Corporate Governance as a source of competitiveness for Nordic firms

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Corporate governance as a source of competitiveness for Nordic firms

- Causes and effects of board diversity among Nordic publicly traded firms
- Case analysis of nine Nordic firms from four Nordic countries
- 2001-2007: Except for Norway, relatively small changes in board diversity among the Nordic firms

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Corporate governance as a source of competitiveness for Nordic firms

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Abstract:
This project addresses the causes and effects of board diversity among Nordic publicly traded firms. For the period the 2001-2007 our data reveals, with the exception of Norway, relatively small changes in board diversity among the Nordic firms. Based on a case analysis of nine Nordic firms from four Nordic countries, we report in Chapter 2 that the case companies adopted a reactive rather than proactive approach to the recruitment of diverse board members. Furthermore, the same pattern is evident in Chapter 4, as we find statistical evidence to the general notion that board diversity is (still) primarily driven by the firms' need for legitimacy, rather than by the potential benefits associated with heterogeneous boards. Measuring board diversity by gender, nationality and age dispersion we find that companies with diverse boards generally perform better than companies with homogenous boards in terms of firm value, return on assets and growth (Chapter 3). However, the performance differences are not statistically significant when controlling for other relevant variables. Chapter 5 addresses factors driving the internationalization of boards. We find that financial competencies called for by the internationalization of firms positively affect board internationalization, whereas the degree of the internationalization of a firm's commercial operations seems to have no impact on the internationalization of the board (Chapter 5). Long tenure of a board seems to work as a barrier to internationalization of it. Finally, we find that foreign and female board membership is associated with higher CEO pay levels among Nordic firms in 2006, whereas female remuneration committee membership is associated with lower CEO pay (Chapter 6). However, the only diversity measure significantly affecting CEO pay growth over time – is the internationalization of boards.

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EXECUTIVE SUMMARY

The purpose of the project was to:

1. Provide Nordic firms with a deeper understanding of the direct and indirect performance effect of various corporate governance mechanisms. We address board diversity (gender, age, education, nationality), board nomination committees, management incentives (CEO pay) and ownership structure.

2. Provide Nordic regulators (both Stock Exchanges and Governments) with a better basis for decisions-making on various corporate governance issues; such as exchange listing requirements, corporate governance code recommendations, information disclosures, and top management incentives (stock options etc.).
3. Provide owners, and board nomination committees, with a better basis for recruitment of board members.

This study has achieved this aim by:

1. Identifying underlying mechanisms for evolution of board diversity based on nine in-depth case-studies (Chapter 2).
2. Addressing the causes and effects of board diversity as it relates to the effects of board composition (Chapter 3), motivation for board diversity (Chapter 4), factors driving board internationalization (Chapter 5), and the effect of board and remuneration committee diversity on top management pay (CEO) in Chapter 6.

Method

We base our analysis on a uniquely collected database of between 431 and 757 (depending on year) publicly traded firms with firm-year observations from 2001 to 2007 – as described in section 1.3. We use a number of econometric techniques to support our findings - as described in the individual chapters. In addition we also perform in-depth cases studies of nine Nordic firms (chapter 2).

Chapter 2: Corporate Governance and Global Competitiveness

The nine companies originating from four Nordic countries operate in different legal and institutional environments. For example, in Norway a quota for gender representation on the board is in place. Despite these differences across countries, all the case companies have internationalized and diversified their boards rather simultaneous in the 1990s. Our analysis suggests that the case companies adopted a reactive rather than proactive approach to the recruitment of board members. In other words, they were already operating in particular geographical regions when the need to possess specific market knowledge, or personal relationships emerged.

The interviewees emphasized various, non-visible dimensions of diversity such as cognitive, experiential and linguistic competence in contrast to nationality, age or gender. Yet, foreign or female board members were seen to carry important signaling effects, both externally and internally within the firm. Their board membership was regarded as evidence of an 'open career path' up to the board. The case studies also point to a number of barriers that prevent, or slow down, the process of increasing board diversity and internationalization. These include factors such as, long physical distance to "commuting" board members, the local national languages and internationally low board remuneration.

Chapter 3: Board Diversity and Corporate Economic Performance

Nordic corporate boards are becoming increasingly diverse as a consequence of legal changes, globalization and social trends. We analyze the implications of board diversity for the economic performance of publicly listed Nordic companies 2001-2007. Measuring board diversity by gender, nationality and age dispersion we find that companies with diverse boards generally perform better than companies with homogenous boards in terms of firm value return on assets and growth. However, the performance differences are not statistically significant when controlling for other relevant variables like firm size and internationalization, ownership structure, time and country effects. Altogether the lack of significance does not mean that there are no positive effects of board diversity. In fact a significant correlation between board diversity, all else equal, supports the existence of such effects.

The main finding from Chapter 4: Paths to Gender Diversity

This paper analyzes female board representation in four Nordic countries over the 2001-2007 period. We show how the increasing institutional pressure for stronger female representation influenced female appointments on boards and what other firm-specific factors contributed to higher gender diversity. In particular, we explore how different dimensions of board diversity interact with each other. We provide supporting evidence to the general notion that board diversity is (still) primarily driven by a need for firm legitimacy, rather than by the potential benefits associated with heterogeneous boards.

The main finding from Chapter 5: Internationalization of the Firm and its Board

In this chapter we study the internationalization of corporate boards. We apply panel study methodology when analyzing 559 firms from four Nordic countries in 2001-2007. We find that financial competencies called for by the internationalization of the firm positively affect board internationalization, whereas the degree of the internationalization of a firm's commercial operations seems to have no impact on the internationalization of the board. We find that the higher the number of national board members with international experience, the higher is the number of foreign board members. A significantly positive impact is also found for foreign ownership; the higher such ownership of a firm, the higher is the number of foreigners we can expect on the firm's board. The number of foreigners on the nomination committee is found positively related to the number of foreigners on the board. The only variable that is found with a significantly negative impact on the prevalence of foreigners on the board is the average board tenure. The negative impact is here interpreted as reflecting conservatism and potential communication difficulties due to language problems.

The main finding from Chapter 6: Board Diversity and CEO Pay

In this chapter we address how board diversity affects CEO pay in Denmark, Finland Norway, and Sweden. We find that foreign and female board membership was associated with higher CEO pay levels in 2006, whereas female remuneration committee membership was associated with lower CEO pay. The annual growth in CEO pay between 2005 and 2007 – limited to Norwegian and Swedish firms - reveal that internationalization of the board enhances pay, whereas the level of female board membership and age diversity do not significantly alter CEO pay growth.

PREFACE

This research report is a first attempt at empirically addressing the effect of board diversity and corporate governance in a cross-Nordic setting. We started the project during the fall of 2006 and this report was finished during the winter of the financial crisis of 2008/2009. We acknowledge the support from Nordic Innovation Centre and our respective research institutions.

This report is a joint effort – but we recognize the great contribution by all our participants. The descriptive Chapter (1) benefits from all participating countries. The case Chapter (2) was put together by Rebecca Piekkari and Taru Vesanen (also responsible for the Finnish cases), based on case reports from Denmark (by Jette Steen Knudsen, Steen Thomsen and Kristian Jacobsen), Sweden (by Lars Oxelheim and Rebecca Piekkari), and Norway (Trond Randøy and Kristin Wallevik). The remaining Chapters 3-6, are co-authored by the authors of this report. However, the lead author of Chapter 3 is Steen Thomsen, the lead author of Chapter 4 is Aleksandra Gregoric, the lead author of Chapter 5 is Lars Oxelheim, and the lead author of Chapter 6 is Trond Randøy

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CONTENTS

1. Introduction

1.1 Background

Based on the recent financial turbulence – with the financial development in Iceland being the extreme case in a Nordic perspective – a number of policy makers have called for revision of the corporate governance system. Corporate Governance – the control and direction of companies by owners, boards and other mechanisms– is a key determinant of company performance. However, little solid evidence exists on these issues in a Nordic context – and this is one of the major motivations behind this project.

Despite the apparent challenges of globalization, our descriptive statistics reveal that Nordic boards have changed considerably over the last five years. However, with the exception of Norway, Nordic boards are still predominately composed of national men, age around 50+ with an education in economics and business, law or engineering. In Chapter 3 we examine whether international board membership and increased board diversity can become a source of competitive advantage for Nordic firms? It is often argued in the public debate that better corporate governance could stimulate innovation, growth and internationalization – and thus create long-term value for owners and society. The project tests the validity of these assumptions as a cornerstone for a future-oriented strategy for Nordic firms.

The role of the corporate board has come into question in many countries, and specifically the role of board diversity. Whereas the Conference Board, and other institutions concerned about corporate governance, emphasize that board diversity should make sense from a shareholder point of view, others would emphasize that diversity is a goal in itself[1]. A fierce debate has emerged in the Nordic countries concerning the pros and cons for increased gender diversity and about the potential role of politicians/regulators in achieving it. This makes the region particularly interesting for empirical testing of the effect of board diversity. Furthermore, the political implications vary extensively across the region. In Norway the equity argument has become law, and Norwegian public firms (The "ASA"-firms) are required to have a 40% minimum board representation (among shareholder appointed, not employee elected, board members in boards with four or more members) from each gender since the end of 2006 – with deregistration being the penalty if this was not implemented by the end of 2007. We specifically address the issue of board diversity as it relates to gender (Chapter 4) and internationalization (Chapter 5). Furthermore, we also look at the impact of board diversity on CEO compensation among the Nordic countries (Chapter 6).

