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Over the past ten years, a series of contractors operating in Denmark, Norway and Sweden have slowly but surely expanded their markets beyond their previous single-country base towards operating in Scandinavia as a whole, and beyond. This expansion has been accompanied by a restructuring of company organisations and associated processes of competency development in senior management. This paper asks the question: How well is top level management prepared to manage and lead these large companies? The paper adopts a multidisciplinary theoretical approach combining international business, strategic management and HR concepts and approaches. Methodologically, a sample of the top level leaders of the hundred largest business units at some thirty Scandinavian contractors has been analysed. The focus is on the 400 top level managers in these organisations. On the basis of a desk study, an analysis of 124 managers from 18 companies has been carried out, providing insight into the basic education and mixing of competences in the top-level boards. More specifically, the areas of operations strategy and IT have been reviewed. The results show that even if the board is mainly composed of engineering competencies, business, legal and HR competencies are also present. Both engineer-dominated and mixed management boards are heading companies which show growth in turnover. This runs counter to a widespread sector perception that management boards in the construction industry are mainly composed of engineers. However, it seems that the managers with business administration competencies are rarely those with responsibility for the central tasks of leadership and strategy. Moreover, very few companies prioritize operations strategy and IT. It is assumed that everybody knows about practical building projects, and therefore that operations strategy will develop naturally. The IT area is viewed as best placed at a lower level of organisation, counter to IT governance and management prescriptions.

Keywords: strategic management, contractor, Scandinavia, competency.

INTRODUCTION

The unsatisfactory performance and development of productivity in the construction sector in Denmark, Sweden, Norway and internationally can be ascribed to a series of factors, the fragmentation of the industry being one. There are however indications that the lack of strategic management competencies among the large contractors is one of these factors (Xia et al 2009) - an element which is under-researched.

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Koch C and Buhl H (2013) Strategic management competencies in Scandinavian contractors *In:* Smith, S.D and Ahiaga-Dagbui, D.D (Eds) *Procs 29th Annual ARCOM Conference*, 2-4 September 2013, Reading, UK, Association of Researchers in Construction Management, 645-654.

Corporate management is being challenged by a series of complex issues, and it is apparently common practice to compose management boards with a mixed set of competencies, both among companies generally (Adams et al 2010, Dilling-Hansen 2009, Keller 2009, Wagner 2011) and among contractors. Experience with operations is sometimes emphasised as an important competency at board level (Löwstedt 2012). The makeup of the corporate management and its role in other sectors has been studied in a number of disciplines where economics are particularly important (Adams et al 2010, Dilling-Hansen et al 2009, Hitt and Ireland 1985, Wagner 2011). As this paper represents one of the first steps towards creating a research agenda, the approach adopted here is however open to many possible results on and to more approaches to the role of corporate management.

The aim of the present paper is therefore to investigate Scandinavian contractor's corporate management strategy competencies by

- identifying constellations of competencies in corporate management in Swedish, Norwegian and Danish contractors
- analysing possible indications of links to good performance among the contractors.

The empirical focus is on building contractors from Denmark, Norway and Sweden, and companies which span these and other countries, known here as Multinational Nordic Companies (MNCs). NACE group codes are used, under which the building sector contractors fall into three groups: 'Construction of buildings' (group code 41), which encompasses general contractors, 'Civil engineering' (42), who are contractors constructing bridges, tunnels and public infrastructure, and 'Specialized construction activities' (43), technical contractors involved in installation work.

By developing statistically-based evidence on the composition of boards, our understanding of the role of corporate management in construction contractors can be significantly improved. However, such knowledge has clear limitations in terms of understanding strategic processes and experiential competency development. The underlying idea of the material developed and presented here is therefore to create a research agenda on the strategic development of contractors in Scandinavia.

The paper is structured as follows. Firstly, the theoretical framework is developed, followed by the empirical and analytical methodology. A description is then presented of the data found. This is analysed in the case studies section, and in the discussion, which also suggests some elements of a future research agenda. The paper closes with a conclusion.

