol. 22, pp. 183 – 91.

[65] Van der Walt, N., & Ingley, C. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance*, 11(3), 218–234

[66] White, R. W. (1959). Motivation reconsidered: the concept of competence. *Psychological review*, 66(5), 297.

[67] Wilson A., Lenssen G, and Hind P. (2006) *Leadership Qualities and Management Competencies for Corporate Responsibility*. Ashridge. Berkhamsted.

[68] World Economic Forum (2006). *The Global Competitiveness Report 2013-2014*

[69] Xia B., Chan A.P.C. & Yeung J.F.Y. (2009) Identification of key competencies of design-builders in the construction market of the People's Republic of China (PRC). *"Construction Management and Economics"*. 27(11), 1141-1152.

[70] Ödman, P. J., (2003). "Hermeneutics and research practices." In *Kunskapande Metoder*, by Bengt Gustavsson, 71-93. Lund

Appendices

APPENDIX A: Questionnaire

Management Investigation (Scandinavian Construction Industry)

Purpose of the study

In connection with my MSc. in International Project Management at Chalmers University of Technology in Gothenburg, I have to write a dissertation. I have chosen to write about management competencies in the Scandinavian construction industry. The study investigates organizations of the private sector. In particular the focus will be on investigating:

- Which are the most important management tasks for managers today?
- How are the manager's jobs?
- What are the main challenges for management in years to come?

I consider it to be of great importance that such research conducted at university level should explore what is happening in the Scandinavian construction industry, since previous research has showed that organizations in the Scandinavian construction industry are in decline in terms of productivity.

Guidelines

Before starting filling in the questionnaire pay attention to the following guidelines.

- To make answering the questionnaire easier the majority of questions are closed type questions. That means you only need to check the answer that is most applicable to you.
- The word "company" defines the physical and geographical unit, which you consider as your workplace
- The options given in each question might not be entirely suitable to your case. Please try to answer the questions in the best possible way
- There might be questions that are irrelevant or you do not feel comfortable to answer. You can skip these questions and complete the rest of the questionnaire
- In case you want to add comments or further details on your answers at the end of the questionnaire there is space for this purpose.

The average time to complete the questionnaire is 20 minutes

For every answer anonymity is ensured and your answers are treated in outmost confidence. You as an individual and the company you represent will not be identifiable by anyone except the researcher.

If you have questions concerning the study or answering the questionnaire you are welcome to contact myself on phone (+46) 0760831876 or through e-mail: pardalis@student.chalmers.se

I would be grateful for receiving the questionnaire no ~~000000~~ later than

2nd of May 2015

I would like to thank you for participating.

Yours sincerely

Georgios Pardalis

BACKGROUND INFORMATION

Year of Birth _____

Gender*

- Male
- Female

What is the highest qualifying education you have completed since secondary school?*

- None
- Skilled Worker
- Internal Education
- Shorter higher education (1 – 2 years duration)
- Middle range higher education (2 1/2 - 3 1/2 years duration)
- Longer higher education (4 years and longer)

What is your educational background

- Engineer PhD
- Engineer MSc
- Engineer MSc & MBA or business training
- Engineer BSc
- Craftsman
- Business administration MSc
- Law MSc
- Academia
- BA & non-academic

In which business sector is your company in?*

- Construction of buildings
- Civil engineering
- Specialized construction activities

How many managerial jobs have you had before present job?*

How many years have you in total been a manager?

How many years have you been in this job?*

How many staff members in the company report directly to you – i.e. not through a managerial intermediary?*

How many staff members work in the company (if possible in full-time equivalence)?*

THE MANAGEMENT JOB

How important are the following tasks in your management job today?*
(Please put only one answer for each task)

	No Importance (1)	Little Importance (2)	Some Importance (3)	Great Importance (4)	Very Great Importance (5)	Not Relevant (6)
Formulation of vision and strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal and results monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instruction and training staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Development of staff members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
User and customer development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-ordinate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time and resource management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivation of others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine rules and routines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Represent the company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate values/attitudes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teambuilding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflict handling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delegate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information processing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidance/coaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Negotiation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Follow-up/supervision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional tasks/specialist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality and service development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How great a percentage of your working hours do you currently spend on tasks which are connected to the following four management areas?