1.2 Characteristics of the Nordic board

Board structure in the five Nordic countries has many common features. While company law in all five countries prescribes that there must be both one or more responsible managers ("direction" of at least three persons in Danish, one person in Norway; the "administrerende direktør" and one person in Sweden, the "verkställande direktör") and a board ("Bestyrelsen" in Danish, "styret" in Norwegian, "hallitus" in Finnish and "styrelsen" in Swedish). In Finland it is also legally one

[1] Bilimoria, D. and M. Huse,. 1997. A qualitative comparison of the boardroom experience of U.S. and Norwegian women directors. International Review of Women and Leadership 3 (2); 63-76.

person presenting the management – but the top management is commonly referred to as a management board – or "johtoryhmä" in Finnish. Company law requires that some larger companies also have an additional board, such as "bedriftsforsamling" in Norway or "hallintoneuvosto" in Finland. This implies that Nordic boards have been described as both one-tier and two-tier, and even semi-two-tier boards. The Swedish corporate governance code also describes the Swedish board as in between the one and two-tier paradigms. Despite some of the formal differences, we can see from our descriptive statistics that these boards – sometimes referred to as supervisory boards (the non-executive board) - share many of the same characteristics. Furthermore, our case studies (Chapter 2) reveal that these boards share many of the same challenges and that they also function rather similar in terms of meeting frequency and responsibility.

The tradition of strong owners is reflected in the composition of supervisory boards, which are quite strong (independent) vis-à-vis managers and composed of mainly non-executives. CEO duality is not allowed by law. Instead, board directors mostly are elected by majority shareholders. Thus, the management is in charge of the day-to-day business of the company, while the board monitors, hire/fires and must approve all major decisions – sometimes with the additional monitoring of the secondary supervisory board (for example the "bedriftsforsamlinget" in Norway).

Table 1.1 shows the composition of boards in publicly traded firms in the Nordic area. These figures are based on the uniquely collected data in this project, and represent the years 2001-2007. With one exception, the increases in female board membership in Norway, the composition of the boards has changed slowly over time (see Table 1.2). The largest boards are found in Finland (average size 7.03 members) and the smallest (6,38) in Denmark. In fact, all the Nordic boards must be considered small in an international context. For example a recent study of German firms shows an average board size of 16.75[2]. Among US based publicly traded large firms the average board size was just over 10 in 2004, and 6.5 for small public firms.[3]

The cross-country difference in average age is small. The youngest boards are found in Norway, and this observation can partly be explained by the gender quota, as new entering female board members are younger then the men they replace. This tendency of younger female members is also present in other Nordic countries, but the largest difference exists in Norway – where female members are on average 46.3 years old. The recent influence of more female members in the Norwegian board has also affected average board tenure – which is lowest in Norway (3.25 years) and highest in Denmark (5.88). However, worth noting is how much lower the average tenure of females is as compared to that of male members in all the Nordic countries.

Table 1.1: Board (members') characteristics (2001-2007 figures)

	Average board size	*Average age board*	*Median age board*	*Average age females*	*Average tenure board*	*Average tenure females*
DENMARK	6.38	54.4	54.8	48.51	5.88	3.97
FINLAND	5.97	53.72	54.28	51.32	5.14	3.34
NORWAY	6.46	50.22	50.14	46.34	3.25	1.62
SWEDEN	7.03	53.60	54.07	49.87	4.36	2.74

[2] P. Fizz. 2006. Social influence effects and managerial compensation evidence from Germany. Strategic Management Journal 27: 1013-1031.

[3] James S. Linck, Jeffry M. Netter, Tina Yang, The determinants of board structure, Journal of Financial Economics, Volume 87, Issue 2, February 2008, Pages 308-328

Table 1.2 shows the evolution of female board members in publicly traded firms in Nordic countries. In Denmark the change in female board membership has been extremely small – with, in fact, 2006 being the year with the lowest female board percentage. Finland and Sweden, on the other hand, show a clear trend of increased female board membership. Norway is a special case in terms of female board membership. In all years, also before the gender quota was announced in 2003, the percentage of female directors has been higher in Norway than in other Nordic countries.

Table 1.2: Percentage of females on boards (unbalanced sample)

	2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
DENMARK	7.93	8.03	7.50	7.40	7.13	6.85	7.82
FINLAND	4.63	4.48	5.48	7.21	7.95	10.10	11.60
NORWAY	8.45	10.89	13.10	15.52	21.12	29.46	39.07
SWEDEN	6.71	7.12	10.49	15.39	15.76	15.93	18.40

Table 1.3 shows the share of foreign board members in publicly traded firms in Nordic countries. Even though there has been a trend of more foreign board members in all countries during 2001-2007, the change has been relatively small (from 6-11% in 2001 to between 9-14% in 2007). The high increase in foreign board membership in Norway is partly associated with the gender quota, as new female members are more likely to be non-nationals.

Table 1.3: Percentage of foreigners on boards (unbalanced sample)

	2001	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
DENMARK	6.52	6.00	6.09	7.00	8.59	9.64	9.50
FINLAND	7.40	8.38	7.90	9.40	9.30	11.56	13.70
NORWAY	10.63	8.50	9.33	10.76	13.53	14.58	13.94
SWEDEN	7.15	6.99	8.09	9.14	9.14	9.02	9.90

Table 1.4 shows the board members' education among publicly traded firms in the Nordic countries. Again we see relatively similar patterns among the Nordic firms. The highest percentage of board members without a formal education is found in Denmark, whereas the lowest percentage is found in (Finland). The level of technical education is very similar throughout (between 21-26%). The number of board members with law degrees is highest in Denmark (15%) and substantially lower in Sweden (5%). The number of board members with economics or business degrees is also rather similar – with the exception of Denmark at 36%.

Table 1.4: Board members' education (year 2007)

	Economics & Business	*Law Education*	*Technical education*	*No high education*
DENMARK	35.73	14.73	23.02	16.39
FINLAND	44.33	9.35	25.92	9.34
NORWAY	47.99	8.38	21.14	14.22
SWEDEN	48.27	4.71	21.04	11.38

Table 1.5 shows the level of independent directors, employee representative, and the percentage of firm with no international experienced board members. The number of independent directors varies between 54% in Sweden and 66% in Finland. However, part of this variation is driven by differences in the corporate governance codes, and the fact that the number of employee directors vary considerably (such directors are by definition considered non-independent). In Norway and Denmark the number of employee elected members is 15% and 14% respectively, whereas the figures for Sweden is 7% - and only 1% among our Finnish sample firms. With respect to boards without international experience (either through studies or employment), we see that Finland had the largest number of such boards (19%) – and Norway and Sweden the most international experienced boards.

Table 1.5: Other board members characteristics (year 2007)

	Percentage of independent[4] directors	***Percentage of employee representatives***	***Percentage of firms with no international experienced board member[5]***
DENMARK	60.61	15.38	16.41
FINLAND	66.13	1.00	19.48
NORWAY	63.90	14.07	8.70
SWEDEN	54.20	8.69	8.99

Table 1.6 shows the characteristics of various board committees among publicly traded firms in the Nordic countries. This time we see very different national patterns among the Nordic firms. Particularly Denmark has few companies with either audit, remuneration, or election committees. It is particularly Sweden that has a large number of committees; 41% have a audit committee, 56% a remuneration committee, and 79% have a election committee.

[4] Independence as defined by each country's Governance Code.

[5] International experience refers to international education, international board or international working experience.

Table 1.6: Board committees (2007)[6]

	% of boards with audit committee	*% of boards with remuneration committee*	*% of boards with election committee*
DENMARK	9.32	12.02	3.60
FINLAND	53.5	55.03	42.90
NORWAY	24.43	39.97	67.56
SWEDEN	41.38	56.38	79.33

Table 1.7 shows key board characteristic among a sample of 26 Icelandic publicly traded firms. The small number of sample firm, and lack of 2007 numbers, made us reluctant to compare these figures to the other Nordic boards. We therefore found it appropriate to report this in a separate table. The Icelandic boards are a little smaller than that of other Nordic board, but a large part of this can be explained by the smaller size of the firms. We found in fact no female board members represented among the sample firms. With respect to board member's age (54 years) and share of employee elected members (11%) – these figures are within the range of other Nordic countries. However, with respect to higher education the number of board members without higher education is slightly higher (21%) than in the other Nordic countries (9-16%), and with relatively more members with a legal education background (21%) than in other Nordic countries (5-15%).

Table 1.7: (Limited) Descriptive statistics for Iceland (end of 2006 only)

Variable	
Number of boards analyzed	26
Average number of board members	5.3
Median board size (number of board members)	5
Percentage of females on board	0
Average age of the board members	54
Percentage of employee representatives	11.17
Percentage of members with no higher education	21.05
Percentage of members with economics or business education	36.84
Percentage of members with education in law	21.05
Percentage of members with technical education	15.79

[6] These results have to be taken with caution since for many firms data on committees were not available.

1.3 Data collection

Data collection started with the identification of the population of firms in our analysis: all firms that were listed on the stock exchange in Denmark, Finland, Norway, Sweden and Iceland at the beginning of 2007. For these firms, the data collection was performed in three rounds (two main and one smaller). In the first round, very detailed current information about the board members and committees was collected. This first data collection lasted approximately half a year. Data collection took place in each home country and was performed by local student assistants and supervised by the Steen Thomsen (in Denmark), Rebecca Piekkari (in Finland), Trond Randøy (in Norway) and Lars Oxelheim (in Sweden). The coordination of the three groups and final "cleaning" and merging of the data was performed by Aleksandra Gregoric.