THEORETICAL FRAMEWORK

A number of scientific disciplines have studied and conceptualised the contribution of the upper echelons of management to the competitiveness and performance of companies (Acquaah 2003, Adams et al 2010). These include the areas of industrial economy, strategy (Acquaah 2003), econometrics, law, accounting, sociology and psychology (Adams et al 2010). Other approaches, on the other hand, downplay or even dismiss the very idea that management can make a difference. The former would include the organisational politics approach, which underlines the fragmentation into coalitions of managers and employees, often with limited power (Pettigrew 1985), while the latter includes the evolutionary approach, which points to market and structural factors as explanations for enterprise development (Aldrich 1979). An often adopted approach in favour of some influence by managerial action is the resource-

based view (De Wit and Meyer 2010). This approach identifies a number of factors contributing to competitiveness and performance, listing senior management capabilities as just one among many (Acquaah 2003, De Wit and Meyer 2010). The factors listed include a resource base of tangible and intangible resources, 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, management competencies are understood to comprise a blend of personal skills, practice, attitude, basic formal education and later vocational training (De Wit and Meyer 2010, Mintzberg 1973, Wilson et al 2006). This implies that management competencies are usually built up through years of practical experience, in which basic education may form a basis and/or a point of departure. Moreover, when it comes to practising strategy, the scarce amount of empirically-based literature on strategic processes among contractors suggests that these are formed continually over longer periods of time (Löwstedt 2012). In the general literature on strategy processes, it has been established that is usually the higher echelons of management who are active in these processes (Jarzabkowski and Spee 2009), and only to a limited extent middle managers, and rarely other employees (Friis 2012, Mantere 2009).A number of studies of company performance and competitiveness have adopted the resource-based view, investigating a long series of possible contributory factors. These emphasise the strengths of mixed corporate management and/or boards of directors with managers from various different backgrounds (Acquuah 2003, Adams et al 2010), together with the role of incentives for the CEO (Adams et al 2010), 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, Søderberg & Vaara 2003).

However, the idea that management competencies are important contributors to company development is not uncontroversial. Acquaas (2003: 78), based on his survey, is completely confident that "corporate management capabilities significantly influence the sustainability of a firm's abnormal (high) profits", while others (Cheah et al 2007, Dilling-Hansen et al 2009) do not share this conclusion. Dilling-Hansen et al (2009:398) thus conclude, in an econometric study of a large sample of Danish firms, that "it shows no effect of the educational level of top management on performance". Neither are there demonstrable effects from external networking (relational capabilities) (Dilling- Hansen et al 2009:398). Cheah et al 2007 analysed 12 Chinese building contractors and found no support for senior management capabilities being important, while they found that external networks were (Cheah et al 2007:35).In a similar vein, it has been continually debated whether certain managerial areas should be represented or not on the top-level management board. There is a tendency for areas such as operations (Hammer 2004), human resources, accounting, sourcing, and IT all advocate their presence at the top level (Weill & Ross 2009).

There are also studies indicating the importance of project and programme management competencies as vehicles for the delivery of strategy in organisations (Crawford 2011). However, studies of project-based companies and their vertical relations often claim that there is a poor correlation between strategic management and operational (project) management (Ekstedt 1999, Koch 2004). This is mirrored in the emphasis on project management as being important for contractors - something

that Cheah et al (2007) set out to demonstrate, but are unable to establish, and the importance of operational practice among strategic managers (Löwstedt 2012).

To summarise in the context of Scandinavian contractors, the need for strategic management competencies can both be supported and questioned, which provides the starting-point for our explorative empirical investigation. The theoretical framework, too, underlines the fact that the basic education of top level managers, and the composition of the board, whether mixed or monolithic, provide but two possible contributors to corporate competitiveness and performance.