(Please put only one answer for each task)

	0-10%	10-25%	25-40%	40-60%	60-80%	more than 80%
Administration and organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goals and result monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff development (HR – Human Resource)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How great a percentage of your working hours do you currently spend on the following mentioned activities?*

(Please put only one answer for each task)

	0-10%	10-25%	25-40%	40-60%	60-80%	more than 80%
Internal meetings and conversations/discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
External meetings and conversations/discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Own tasks ("behind writing desk")	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information processing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which management tools do you use in your work – and what is your experience with the usefulness of these tools?*
(Please put one cross for each management tool)

	Do no use (1)	No value (2)	Little value (3)	Some value (4)	Great value (5)	Very great value (6)
Strategic planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plans of action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental account	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Knowledge and competence account	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social account	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ethical account	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer investigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff-/satisfaction investigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appraisal interview	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality systems (e.g. ISO, TQM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Production operating systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Management evaluation (not yourself)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benchmarking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Process management tools (e.g. BPR, Lean)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial management tools (e.g. ABC, SAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contract and contract management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Payment-by-results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What do the following factors mean for your to justify our existence as a leader?*
(Please put one answer for each circumstance)

	No importance (1)	Little importance (2)	Some importance (3)	Great importance (4)	Very great importance (5)
My professional competencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My management competencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My personal qualities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you think that below mentioned factors gives you power of penetration in your management position?
(Please put one cross for each factor)

	Not at all (1)	A little (2)	To some extent (3)	Highly (4)	Very Highly (5)
My job and my position	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My professional competencies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My power to punish and reward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My power over resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My relationships with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My personal qualities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My management experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My attitude and values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What importance do the following personal factors and abilities have for you in your management position?*
(Please put one answer for each personal good points/ability)

	No importance (1)	Little importance (2)	Some importance (3)	Great importance (4)	Very great importance (5)
Involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resolute	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outgoing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpersonal skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Credibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Power of penetration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Persistence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tolerance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidence in others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logic/analytical ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Independence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enthusiasm/vitality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interesting to be with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unselfish/put others interest before own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding/attentive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disciplinary and organized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of humour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Will	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Results-oriented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identifying oneself/empathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diplomatic/tactful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optimistic outlook on life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robust	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotionally stable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High stress tolerance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MANAGEMENT STYLE

How do you perform your management job?*
(Please put one answer for each statement)

	Not at all (1)	A little (2)	To some extent (3)	Highly (4)	Very highly (5)
Through dialog and coaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through acknowledgement and rewards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through follow-up and supervision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through attitude and values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through order and instructions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through co-operation and participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through rules and directives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Through self-governing and self-management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MANAGEMENT CHALLENGES

Below you are asked to determine what importance you ascribe to different tasks for you as a manager over the next 2 – 3 years.*
(Please put one answer for each task)

	No importance (1)	Little importance (2)	Some importance (3)	Great importance (4)	Very great importance (5)	Not relevant (6)
Make working processes more effective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Export orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Goal and results monitoring/contract control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product or service development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality development and quality management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement of customer satisfaction or customer loyalty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement of owners returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk- and safety management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time- and resource management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Merge, buying etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outsourcing, put out to tender etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insourcing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Co-operation with other companies, institutions etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment of qualified employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop and retain good employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce staff numbers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flexible wage system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve co-operation across the organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raise knowledge and competence level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversity staff: Gender, age, culture etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental working environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical working environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizational development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value-based management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adopt new technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internationalisation/globalisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction of absence due to illness/staff turnover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ensure the company's/institution's competitiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

If you have further comments you are welcome to mention them below.

APPENDIX B: Interview with CEOs

B1: Contact e-mail

Dear Sir/Madam,

I would like to ask you about the possibility of interviewing you as you are holding a CEO position in one of the largest companies in the Scandinavian construction industry. The interview will be used as a source of information for my Thesis project at Chalmers University of Technology.

My thesis deals with the investigation of strategic management competencies of top-level managers in the Scandinavian construction industry, and it examines how the managerial competences of top-level managers have an effect on their productivity. The opinion of people holding CEO positions in high profiled organizations in this industry will provide me with a useful data for my thesis and it will help me approach my subject from an experts' point of view.