In the second round (organized in the same way as the first round), a number of key variables were selected. For these variables, the students were asked to collect a panel, namely the data for each of the 2001-2006 years. The limitation of the data collection to the key variables was primarily due to: 1) time constraints: given the time that took to collect the data for a single year (end of 2006), it would take us at least 1.5 more years to collect the same information for a panel; 2) poor availability of the data: in gathering past information on board members, we primarily relied on firm annual accounts. The data available in these accounts is much poorer than the data that can be found on the company web-sites (which was used as an additional source in the first round). This consequently limited the depth of the data collection in the second round. The second round of data collection lasted approximately 6 months and was concluded in November 2008.

Finally, in the third and last round (January and February 2009), all the collected data was re-checked. Our student assistants were also asked to add the (end of) 2007 data, given that the 2007 annual accounts became available during the year 2008 (and could be now included in the analysis). It must be noted that the data was, however, not equally available for all the firms in our initial sample. For a large number of firms it was particularly difficult to obtain information for the initial years in the period of our analysis (year 2001, 2002 in particular). Thus, we ended up with a rich but unbalanced panel consisting of 431 firms in year 2001, 471 firms in 2002, 493 in 2003, 518 firms in 2004, 537 firms in 2005, 757 firms in 2006 and 678 firms in 2007. The list of the main variables is presented in Table 1.8 below.

Table 1.8: Main variables

	Panel data (availability of the information also for the years 2001-2007) and other comments
Country name	Denmark/Finland/Norway/Sweden
Company name	Company name in writing.
Name and surname of board members and CEO	Yes, but for Sweden and Finland the data for CEO was collected only for the CEOs that were actually also part of the board. In the third-round of data collection we collected the info for all CEOs in addition to these two countries, but (due to time constraints), this was only done for the end of year 2006/2007, and not for the years before.
Title	Yes. We distinguish between the CEO, chairman, (regular) board member; CEO and board member; chairman and CEO.
Title since (since when he is a board member)	Yes. The variable refers to the year of first appointment on the board (regardless of the function).
Number of years in the company (if employed)	No: collected only for CEO and only for the end of year 2006/2007.
Internal recruitment (yes/no)	No: collected only for the year 2006/2007.
Gender	Yes
Date of birth	Yes
Nationality	Yes
Education	No. For the end of years 2006/2007, we have data on the board members education, that is whether they have a business, law, technical or any other high education; for other years, we only know if the board member has a Ph.D. or Master education.
International education	No (2006/2007 data only): With regard to this variable, we collected the information on “yes” and “no” basis (whether the board member has international education or not).
International working experience	No: see above.
International board experience	No: see above.
Number of other positions	No: see above.
N of employee representatives	Yes.
Founder on board	No.
Founder related representatives	No.
Number of independent board members	No.
Total number of board members	Yes-
Total pay CEO	Data collected for end of 2006, for other years we relied on previously

	collected from Annual Reports of listed firms.
Bonus	See above.
Pensions CEO	See above.
CEO stock options	See above.
CEO ownership/votes in %	End of 2006 data only.
Percent of ownership and votes held by the board members	End of 2006 data only.
Auditor name	No (2006/2007 data only).
Number of members on the election committee	No (2006/2007 data only).
Number of females on the election committee	No (2006/2007 data only).
Number of foreigners on the election committee	No (2006/2007 data only).
Number of members on the audit committee.	No (2006/2007 data only).
Number of females on the audit committee.	No (2006/2007 data only).
Number of foreigners on the audit committee.	No (2006/2007 data only).
Number of remuneration committee.	No (2006/2007 data only).
Number of females on the remuneration committee.	No (2006/2007 data only).
Number of foreigners on the remuneration committee.	No (2006/2007 data only).

For Iceland, the data were only collected in the first round. Due to the low number of firms listed, hard to get access to company specific information (partly due to the financial crisis), we decided not to include Island in the additional rounds of data gathering.

The data on boards was aggregated, re-checked and finally merged in one file. In addition to this data, we collected ownership information – here, we relied on the Thomson Financial Ownership data base (Ownership module, Thomson One Investment Banking). The format of the data as presented by Thomson Financial was not appropriate for our analysis. Thus, the data had to be downloaded for each firm separately and then transformed into an appropriate format (1 month of work). This data was then merged with the main financial variables, which we obtained from Thomson Financial database (Core Banker Module – Thomson One Banker). This database also provides information about firm foreign sales. The ownership and financial variables were finally merged with the board and compensation data into a final database, which we then used in each of the empirical papers presented in this report.

2. Corporate Governance and Global Competitiveness – Within and cross-case analysis

2.1 Introduction

The purpose of the following case studies was to explain corporate board diversity in a holistic rather than a single, variable-oriented way. The aim was to uncover how and why new board members are recruited, and what their contribution is. Changes in board membership and diversity were analyzed holistically by considering the history, growth, ownership structure and international expansion of the firm, among other factors. More specifically, our objectives with the case studies were:

- to unravel the complexity associated with corporate board diversity
- to understand the process leading to corporate board diversity
- to explain corporate board diversity in a company context
- to contrast and compare corporate board diversity across the case firms

The overall research topic of this report - the relationship between corporate governance and global competitiveness - generated a lot of responses from the interviewees. For example, one Nokia interviewee commented that from the viewpoint of the success of the company, corporate board diversity is not as central as the recruitment of personnel, their competencies and top management's ability to steer the company:

> "The real issue is not how many women are members of the board but what is the situation at the two management levels below the CEO? Are there women in key positions who make important decisions? Is the career path open for them?"

Such comments encouraged us to further investigate corporate diversity by taking into account various contextual and situational factors in the case companies. The findings are divided into two broad themes; board recruitment and board dynamics. These are examined in the broader context of the firm.

2.2 Case selection

We selected firms that had recently made substantial changes in terms of board diversity and corporate governance, and which could be regarded as examples of good or even best practice. We matched the case companies in different countries by selecting firms from the same industry, for example, Nokia of Finland against Ericsson of Sweden.

2.3 Data collection and analysis

A total of 30 personal interviews were conducted in nine Nordic companies: Biohit, Danisco, Ericsson, Expert, ISS, Nokia, Novozymes, Outokumpu and Simrad Optronics. Three of these firms were headquartered in Finland, three in Denmark, one in Sweden and two in Norway. The interviews were held with the Chairperson of the board, several board members and the managing director of the firm, if possible. Also, interviews with former board members and managing directors were conducted in order to gain historical data. As Table 2.1 shows, five of 30 interviewees were female, four were conducted with former board members and 10 with foreign members.

Table 2.1: Distribution of interviewees across the cases

		Total interviews	Female	Male	Current member	Former member	Foreign	Native
Biohit	Chairman	1		1	1			1
	Board member (Incl. employee reps)	2		2		2	1	1
	Managing Director	1		1	1			1
	TOTAL	4		4	2	2	1	3
Danisco	Chairman	1		1	1			1
	Board member (Incl. employee reps)							
	Managing Director							
	TOTAL	1		1	1			1
Ericsson	Chairman	1		1	1			1
	Board member (Incl. employee reps)	2	1	1	2		2	
	Managing Director	1		1	1			1
	TOTAL	4	1	3	4		2	2
Expert	Chairman	1		1	1			1
	Board member (Incl. employee reps)							
	Managing Director	1		1	1			1
	TOTAL	2		2	2			2
ISS	Chairman	1		1	1		1	
	Board member (Incl. employee reps)	1		1	1		1	
	Managing Director							
	TOTAL	2		2	2		2	
Nokia	Chairman	1		1	1			1
	Board member (Incl. employee reps)							
	Managing Director	1		1	1			1
	TOTAL	2		2	2			2
Novozymes	Chairman	1		1	1			1
	Board member (Incl. employee reps)	3		3	3		2	1
	Managing Director	1		1	1			1
	TOTAL	5		5	5		2	3
Outokumpu	Chairman	1		1	1			1
	Board member (Incl. employee reps)	7	4	3	6	1	3	4
	Managing Director	1		1		1		1
	TOTAL	9	4	5	7	2	3	6
Simrad Optronics	Chairman	1		1	1			1
	Board member (Incl. employee reps)							
	Managing Director							
	TOTAL	1		1	1			1
C	TOTAL	30	5	25	26	4	10	20

Most of the interviews were tape-recorded and transcribed, during some interviews notes were taken. The interviews were conducted in Danish, Norwegian, Swedish, Finnish and English. When necessary, the quotations from the interviews have been translated by the authors into the reporting language, which was English. A case narrative was written based on each company and the data was analyzed thematically. The emergent findings such as, barriers to corporate board diversity, the timing of board diversity and issues related to the working language of the board were discussed in several project meetings during the process of data collection and analysis. A cross-case analysis was undertaken based on the individual case narratives.

2.4 Background to the case companies

The basic facts of the nine case companies and their boards have been presented first, before proceeding with the findings of the case studies.

Biohit

Biohit is a Finnish biotechnology company. It was founded in 1988, and started its first subsidiary in France in 1991. The company still has a strong entrepreneurial feel to it, even though it is a public company with several subsidiaries in other countries. In 2007, 95% of sales came from overseas, while only 0.6% of the shares were in the hands of international investors.

Currently, the board of directors has six members, of which, all are Finnish men. When we initiated the case study there was one foreigner on the board who then left the board in 2008 after a two year tenure. His departure was explained due to difficult transportation connections from his home outside London and the board meetings in Finland. No women have so far been members of the board for Biohit. The board is elected for a period of one year. One interviewee explained that the lack of diversity on the corporate board is due to the composition of the top management team which is very diverse. Members of the top management team sit in on the board meetings, and the board, in turn, visits foreign subsidiaries. Some of the board members are also members of subsidiary boards. According to this interviewee, the intense communication between the board and the rest of the company reduces the need to recruit diverse members to the board.