METHOD

The focus here is on the empirical method, which is based on an interpretivist approach. The study covers large Scandinavian contractors, measuring the quantitative representation of educational backgrounds in boards of directors, including CEOs. The gross sample consists of 93 contractor companies: 17 Danish, 26 Norwegian and 23 Swedish companies, and over-layering these, 27 Nordic multinationals. Desk research using web resources such as www.largestcompanies.com initially helped to determine that these companies have 389 managers at board level (see below), of whom a smaller sample of 124 was studied through the web with regard to their educational backgrounds, drawing on publicly-available data such as CVs and personal profiles on company websites. The delimitation of this sample followed these steps: Firstly, it was assumed that the larger companies would be the market leaders in terms of strategy; limitations of resources prevented us from examining small and medium-sized companies, or including consulting engineers or architectural firms. 'Large' was defined as a company with turnover in excess of SEK 1 billion (EUR 113 million) in 2010. The number of employees was also taken into account. Secondly, choosing Scandinavia (Denmark, Norway and Sweden) allowed the authors to access national language material in their desk research. Thirdly, contractors active in the construction industry were understood to cover some of the largest general, earthworks, civil engineering and technical contractors (installations, HVAC), using the NACE sector group codes 41, 42 and 43: ‘Construction of buildings’ (41), ‘Civil engineering’ (42), and ‘Specialized construction activities’ (43).

Since regulatory frameworks in the three countries distinguish between public liability companies, i.e. shareholder companies, and listed public liability companies having shares traded on the Nordic Stock Exchange, this distinction was maintained when gathering data (public liability companies are abbreviated to AS in Norway, AB in Sweden and A/S in Denmark; listed public liability companies are abbreviated as ASA in Norway and AB (publ.) in Sweden, and are designated “listed” A/S in Denmark).The company sample was initially generated using the website "largestcompanies.com" (Largestcompanies 2012), which encompasses data for 100,000 Nordic companies and enables national comparisons. The sample revealed that a group among the largest companies comprised multinationals cutting across all three national markets, with their primary markets in (all) the Nordic countries, and/or having their corporate headquarters there. This group consists of six complex multinational corporations, organized in a large number of shareholder companies (often more than 100 companies per multinational). An evaluation of the corporate structure led to an interpretation of them as 27 primary shareholder companies, (all with a CEO, board of directors and management board) which are interpreted as important decision-making units in the corporate structure. These include holding companies, as well as units with a turnover exceeding SEK 1 billion and many

employees. 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. The sample thus consists of 93 legal units/companies: 17 Danish, 26 Norwegian and 23 Swedish,. The 27 Nordic multinationals encompass 6 units in Denmark, 7 in Norway, and 14 in Sweden. The sample is comprehensive as all company units with a turnover exceeding SEK 1 billion in the three sector groups have been covered. In the sample, four Norwegian companies are listed as shareholder companies with special obligations (ASA), while the rest are ordinary shareholder companies.

Three Swedish companies are listed as companies with shares traded on the Nordic Stock Exchange. No large Danish contractors are listed on the stock exchange. For each company, data were gathered on the board of directors, i.e. the CEO and other management board members. A range of material was used including annual reports, research studies and media coverage. For each country, specialized websites were used – e.g. for the thousand largest Danish enterprises – together with websites with information on professionals in Danish, Norwegian and Swedish contractors (proff.dk, proff.no and proff.se). Desk research utilized triangulation (Bryman and Bell 2007) and included both quantitative and qualitative company data. Delimitations similar to those applied to multinationals were necessary in the case of many other investigated companies, in order to determine which units should be counted in a company structure with many shareholder companies and many CEOs, directors and boards. Here, the criteria applied were centrality, turnover and the number of employees. This method has its limitations – for example, using Scandinavia rather than the Nordic countries as the area of study excludes Iceland and Finland. Since almost all of the multinationals also operate in Finland, we label them Nordic multinationals. Another limitation relates to lifelong education for the boardroom. The material used here does not cover more than basic education. Finally, the particularities of corporate governance in Scandinavia are not discussed.