The interview is aimed to last about an hour and it can be done at a date and time of your preference. Discretion and anonymity is guaranteed, unless you want else. In the attached file you can see a brief description of the problem that my Thesis project examines. If you would like to have more information about my project you can contact me either via email at this present email address or via phone at (+46) 076 083 18 76. You can also validate the project work by contacting my supervisor, professor Christian Koch at Christian.koch@chalmers.se.

I would like to thank you in advance for your time and consideration, and I hope to hear from you soon.

My best regards

Georgios Pardalis

B2: Interview Questions

- How would you describe your managerial style?
- What is the level of your participation in the formation of this strategy?
- What is the greatest challenge you have faced in the position? How you have managed to deal with this challenge?
- Which three of your managerial skills do you value as the most important?
- Is there a time when you had to go against the company's policy? Why did you do that and how did you handle it?
- What big decision did you make recently? How did you go about it? Is there a decision that had to put off for a long period of time? Why did you do that?

- Can you give me an example of a situation where you had to make a decision without the input of key players, but knowing that these players would judge you on that decision?
- Can you tell me about a decision that you made, which you knew would be unpopular with a group of people. How did you handle the decision-making process and did you manage expectations?
- Describe a situation where you had to deal with an unexpected situation that led to setbacks in the function of your organization. How you have had approach this situation?
- Which decisions you make on your own and which require the management board's support to make? Have you ever had an argument with the management board? How did you handle it?
- When do you feel it is justified to go against accepted principles or policies? Have you ever gone beyond the limits of your position to make a decision?
- Which constraints are imposed on you in your current position and how you deal with these? Have you ever gone against those constraints?
- Describe a situation where you were able to influence others on an important issue. What approaches or strategies did you use?
- Describe a situation where you needed to inspire those working in the organization. What challenges did you meet and did you achieve your objectives?
- Describe a situation where you had to use different leadership styles to reach your goal. Is there a time that you felt less successful as a leader?
- What is the biggest challenge that you have faced in your career? How did you overcome it? Are there challenges that you foresee in the sector in the close future?
- Tell us about risks that you have taken in your professional or personal life? How did you go about making your decision? What is the biggest risk you have taken?
- What problems has one of your staff or colleagues brought to you recently? How did you assist them?
- What is your forecast about potential challenges that you as an executive will face in the future? A forecast for the challenges that the industry will face in the next few years?

APPENDIX C: Interviews with recruitment consultants and other experts

C1: Contact e-mail

Dear Sir/Madam,

I would like to ask you about the possibility of interviewing you as you are holding a position that makes you an expert in the Scandinavian construction industry. The interview will be used as a source of information for my Thesis project at Chalmers University of Technology.

My thesis deals with the investigation of strategic management competencies of top-level managers in the Scandinavian construction industry, and it examines how the managerial competences of top-level managers have an effect on the productivity in these organizations. The opinion of people that have a first hand experience, either as recruiters or researchers in this industry will provide me with a useful data for my thesis and it will help me approach my subject from a more comprehensive point of view

The interview is aimed to last about 40-45 minutes and it can be done at a date and time of your preference. Discretion and anonymity is guaranteed, unless you want else. In the attached file you can see a brief description of the problem that my Thesis project examines. If you would like to have more information about my project you can contact me either via email at this present email address or via phone at (+46) 076 083 18 76. You can also validate the project work by contacting my supervisor, professor Christian Koch at Christian.koch@chalmers.se.

I would like to thank you in advance for your time and consideration, and I hope to hear from you soon.

My best regards

Georgios Pardalis

C2: Interview Questions

- What is your opinion about the quality of top-level managers in the construction industry?
- According to your experience organizations in the construction industry deal with their top-level management needs internal or they address to recruitment agencies?
- To your opinion what are the traits that a top manager needs to have in the construction industry as it is today?
- When you are called to review the skills of a potential top-level manager, in which areas of his/her skills do you focus?
- What are the major strengths and weaknesses of top-level managers in the Scandinavian construction industry, according to your experience?
- To your opinion what are the four most important strategic competencies that a top-level manager should have in the Scandinavian construction industry?

- Do you believe there is a shortage of people capable for top-level management positions? How you justify your answer?

- What is your forecast about the challenges that top-level managers in the Scandinavian construction industry would face in the next few years?