Danisco

Danisco is a Danish company, which started as a sugar-based conglomerate, and has become the world leader in food ingredients, enzymes and biotechnology. Three companies merged in 1989 under the common name Danisco, bringing together companies with activities in distilling, paper, engineering, manufacturing, sugar and other food ingredients. The oldest of these three companies dates back to 1872, while the name Danisco was originally introduced in 1934.

The first sales company was established in Germany in 1954, and production facilities were started in the Americas and Europe in the 1980s. In the 1990s, Danisco undertook further investments in Asia, Eastern Europe and Scandinavia. In 1999 it merged with the Finnish Cultor, and in 2005 Danisco acquired a US biotechnology company. In 2007, foreign sales accounted for 92% of Danisco's total sales, and the share of foreign employment was 78%. Danisco is a public company, with a broad owner base. In 2007, 17% of the total share capital was held by international investors.

The board of directors consists of six shareholder elected members and three members elected by Danish employees. Members are elected for a period of two years and have a mandatory retirement age of 70 years. The members receive a fixed fee instead of participating in incentives programs. Of the six shareholder elected members, one is female and two are foreigners, although all are from Nordic countries. In addition, one employee-elected member is female. The educational span of the board members ranges from three degrees in economics, to one in law and two in sciences. This composition is the result of a deliberate decision to increase board diversity in order to create a well-functioning board.

Ericsson

Telefonaktiebolaget LM Ericsson is a leading global telecommunications company based in Sweden. It was established in 1876 as a small mechanical engineering shop, and has continued developing telephones and connection systems. Currently, it has two major owners who have two representatives each on the board of directors along with two seats reserved for the next largest owners with alternating representation.

Ericsson had already started its international operations in the first years of the 20th century, when it bought part of a telephone company in Mexico. In 2001, Ericsson created a joint venture with Sony of Japan in order to market mobile phones. Currently, Ericsson has customers in 175 countries, and international operations in 150. About 95% of its sales came from outside Sweden in 2008. In 2007, the share of foreign employment was 73%.

Ericsson's board consists of 13 members, including three employee representatives. In 2008 there were four women on the board, and three foreigners. The first foreign member joined the board in 1996. In 2004, the board got its first member from outside Europe. The first female member was elected to the board in 2002. Diversifying the board was a conscious decision, although difficult to undertake due to the ownership structure. The board members receive a fixed fee.

Expert ASA

Expert AS is a Norwegian based consumer electronics retailer. It has major activities in the Nordic and Baltic region. Expert was established in Switzerland in 1967 as a voluntary chain, and Expert International GmbH consists of independent electronics retailers in 22 countries. These members remain separate legal entities. Expert AS represented approximately 8% of the turnover of the associated firms under the Expert umbrella. Expert ASA was listed on the Oslo Stock Exchange in 1998, and was delisted in 2007 after a private equity investor group acquired all of Expert's stock. With the new ownership the legal form of the firm was changed to, non-public form: from Expert ASA to Expert AS. Before the takeover, 15% of the stock was in the hands of foreign investors.

Expert has internationalized only during the past eight years, starting with the acquisition of a minority shareholding in the Danish part of the Expert group in 2001. By 2007, foreign sales had reached 59%, and 58% of employees were outside Norway.

Expert AS’s board has one foreign member from Sweden, and two out of eight members are females. In addition, another member is a long-term resident in the Baltic States. The board is currently chosen by the sole owner, and does not need to comply with the Norwegian gender quota of 40% female representation on the board – which only applies to public firms (the ASAs)

ISS

ISS is a Danish company specialized in facility management services. It was started in 1901 as a night watchman security firm named København-Frediksberg Nattevagt. It started cleaning operations in 1934. Its internationalization process dates back to the 1960s when ISS undertook acquisitions and joint venture operations mainly in northern Europe. It engaged in international business operations in Australia, Brazil and the US in the 1970s, but never truly became a global company in terms of revenues. The name ISS has been in use since 1973, and the company went public in 1977. In 2005 ISS was taken over by two international private equity funds and was de-listed. This takeover increased the foreign ownership to 100%. In 2007 16% of revenues were generated overseas, and 41% of employees were located outside Europe.

Before the takeover, the board members were elected for a period of two years, but this was changed to one year. There is a set retirement age of 70 years. Each of the two owners has the right to nominate three members. A share option plan was attempted in the early 21st century, but currently the members are involved in a warrant program of which the direct salary accounts for less than 20% of the total remuneration package.

The first foreign board member was elected in 1998 and the first female member in 2004. Until the takeover, the degree of board diversity was rather limited. However, the board was transformed and in 2007 only two shareholder elected members were Danish. Even the chairman and vice-chairman of the board were foreigners. In 2008, there were no females on the board.

Nokia

Nokia is a global telecommunications company headquartered in Finland. Its roots go back to a paper mill started in 1865. In 1967 Nokia Corporation was formed when Nokia Ab, Finnish Rubber Works and Finnish Cable Works, formally merged. Its operations in electronics were started in 1960 when Cable Works established its first electronics department. The company's focus was concentrated on mobile phones in the early 1990s, all other operations such as paper, cable, rubber, and consumer electronics were divested.

All three original companies already had international operations before they merged. The Soviet Union was the largest single customer for years, even after the settlement of the war retributions that Finland was ordered to pay to the Soviet Union in the 1940s. The merger eased exports to the West also. Currently the company has a presence in 130 countries, with subsidiaries around the world. Sales outside Europe account for 61% of all sales, and Nokia does not consider itself to have a home market. Despite the fact that 28% of employees are Finnish about 115 nationalities are represented in the work force.

In 2008, the board of directors had ten members. including two women and four foreigners. The first foreign members joined the board in 1997, while the first female was elected already in 1992. The age span for the board is from 42 to 68 years of age, making the average age 58. The board is elected for a period of one year, and receives a fixed fee along with stock options.

Novozymes

The Danish company Novozymes is the world's largest producer of enzymes for industrial use. Novozymes spun off from the pharmaceutical company, Novo Nordisk A/S, in 2000 as an independent publicly listed company, but remains under its control. Novo Nordisk was founded in 1925.

While only 2% of Novozymes's sales were generated from Denmark, and the rest from more than 130 countries, the share of foreign employment was no more than 55%. International investors control 37% of the share capital.

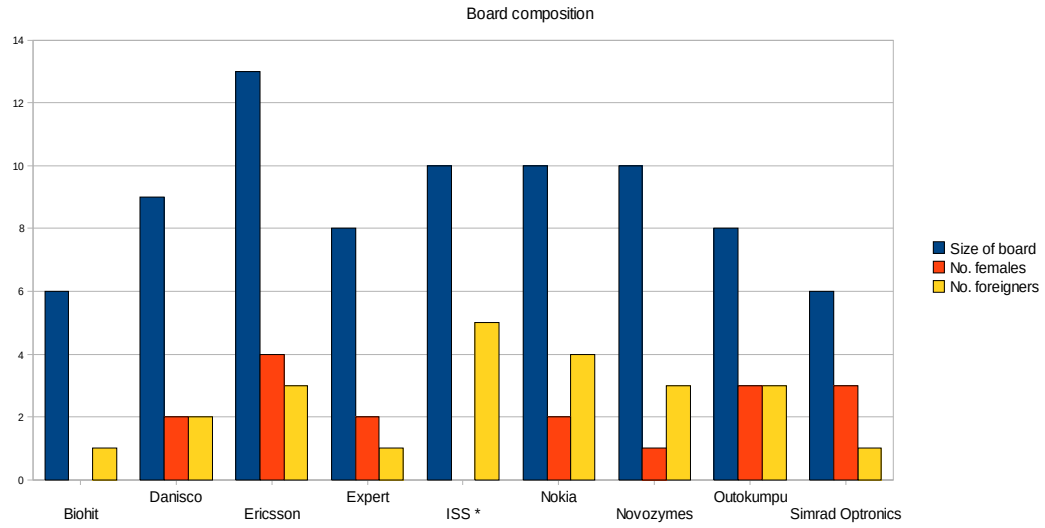
Novozymes's board was created ”from scratch” in 2000 by the CEO, the chairman of the board and a professional headhunter. Since then there have been no changes on the board, besides one new member who was added in 2007. The members are elected for a period of one year, and there is a mandatory retirement age of 70 years. Three of the shareholder elected members are foreign, but all the foreigners are from Scandinavia. There are no share-holder elected women on the board of directors at Novozymes.

Outokumpu

Outokumpu is a global stainless steel company headquartered in Finland. The company started in mining in 1914. In the 21st century it has reduced its business segments from copper, mining, technology and stainless steel to concentrating only on stainless steel. An important investment on this path was the initial joint venture with Avesta Sheffield AB, a British company. The joint venture was acquired by Outokumpu in 2002 and renamed Outokumpu steel, which represents the core business of the current Outokumpu. The company's international mining operations began in the 1970s by acquiring or setting up mines all around the world, but with an emphasis on Europe. In 2007, sales in Finland accounted for only about 5% of all sales, while Europe was the largest market area with almost 70% of sales. 35% of employees are located in Finland. Outokumpu was listed on the Helsinki Stock exchange in 1988. In 2007 the state of Finland was the largest owner of the company, holding 31% of the shares, while international ownership was 38%.