THE CONTRACTORS AND THEIR TOP LEVEL MANAGERS

Table 1 shows the distribution of companies in the NACE groups 'Construction of buildings' (41), 'Civil engineering' (42), and 'Specialized construction activities' (43). It is characteristic that a lot of companies span over more than one type of contracting, for example also including real estate in their business model. The MNCs, in particular, are conglomerates of markets, products and capabilities. The "legal" sector placement is therefore just one way of describing the companies.

Table 1: Company origin and sector

Country | Sector:	Cross	Group 41	Group 42	Group43
Denmark		2	1	1
Sweden		1	1	1
Norway		3	3	1
Nordic Multinationals	4			

The sample encompasses 18 companies, of which four are Nordic multinationals (MNCs) or mega-companies operating in all three Scandinavian countries, and across the three sectors and beyond. In these 18 companies, 124 managers were identified whose educational level could be entered in the table below:

Table 2: Educational background of top level managers

Education	Number
Engineer MSc	44
Engineer MSc and MBA or business training	6
Engineer BSc	21
Craftsman	1
Business administration MSc	28
Law MSc	8
Academic, others	11
BA and Non-academic	5
Total	124

In all cases, it is the most recent education that counts. The category of 'non-academic engineer', i.e. technician, was included in the search but did not produce any hits. Among the social science graduates, it appears that most occupy dedicated specialist positions. The eight law graduates, for example, encompass the position equal to chief legal officer, or work in organisation and communication, whereas only one occupies a position as a line manager. We found three Chief Operation Officers (COO's) and no IT managers among the management board members. Usually, IT management was located immediately beneath the top level. Engineering managers typically have long careers behind them, often starting at the building site. As an example, one CEO from a MNC originally trained as a carpenter. He was 26 years old and engineering student when he was joined the company of which he is now CEO. When he graduated as a construction engineer (MSc) two years later he began work as a site manager, and over the next twelve years he occupied the positions of quantity surveyor, project engineer and regional manager. He then made a major career move by becoming CEO of another large building contractor. In this position, he participated in a management training programme in the US. However, after six years in this position he returned to the "original" company, serving as country manager for seven years before becoming CEO. Another example is the CEO of a national company in a MNC company. He graduated as a construction engineer (MSc), and then began as a single contractor manager. He then became site manager and later project manager at a large joint venture with other contractors, before returning to the company and later becoming CEO. It may be noted that the main similarity between these two examples is their long-term, on-site experience, while the main difference between them is that one started out as a craftsman, whereas the other began as an engineer. The first CEO is one of three managers in the sample who stated their background as 'craftsman', whereas the other 121 had other career patterns (they are entered above according to their most recent qualifications).

Table 3: Educational background of CEOs

Education	Number
Engineer MSc	6
Engineer MSc and MBA or business training	1
Engineer BSc	4
Craftsman	0
Business administration MSc	4
Law MSc	0
Academic, others	
BA and Non-academic	3
Total	18

On the basis of the 18 firms one can identify some characteristic constellations of managers. Firstly, it appears that there is a predominance of technically-educated construction engineers in large groups of firms. In this type it appears that business administration graduates play a more peripheral role. This seems to be the case in seven companies. Secondly, some companies appear to mix competencies: engineers, engineers with management education, and business administration graduates of various kinds. This seems to be the case in seven companies. Thirdly, there are some companies in which business administration-educated managers have come to dominate. This seems to be the case in four companies, some of which have for example a business administration graduate as CEO. Table 4 juxtaposes these types. When we compare trends in turnover for 2009, 2010 and 2011, some companies have experienced what appear to be national market upturns and downturns - a flux that does not appear to be due to the individual company's actions and/or management: 2009 was a bigger market, and 2010 and 2011 provided new growth. This pattern appears to have impacted 8 firms.