In 2008, Outokumpu's board of directors had eight members, of which one is an independent employee representative and one represened the state of Finland. The first woman was elected on the board in 2000, and currently there are three women on the board. The first foreigner entered the board in 2003, and in 2007 there were three foreign members. Initially the state opposed foreign board memberships, while supporting adding women on boards. The age structure of Outokumpu's board varied with the youngest member being 44 years old in 2007, and the oldest 64 years old.

Figure 2.1: Board composition of the case companies



Simrad Optronics ASA

Simrad Optronics ASA is a Norwegian based technology firm in the military equipment industry. Besides Norway, it also has production facilities in the US. The company was originally founded in 1947 but the current name has been in use since 1980. It became a publicly listed company in 2005, after a spin-off from Technor. In 1969 the military technology division was started at SIMRAD, an electronics firm that still exists. In 2006 Simrad Optronics reached its current form through a reverse takeover of Vinhøg, a military supplier.

Simrad Optronics's top management owns nearly 13.5% of the company's shares. Foreign ownership accounts for 13.3% of the shares. This is a low figure on the Oslo Stock Exchange, but what must be taken into account is that the internationalization process only started in 2004. The home market is still the main market for the company, but especially North America and other emerging countries are considered major opportunities. In 2006, 70% of Simrad Optronics's employees were located in Norway, but this figure has decreased after the Vinhøg merger.

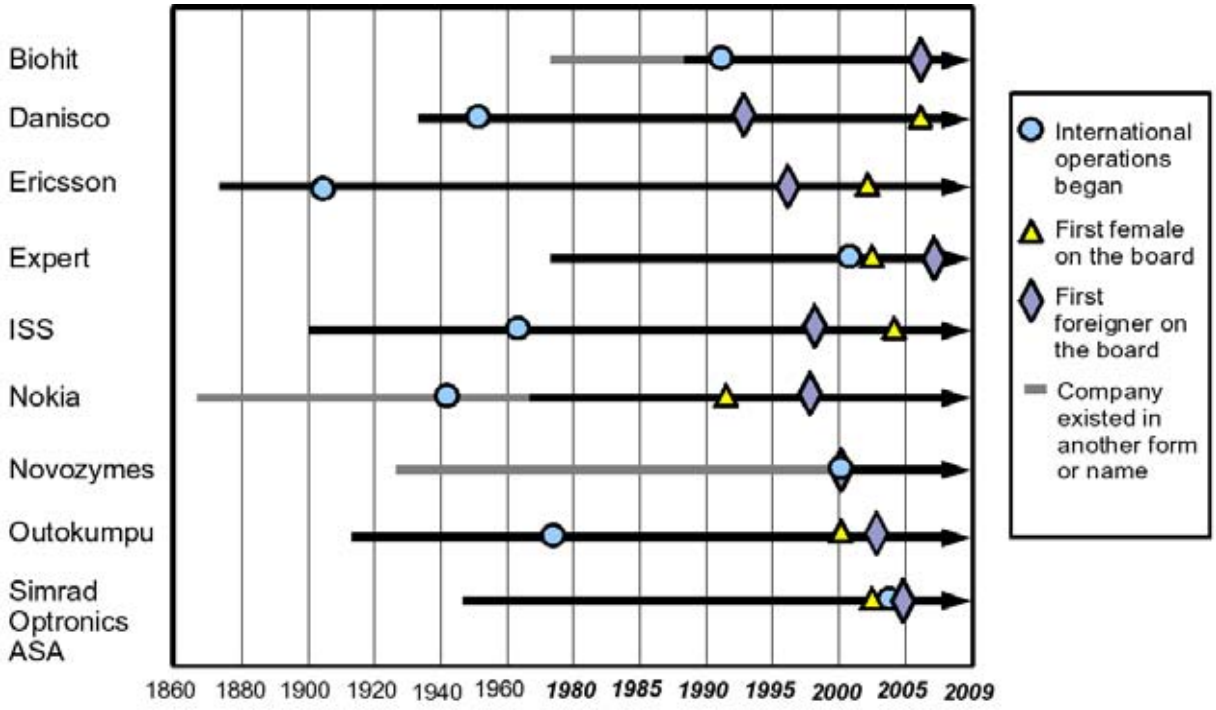
The board of directors has seven members, of which three are female, in accordance with the Norwegian legislation. One of these women is foreign, and she is the only foreign board member. She entered the board in 2005. The chairman highlights that board diversity should mostly relate to variations in board members' experience.

2.5 Findings

As Figure 2.1 shows, the level of corporate board diversity in relation to the total size of the board varied across the nine case companies from seemingly none (Biohit) to relatively high level of diversity (ISS).

While we selected both, relatively young and well-established case companies, who had begun to expand internationally at various points in time, the internationalization of their boards can be dated back to the same time period, that is the 1990s (see Figure 2.2). Women were also introduced to the boards around the same time, although surprisingly often a female board member was elected later than the first foreigner. This was the case in Danisco, Ericsson, ISS and Novozymes, while Biohit has had no female board member to date.

Figure 2.2: Corporate board diversity and internationalization process of the case companies



When defining diversity, the attributes mentioned among the interviewees were rather similar. It was seen to include dimensions of cultural, national, educational, gender and age diversity, as well as industrial experience and other professional competencies. As an interviewee at Outokumpu explained:

> "... I firmly believe if you're going to be international you have to be, nearly by definition … diverse in terms of employment; nationalities and cultures and so on. And to get the best out of your people you will have to understand those cultures, and you will have to understand what benefits diversity will bring.

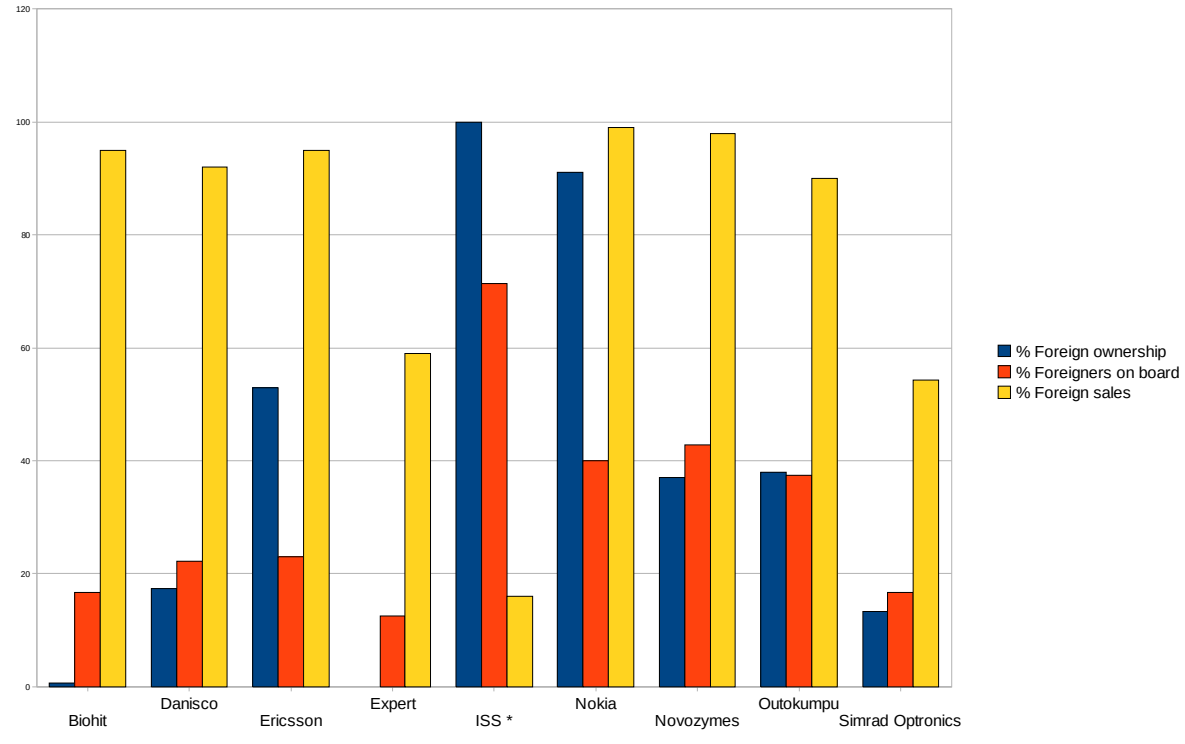
However, even though most interviewees mentioned the above categories, they tended to agree that the visible differences should not be the primary goal of diversity. What mattered was personal experience. Gender was almost always mentioned by the interviewees as a form of diversity, but it

was not discussed as much as the other dimensions of diversity. Yet, gender differences were seen to contribute equally positively to board work as age, nationality or experience, for example, by changing the tone or focus of the discussion, and by bringing new viewpoints. Often, though, gender was considered a ”non-issue” - it was brought up, but the interviewees emphasized that gender had nothing to do with the appointment of a new board member. A board member in Outokumpu commented:

> ”You can’t get me going about it [the gender issue]… I mean that gender quotas and women on boards of directors are a non-issue. You need competent people on the boards and they can be both men and women… [which is] in everyone’s interests.”

When comparing the internationalization of boards with that of the top management teams across the case companies, the boards were the last to be diversified in terms of nationality and gender. Still, top management teams also had a long way to go to be considered truly ‘international’ in most case companies. The exception is Simrad Optronics ASA in Norway, where the law stipulates that 40% of the board members have to be females in publicly traded companies. No such regulation exists for the lower levels of management, and thus women are a small minority further down the hierarchy of the firm. Outokumpu has a similar structure – it has no women in its top management, while there are three female members in the board of directors. Figure 2.3 introduces additional variables to explaining corporate board diversity by depicting the relationship between share of foreign ownership, foreign sales and foreigners on board. It shows the large variety of profiles across the nine case companies. In Nokia, however, one of the interviewees completely rejected the effect of foreign ownership on corporate board diversity. Instead, he related the internationalization of the board to two issues: first, given the internationalization of the business it became important to have a good understanding of local markets beyond the Finnish viewpoint. Second, in a small country such as Finland, the pool of experienced, intelligent and competent management talent is limited. These factors have driven Nokia to consciously internationalize its top management at executive and board levels.

Figure 2.3: Degree of company internationalization and international board membership



2.6 Paths to the board

The process of selecting and recruiting board members deserves special attention. Several of the boards had been diversified through deliberate decisions, but the reasons varied. Most often though, the rationale for recruiting a new member was to "get the best person for the job". In Simrad Optronics and Biohit, the best candidate just "happened" to be foreign; the companies were not explicitly looking for increasing national diversity. Most companies, however, did consider the option of reflecting their presence in global markets through board membership. However, this was not always possible to put into practice. Outokumpu, Danisco and Novozymes all mentioned that finding a suitable Asian or US member could be the next item on the agenda since they were expanding into those markets in 2007-2008. Only Nokia already had an Asian board member at the time of the study.

When broadening search criteria to include foreign and female board members the pool of potential recruits obviously increases. Interviewees from Outokumpu openly admitted that they deliberately went out to find more women on the board, in response to the initiative taken by the Finnish government.

International experience was mentioned as vital in all cases. In some situations domestic citizens with international experience were sufficient while in others 'real natives' were required to gain in-depth knowledge of a market. An international mindset was also found essential across all the nine cases. Other competencies that were emphasized by the interviewees were experience from key executive positions and industry experience. Key positions included CEO posts but also experience from other boards was valued. As the chairman of Outokumpu put it:

> "I think that being a CEO is the best qualification for board work... because nobody else can understand the role of the board, the content of board work and the needs of the board better than a CEO. … The CEO is the one who really works with the content [of the board's work]."

Interviewees in Novozymes also mentioned that new corporate board members should share the core company values. Ericsson and ISS both have strong owners who nominate the board to ensure their fair representation. Expert's sole owner nominates the entire board. Also in Simrad Optronics the importance of owner representation when composing a board is mentioned. In the other cases the importance of owner representation was not mentioned, or they did not have a strong effect on the composition of the board.

The signaling effect of having foreigners and women on the board was noted in some interviews such as at Nokia and Outokumpu. The signal of an "open path" to current and potential employees was seen as very important, in order to attract the best competencies in the company and hold on to them. All employees need to feel that they can advance, even to the highest positions in the company, to keep them motivated. A member of the board at Nokia said:

> "We couldn't keep this non-Finnish talent if they did not strongly believe, based on their own experience, that they have the same chances as everyone else [to advance in their careers]."

Interviewees in Nokia and Outokumpu brought up personal networks as a selection criterion of board members. In small countries, such as Finland, people in a certain industry or at a certain organizational level tend to know each other. Set against this background, foreign members may contribute with critical personal contacts. A related issue mentioned by several interviewees in the context of identifying an appropriate candidate was that the candidate for the board position personally knew someone on the board. From a foreigner's perspective, this can be considered a

barrier as these networks are often limited to home country nationals, thus reducing the pool of potential candidates. A Nokia board member said that ‘a good board recruits its new members without the intermediary involvement of headhunters.’

Age was also mentioned as a form of diversity, but most board members of the case companies were in their 50s. This is not, however, surprising considering the high requirements set for board members; in addition to skills and experience, the candidate should be willing to commit herself/himself to the position, which may be more difficult for younger people. On the other hand, the Danish case companies - Danisco, ISS and Novozymes - had a retirement age in use. This is apparently a problem especially when looking for US members. It was also mentioned that the board is not, “a club for retired persons” but it should include members that are still actively involved in the working life, so as to keep up with trends in the industry.

One of the biggest barriers associated with recruiting female board members was finding suitable candidates. The comments referred to both, the scarcity of females with suitable experience, and the difficulty of finding the individuals that were qualified as they ”do not advertise themselves” enough. The Norwegian gender quota system was not considered helpful among the interviewees, as it puts too much emphasis on gender rather than on identifying the most qualified candidate.

Other barriers to corporate board diversity included physical distance, since traveling to regular board meetings can be very time consuming. Simrad Optronics's whole board lives and works in Norway, which makes it easier to call extra board meetings when particular issues arise.

Case-by-case analysis

Biohit

As our study progressed, Biohit turned out to be a case of de-internationalization of the board. It is a company with a strong entrepreneur, with a board that is composed generally of his contacts. The board had one foreign member for two years, but he eventually gave up his position in 2008 due to the difficulties related to traveling to Finland for board meetings.

Since the founding of Biohit, all board members have been Finnish and male, mostly born in the 1940s, besides one British male member who served the board from 2006 to 2008. The board members differ in terms of whether their expertise is in the area of business or scientific knowledge. The current board of Biohit represents a more balanced mix of both business and scientific knowledge, the latter being perhaps more valued in the past. The interviewees explained, however, that the most important know-how required for the board today was international experience, followed by industry knowledge. The foreign member also mentioned sharing his personal connections from abroad, besides his knowledge of customers and the global industry.

When Biohit was listed on the Helsinki Stock Exchange in 2000, the board had only three members, all of whom still hold positions on the board. New members were added in 2001, 2002 and 2004. In 2006 two members left the board, and both were replaced. At the time of writing this case, the board was comprised of these six members.

Alongside the CEO, the three board members interviewed for this case - the chairman of the board, and two former board members – had all been recruited based on the personal relationships with the CEO. They admitted that this may not always produce the best results. The one foreign member on the board was recruited due to his personal connections and expertise rather than as an attempt to diversify the board. The board consisted of members identified through the CEO's contact network, to fill a gap of expertise on the board.

Danisco

On Danisco's board six members are elected by shareholders and three members are elected by Danish employees. The company has a nomination committee, comprised of the chairman and an additional shareholder elected member. This committee is responsible for reviewing potential candidates for the board. The criteria looked at is the experience and competencies of the candidates, as well as how they enhance the diversity of the board in terms of age, nationality and gender.

The latest additions to the board were based on the decision to add scientific competencies, especially after Danisco acquired the more research intensive Genencor. It was perceived important to understand this research-oriented company culture, in addition to the original industrial culture.

Danisco's international diversity is limited to Nordic board members. This is explained by the view that Nordic managers are thought to be very internationally oriented, which was an important criterion when choosing the board. However, the company is looking into finding a board member from the US or Asia due to the increasing exposure in these market areas.

Personal networks were also used at Danisco. For instance Kirsten Drejer was recruited through the chairman's personal network when traditional recruitment channels failed to locate a suitable candidate.

Ericsson

The first foreign member entered Ericsson's board in 1996. Since then the board has had two to three foreign members. In 2004 the board got a member from the US, which was the first member from outside Europe. The first female member was elected in 2002. In 2008 the board contained four women, of which, two were foreign.

There are ten shareholder elected members on the board, and three employee representatives from three unions representing the staff. The top management has one position on the board which is filled by the CEO. Ericsson has a nomination committee composed of representatives of the four largest shareholders and the chairman of the board. The fact that the owners (both Swedish) appoint two members each to the board, excluding the chairman and the CEO, means that there are only four positions that could be filled with foreign members. The company has had difficulties in deciding whether to recruit an Asian or American member, as there is not room on the board for both.

The first woman was appointed to the board not because of her gender, but because of her technical and research background, as well as her knowledge of the European Commission. Ericsson was

going through a restructuring process at the time, which called for drastic changes in the board as well. One of the female board members, who was interviewed, felt that her gender had mainly influenced her career by making her comfortable with being different and bringing out her viewpoints.

Expert

Before a private equity investor group acquired Expert, its foreign ownership was about 15%, but there was no pressure to diversify the board internationally. The chairman, who had extensive experience of board work, was recruited to the board with the explicit intention on the part of the owners to professionalize the board. Previously board members mostly came from the retailers that formed the Expert group. After the acquisition more emphasis was put on each member's expertise and what they could contribute to the firm. For instance, the appointment of the chairman provided the basis for Expert's international expansion through his prior success as the CEO of one of the most successful Norwegian companies (Tomra ASA).

After changing its legal structure to non-public firm, the company no longer has a nomination committee, but instead, the owner appoints the board. Because Expert is no longer a publicly traded company, it does not have to comply with the 40% gender quota stated in Norwegian legislation, and can thus appoint the most competent person regardless of gender.

ISS

ISS's board procedures underwent some changes when it was taken over by two international investment companies. Prior to the takeover, it had put together a nomination committee that would screen and approve suitable candidates for the board, along with external consultants, before presenting the candidates to the shareholders for election. After the takeover the two owners have the right to appoint six shareholder members, filling three positions each. The employees select the three other members of the board. Currently four members represent the owners, while three are independent.

Nokia

According to the interviewees the diversity on Nokia's board is the result of deliberate strategy to create a truly global company. There should be no restrictions to how far an employee can go, no matter what their nationality. Board members are selected based on their expertise, but also keeping an eye on how they affect the composition of the group in terms of diversity.

Finding suitable candidates is a continuous process, as the selection process can take about two years. Nokia has a nomination committee that presents the candidates at the General Annual Meeting for election. The nomination committee is composed of three board members.