Table 4: Management Board composition

Engineer Dominated	Mixed	Business	Admin.
7	7	4	

Another group had continual growth over the three years, a third group experienced decline, and a fourth global upturns and downturns (flux) which were not only Nordic. Table 5 compares the trends in turnover with the management board composition types, we obtain the pattern showed below. This table gives a small hint as to whether a particular composition provides better performance. The result here seems to indicate that both an engineer-dominated board and a mixed board contribute in some way to the most positive trends in turnover, while all three types are involved in companies that follow national market upturns and downturns. Read strongly, there is a hint that management boards with business administration graduates are more inclined to follow the market trends.

Table 5: Turnover and management board composition

National Market Flux	Increase In turnover	Decrease In turnover	Global Market Flux
8	8	1	1
2 Eng	4Eng		1 Eng
2 Mix	3 Mix	1 Mix	
4 Adm	1 Adm		

(Eng = Engineering dominated, Mix= Mixture, Adm= Business administration)

DISCUSSION

The MNCs are conglomerates of markets, products and capabilities. This is a finding similar to that of Cheah et al. (2007), who in a Chinese context show the importance of these profiles, yet with a further differentiation. It was a premise for the investigation that basic education is merely an element in strategic management competencies, and the study also support that assumption. The educational backgrounds of top level managers with a social science education encompass degrees in economics, business administration and law. Quite a large number of these occupy specialist functions in management boards, such as chief financial officer, chief legal officer or communications manager. One cannot, however, infer from this ranking that business administration-educated managers are unimportant in board level strategy-making. At least one chief financial officer in the sample exerts a great deal of influence on the firm's strategy, and more generally it would depend on the kind of collaboration and teamwork exercised by the board of management (Adams et al 2011). There does however seem to be a smaller group of business administration-educated managers who occupy line management positions. This gives them direct responsibility for a value-creating product area and probably more direct influence on strategy making. The CV examples indicate that engineers who enter contracting companies at site level and remain with the company for a long period of time initially develop competencies in construction project management, and later, when they become department or regional managers, are likely to become involved in strategy development processes, and thereby build competencies in that area.

By contrast, some of the social science graduates also received a basic education in strategy, and would be able to build upon that. Others, such as law graduates, would probably not. There are thus indications that basic education is combined with practice over a long period. Gradually increasing participation in strategic development is a likely career path for these managers, whether they come from an engineering and or social science background. All of the MNCs in the sample prioritized having top level managers from different countries, and some also practised mixing the national boards of managers with several nationalities. However, these were for the most part just one or two representatives, along with many national representatives from the country in which the company headquarters were located, and where the company has its historical roots. Very few (three) companies prioritized operations in the gtop level management board by appointing a Chief Operations Officer. It could be argued that it is assumed that everybody knows about practical building projects, and therefore that operations and operations strategy will develop naturally, which could be said to be in line with Hammer's (2004) advocacy of a strong link between top and bottom. The

counter-argument is that operational experiences could hamper strategic development processes (Löwstedt 2012).

Similarly, we found no IT managers at the top level. The IT area appears to be viewed as being best placed at a lower level of organisation, counter to IT governance prescriptions (Weill and Ross 2009). This paper has taken the first steps towards developing an understanding of the strategy competencies of Scandinavian contractors, and it provides elements for the creation of a research agenda. Firstly, it is likely that a larger data set would improve the picture of competencies and backgrounds. A survey would also enable a more precise analysis of the strategic competencies, as well as of the possible links between management competencies and enterprise performance. Combining this with qualitative methods, it would be possible to analyse the importance and role of experiential competency development and thereby acquire an understanding of strategy processes and globalisation in Scandinavia and beyond. We have found indications of the internationalisation of management boards, in the sense of presence of managers from several countries. Søderberg and Vaara (2003) suggest that the formation of a new layer of managers in Scandinavian companies is a rocky process, and qualitative approaches could investigate that for multinational Scandinavian contractors.