The corporate board became increasingly international in the 1990s when Nokia's market areas shifted to being more and more outside of Finland, and thus more international viewpoints were

needed. Another reason for this was the limited pool of talent in Finland for board positions. Enlarging the pool dramatically increases the number of candidates for finding the best talent.

The search for an Asian member for the board was especially difficult due to the lack of suitable candidates. One was eventually found, however. An international mindset and experience from abroad are essential. The interviewees were more likely to associate these qualities with Finnish candidates rather than with other nationalities.

Novozymes

Currently, the board has seven shareholder elected members, and three employee elected members. The board was constructed by the Chairman of the Board and the CEO to create a competent board to function as a sounding board for the CEO. A headhunter was also included in the process.

The main selection criteria were international experience, key executive experience, process industry experience from the B2B market, as well as product development and commercial research experience. Novozymes also has a corporate responsibility program of sustainability that the candidates must conform with. Self-promotion or “being too wise” were noted as negative characteristics. Although the current board is Scandinavian, Novozymes is considering recruiting a member from China or the US.

Outokumpu

Outokumpu has a nomination committee in which the four biggest shareholders are represented, as well as the chairman of the board as an advisor. They meet every year in November to determine the possible changes to the composition of the board, and start searching for potential candidates. The candidates are presented at the next General Annual Meeting in March, after finding, contacting and obtaining consent from the candidates. One interviewee found this schedule too tight in order to find the best talent for the board.

Personal networks are also used in Outokumpu in order to recruit board members. The former managing director mentioned personally knowing the chairman of the board, and another board member had served on the board of an Outokumpu subsidiary. He was then asked to join the corporate board.

The candidates' networks, especially abroad, were noted, and considered to add value to their board positions, as the Finnish members often lack such contacts in other countries. Finnish board members have also gained valuable experience from sitting on foreign boards. Thus also at Outokumpu it is more the different experiences the foreigners can bring to the board rather than nationality, per se, that counts.

The first women on the Outokumpu board were recruited by the initiative from the Finnish government to increase the number of women on boards of Finnish companies, especially state-owned ones. However, the women that were chosen had extensive business experience, language competence, experience of geographically different areas, projects and marketing management. The women that joined the board later did not have an equally clear idea of why they had been recruited on the board.

After the first three (Finnish) women had been appointed to the Outokumpu board the state no longer set goals for finding more women. Instead, more focus was put on foreign members regardless of their gender. This is interesting as initially the state was reluctant to open up the board to foreigners and the company internationalized through appointing foreigners in its top management team. When the board was considering selecting a foreign member, one Finnish female member actually gave up her own position in favor of this new member. She commented:

> ”The reason why I left Outokumpu was that every year the board evaluated itself and every year all the board members hoped for more international board members. But nobody was willing to say who of us should give up his or her position. And in [my] fourth year [on the board] I thought that this is idiotic. …I went to the ownership steering committee… I said that this [board position] is nothing that I want to hang onto whatever happens, so I can give up my position if international members are wanted.”

Outokumpu has one employee representative on the board. However, he does not represent the employees as such but is independent. The current representative has held many different positions in the company, and can provide insights on the personnel side due to his long tenure in the company. The need for an employee representative was questioned, and it was suggested that the position should be found on the lower levels of the organization, in order to actually promote employee rights.

The signalling effect of a diverse board was also noted at Outokumpu. A Finnish male board member stated that:

> ”..because then [when recruiting women to the board] the [rest of the] organisation sees that yes, all people are treated equally here. And it’s exactly the same if we think about Finns and non-Finns…”

The board members interviewed were rather satisfied with the level of board diversity. However, an Asian member would be welcome as well as someone with in-depth knowledge of Outokumpu's main markets of Germany and Italy.

Simrad Optronics ASA

In 2005 the Simrad Optronics' board was transformed in order to increasingly involve the owners in board work. Before this, there were few outside owners on the board. The size was kept small deliberately, and a focus was set on recruiting people with expertise. A selection committee was in place to form a board that has “significant owners represented, and the selection committee should work hard to find good candidates among the firm's shareholders and network.”

The main element of board diversity was related to experience. According to the chairman:

> “diversity related to gender, age and ethnicity is not a central element when selecting board members [beyond what is required by law] but diversity of competence is.”

2.7 Board Dynamics

Having discussed the selection and recruitment of board members, we shall now turn to how the boards perform their work.

The case studies revealed the importance of having a number of "different" board members. One of the interviewees at Outokumpu said that "you cannot… take only one monkey, you must take two" in order to have an effect on board dynamics. In other words, a critical mass of at least two diverse members is needed in order to change current work practices of the board.

Nearly all of the cases mentioned that the most important consequence of a diversified board was the different perspectives and opinions each member brings to the board. However, some interviewees from companies such as Expert and Biohit, considered it more advantageous to internationalize the top management team rather than the board of directors. Simrad Optronics opted for an advisory board, with international industry experts, to allow for more geographical proximity for the board.

The case companies with modestly, or non-diversified boards, (Biohit, Expert, Simrad) seemed to be rather satisfied with their current situation, while the case companies with relatively, or highly diversified boards, were more prepared to increase the level of diversity (Outokumpu, Danisco, Ericsson, ISS, Nokia). Language skills were often listed as a potential problem, but only Novozymes admitted to actually experiencing such problems. In this case company, a Swedish board member said that it would be easier if the working language would be English instead of Danish, such that board members were not excluded from the discussions. While English was the working language of the board in most companies, Scandinavian languages were used in some of the boards with only Scandinavian members, and Finnish was used at Biohit. The importance of the native language in more informal communication seems to vary: at Ericsson Swedish played a role, while at Nokia the role of Finnish was completely denied. One of Nokia interviewees mentioned that changing the working language of the board from Finnish into English was last in the Nokia organization to adopt English "for good".

The interview data shows that physical distance can decrease the informal conversation and personal interaction within the board. How this affects the board work depends on the company in question, and how often the board interacts. Moreover, long board tenure most likely increases the cohesiveness of the board, as is the case at Novozymes, in which the same board had worked together as a team for many years. One board member explained that "we know each other so well that we can hear body language over the phone." The danger of such intimate relationships within the board is 'clubbiness' and lack of critical questions, which was acknowledged by board members in Novozymes.

In most case companies the boards also included employee representatives. The attitude towards them varied, but in general it seems they were often not considered "real members." A board member at Novozymes even suggested a legislative change not to make it mandatory to include employee representatives, discontinuing employee representation was also discussed at Outokumpu. Meanwhile, for instance at Ericsson, employee representatives were taken as given, and especially the foreign members were very satisfied with the way the system in Sweden worked.

Overall, foreign members were seen as a positive addition to board work, although some interviewees expressed hesitation. They feared that foreign board members would be biased towards product markets that were familiar to them. Consequently, prominent product markets that do not have their 'own' representative on the board might be ignored. Also, as with all forms of

diversity, more opinions may lead to slower decision-making. This, however, can be avoided by letting the members get to know each other and each other's ways of working.

The one-year tenure of the board position was also seen as a barrier for recruiting foreigners, since it was considered a short period of time to invest so much time and effort in. In Finland the recruitment process of new board members is very short which may lead to unsuccessful search of a competent candidate.

Generally, interviewees expressed concerns about the remuneration of board members, particularly in Finland and Denmark as it was regarded not to be internationally competitive. This was especially true for state-owned companies in these countries.

Case-by-case analysis

Biohit

Biohit's board cannot be considered diverse as the only foreign board member left his position in 2008. However, the lack of national diversity introduces the challenge of imperfect information of most markets where the company is active. Management from foreign subsidiaries may visit meetings, but a more concrete understanding of business practices in foreign markers was mentioned as something lacking.

The board members do not have much contact in between meetings, despite the personal contacts they may have in the company. The chairman makes sure that meetings are run efficiently and mainly topics on the agenda are discussed. The CEO is seen as the "father" of the company and has an unusual amount of power. He stressed the following:

> "I try to use my power wisely. And I had the goal to hire people who are smarter than me and to listen to what they have to say."

However, even though the board sometimes does exercise its power over the CEO, there are problems in his dual role as a board member and a manager in charge of operations, especially with his powerful role as a respected owner of the company as well. For instance, it would be very difficult to replace the owner and the person behind major innovations, if a need for such would arise.

The board experienced major challenges when it had a foreign member. For instance, the working language of the board switched from Finnish to English and back to Finnish when the board became all Finnish again. The biggest change in the language policy was translating documents and learning a new vocabulary for the existing board members. One of the board members explained how the quality of the discussions in the board meetings suffered as it was difficult to argue and disagree in a non-native language. Moreover, the time it took for the foreign member to travel to Finland was unreasonable compared to the length of the meetings, and called for a bigger commitment than he was willing to make.

Danisco

Of the shareholder elected members on Danisco's board one is a woman, and three are foreigners, one from Finland and two from Sweden. In addition, one of the employee-elected members is female. In terms of educational diversity, there is a split between business education and science, as well as one law degree. The current board has been selected specifically to increase diversity on the board, as it was thought that a diverse board would be advantageous for the company.

Danisco also has experienced problems with foreign membership due to lack of participation from the member in question. Other difficulties with foreign members that were mentioned were the lack of language skills, especially from the French and the German members, as well as the limited international orientation of managers, from the previously mentioned countries and the US. US candidates are also not of a suitable age, as they tend to be older when searching for board positions, and thus would only have a short time to serve on the board, due to the mandatory retirement age of 70 years set at Danisco.