CONCLUSIONS

The aim of this exploratory paper was to identify constellations of competencies among the corporate management of Swedish, Norwegian, Danish and Nordic Multinational contractors, and to analyse possible links to good performance among these contractors. We have found that the companies exhibited a diversified set of activities, enhancing the need for strategic management. There was a diversity of educational backgrounds among the sample studied, indicating that the predominance of engineers in the management of contractors was less pronounced than expected. We identified three stereotypical versions of board composition: the engineer-dominated, the business administration-dominated and the mixed. We found indications that engineer-dominated or mixed boards are performing better than business administration-dominated management boards, which deserves further investigation. We suggest using mixed methods with more, and more precise, data, and performing qualitative studies of strategy processes and management boards.

REFERENCES

Acquaah, M. (2003) Corporate Management, Industry Competition and the Sustainability of Firm Abnormal Profitability. Journal of Management & Governance, 7(1), 57-85.

Adams, R.B., Hermalin, B.E., Weisbach, M.S. (2010) The role of boards of directors in corporate governance: A conceptual framework and survey. "Journal of Economic Literature". 48 (1), 58-107.

Aldrich, H. E. (1979). Organizations and Environments. Englewood Cliffs. Prentice-Hall.

Bryman, A. and Bell, E. (2007) Business research methods, Oxford University Press, Oxford.

De Wit B. and Meyer R. (2010) Strategy Synthesis. Cengage Learning. Andover.

Cheah C.Y.J., Kang J. & Chew D. A. S. (2007) Strategic analysis of large local construction firms in China. Construction Management and Economics. 25 (1), pp. 25-38

Crawford, L. (2011) Fitting project management capability to strategy. 8th Annual Project Management Australia conference: Project management at the speed of light. Sydney.

Dilling-Hansen, M., Madsen, E.S., Smith, V. (2009) Top management, education and networking, in Bjuggren P-O., Mueller D. C. (eds)The Modern Firm, Corporate Governance and Investment. Edward Elgar Publishing. Massachusetts.

Ekstedt, E., Lundin, R.A., Soderholm, A.,Wirdenius, H. (1999), Neo-Industrial Organising: Renewal by Action and Knowledge Formation in a project intensive economy. Routledge, London

Friis, O. (2012) Strategy-as-Practice – Involving Employees. Ph.D. Thesis Aarhus University.

Hammer, M. (2004) Deep Change. How Operational Innovation Can transform Your Company. "Harvard Business Review" april.

Hitt, M.A. and Ireland, R.D. (1985) Corporate distinctive competence, strategy, industry and performance. "Strategic Management Journal", 6(3), 273–93.

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.

Keller, G. F. (2009) Assessing the impact of management practices on corporate performance in southeast Wisconsin. Ph.D. Dissertation. NorthCentral University. Prescott Valley.

Koch C. (2004) The Tyranny of projects - Teamworking, Organisational Knowledge and Project Management in Consulting Engineering. "Economic and Industrial Democracy", 25(2), 270-292

Lahti A (2010) Globalization & the Nordic Success Model. Ventus Publishing. Bookboon.com.

Largestcompanies (2012) website Largestcompanies.com accessed in spring 2012.

Largestcompanies (2013) website Largestcompanies.com accessed in spring 2013.

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.

Mantere, S. (2005) Strategic practices as enablers and disablers of championing activity. "Strategic Organization", 3(2), 157–284.

Mintzberg H. (1973) The Nature of Managerial Work. Harper and Row. New York.

Pettigrew, A. M. (1985) The Awakening Giant: Continuity and Change in ICL. Basil Blackwell, Oxford

Søderberg A.M., Vaara E. (2003) Merging across borders: people, cultures and politics. Copenhagen Business School Press. Copenhagen.

Weill P., Ross J.W. (2009) IT Savvy: What Top Executives Must Know to Go from Pain to Gain. Harvard Business Press. Boston.

Wagner, A.F. (2011) Board independence and competence. "Journal of Financial Intermediation". 20(1), 71-93.

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

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.