Other difficulties mentioned with having foreign members included the fact that many candidates have a conflict of interest that violates the independence criterion on the board, meaning that they are associated with Danisco as buyers, competitors or suppliers. Also traveling to board meetings was seen as troublesome and time consuming, especially when the remuneration level on a Danish board is not thought to be very internationally competitive.

The board has noticed the effect of women board members. This includes introducing different points of view to discussions, as well as a different way of thinking. Professionalism on the board has also increased with the change of general tone and increased interaction. Finding female members was seen as difficult though. Traditional headhunting methods are often not enough, and the search must be made specifically for a female board member. It was noted that the women should advertise themselves more actively, and register for databases that headhunters use. However, there is an overall scarcity of women with desired international experience and experience of executive positions.

Expert

Expert has one foreigner on the board, a Swedish woman. Another member also lives in the Baltic States, bringing in more international knowledge. The chairman stated that he felt a more pressing need to internationalize the management team instead of the board. With the current board composition, choice of language is not an issue, since all meetings are held in Scandinavian.

Some attempts to diversify the board had been made, at the cost of the candidates having less industry knowledge. This did not work out, as their contribution was often seen as limited.

Ericsson

At Ericsson the most emphasis was put on having a balance of personalities and expertise on the board. It was stated that the board's working style should reflect the company culture. Each board member should bring some unique know-how with them. Strong commitment and strong

independence are also essential. The candidates often share experiences of key positions, for instance of being a CEO, which makes it easier to understand and support management.

Employee representation on the board was seen to work well by the foreign members of the board. They suspected it would not work as well in other countries, but in Sweden it is a functioning system as it has such deep roots in history.

The critical forms of diversity are considered to be expertise, technical backgrounds, industry experience and different business area specialties, rather than gender and nationality. A small local firm may not have access to such advantages from diversity, but it is quite vital for a global company such as Ericsson to make sure all questions are asked and covered. This is facilitated by a board in which not everybody thinks the same.

The CEO suspected that a diverse board may take slightly longer to start functioning, as members need to get used to each other and learn to communicate effectively, but the results are often worth it. However, the focus should not be on diversity in itself, at the cost of losing sight of the core business.

Traveling to meetings was mentioned as the largest difficulty for foreign board members. Language in general was not considered an issue, as the meetings are held in English. There is some informal discussion in Swedish, but this did not bother the foreign members interviewed.

ISS

Prior to ISS's takeover, the board had one foreign member, a Swiss male. In 2004 the company added its first female member. Meanwhile, after the takeover, only two of the shareholder elected board members were Danes. The main motivation for including foreigners in the board is increasing the recruitment pool in order to facilitate the finding of the right competences for the board. Also bringing in knowledge of foreign market operations can be an important aspect. However, the board does not, and perhaps should not reflect the geographic markets of the firm, to make sure there is no bias towards certain markets.

Remuneration of Danish boards was considered a barrier to attracting skillful board members, as the level is not very internationally competitive. However, ISS has a remuneration package for members of the board of directors to overcome this. Another barrier mentioned was distances, since it takes time to travel to Denmark, and time differences may also cause problems. Also the possibility to interact informally is minimal in board work if there is a large physical distance separating the members. Efficient board work may be hindered by cultural differences, as well.

At the time of the study there were no women on ISS's board. One interviewee explained that the current demand for highly skilled female executives clearly exceeds the supply. In order to recruit a female board member to ISS’s board, one would need to specify the gender in the recruitment profile. The interviewees did not view such ‘positive’ discrimination favorably.

Nokia

At Nokia, gender was not found to be an issue when recruiting board members, though a difficulty in finding suitable members was noticed, Headhunters need to be specifically instructed to find a female candidates, otherwise it will be very unlikely that one will be found. The problem is thought to be that high-tech companies, which are male-dominated, often have engineers in management. Women are only slowly entering technical universities and advancing to managerial positions that are required for board positions. The number of women in top management positions is important as it is seen to reflect the overall diversity situation of the company. The interviewees considered the composition of top management to be more important than the number of women in the board. As one interviewee pointed out, the board's role is to support the management and supervise it, but:

> "the board is not the company. The management team and the management culture define the company much better."

Using English as the working language was not seen as a problem, since it has been Nokia's corporate language for years. After Nokia divested its other businesses and concentrated on mobile technology, English as a working language, as well as the international outlook, practically "came as given."

The interviewees were not in favor of quotas, but instead Nokia wants to attract the best talent to get the best results. Often this is done with a diverse team which brings in more points of view than a, "homogeneous group of Finnish-speaking engineers who think alike."

Novozymes

The board of Novoymes has remained mainly the same since it was created, besides bringing in an additional member in 2007. This has created a strong board that functions well together and complements each other. They do not consider themselves a club though, and they do not interact socially outside board meetings.

Novozymes has no shareholder elected females on its board at the moment. This is blamed on the limited supply of eligible women. One of the employee representatives is however female. It was also suggested that women lack the self-confidence to take on such positions. However, the board members are hopeful that as more women enter universities, the supply of women will increase. Quotas are not favored, as they put too much emphasis on gender. Finally: "Women do not want to sacrifice their lives for a career to the same extent as a man."

Three out of seven members on the board are foreigners, but they all are from Scandinavia, two from Sweden and one from Norway. International experience is considered more important than foreign nationality, per se, in terms of board work. This experience can be gained from a variety of sources, such as overseas work experience. More specifically, an international mindset is essential.

Language causes some problems at ISS, since board meetings are held in Danish because it is required by Danish law due to the employee representatives. Documents are now submitted in English without translating them into Danish. However, this is an outcome of rather recent development. A change in legislation to eliminate the need for company representatives was mentioned, but opinions on this were divided.

Outokumpu

In 1999 Outokumpu's board consisted of only Finnish men. In 2007 the board had been transformed into a fairly diverse one, with three out of eight female members, and three foreign members.

The impact of women on the board was noted by one of the foreign female board members:

> "What happens… when you have women present [is that] you will get different perspectives… I think it is very important…. Women contribute to a more… complete discussion and …are not part of the male culture. They …put questions in another way or bring up issues that would have not been brought up otherwise."

An interesting issue that was brought up in relation to diversity was the number of "different" members it takes to have an effect on the board. The opinion was that at least two of a kind is needed, as a single one is more of an oddity. As the chairman commented:

> "One essential thing, when we start with the [making] Finnish board [more diverse], is that you cannot…take only one monkey, you must take two. I have thought it through many times. He/she is too much of an orphan and people tend to speak their mother tongue and then you sit there quietly and… so… there must be at least a couple at one time."

With three, the female or foreign board members threshold is already passed, and the climate is more open. International experience was seen to be essential, and a board member stated that the home country matters, compared to locals with international experience. This is seen to bring knowledge that someone coming from the outside the country simply cannot gain. Also, the networks the foreign nationals possess are often more extensive than what a local visiting other countries would be able to establish.

The difficulty of finding women for board positions was mentioned several times, especially in such a male-dominated industry as the stainless steel industry. At Outokumpu the number of women in the board exceeds the corresponding figure in the executive committee – or top management - in which all members are men. In light of recruiting foreigners, the remuneration for board services was mentioned most often as a barrier, since the level is not very competitive internationally, especially in state associated companies. Higher fees should be introduced, especially since the time to travel to Finland for meetings is quite long. Yet another difficulty is that Outokumpu is quite an unknown company and brand elsewhere, as are the Finnish culture and language, which can be intimidating to candidates. Also, the personal networks often used to recruit Finnish board members do not apply internationally. Finally, the one-year term of the board was noted to be unattractive to foreigners in relation to the time and commitment it takes to work on the board.

Simrad Optronics ASA

There are in total three women on the board of Simrad Optronics, of which one is foreign, an American who lives and works in Norway. This physical proximity is noted to facilitate board work, as it makes it easier to, for instance, call an extra board meeting if need be. Instead of an often costly widely internationalized board, the chairman has formed an international advisory board to tap into international military knowledge. The fact that 50% of the board is women is considered a "natural balance", which is important in a company with only public customers. However, this balance does not reflect the composition of the top management or the advisory board.

The chairman defined his role to be, “and important discussion partner and supporter of the CEO – but [he] should not get involved in the day to day running of the business.” Weekly contact is held between the chairman and the CEO, and a good working relationship is considered essential. The CEO is not a member of the board.

2.8 Concluding remarks

The nine companies originating from four Nordic countries operate in different legal and institutional environments. For example, in Norway a quota for gender representation on the board is in place. Despite these differences across countries, all the case companies have internationalized and diversified their boards rather simultaneous in the 1990s. Our analysis suggests that the case companies adopted a reactive rather than proactive approach to the recruitment of board members. In other words, they were already operating in particular geographical regions when the need to possess specific market knowledge, or personal relationships emerged.

The interviewees emphasized various, non-visible dimensions of diversity such as cognitive, experiential and linguistic competence in contrast to nationality, age or gender. Yet, foreign or female board members were seen to carry important signaling effects, both externally and internally within the firm. Their board membership was regarded as evidence of an ‘open career path’ up to the board. The case studies also point to a number of barriers that prevent, or slow down, the process of increasing board diversity and internationalization. These include factors such as, long physical distance to “commuting” board members, the local national languages and internationally low board remuneration.

3. Board Diversity and Corporate Economic Performance

3.1 Introduction.

As in most countries across the world company boards in the Nordic area (Denmark, Norway, Sweden and Finland) tend to be composed of demographically similar individuals: men between 50 and 60, national citizens with an education in business, economics, law or engineering. They tend to have the same background as managers in similar companies, live in the same areas and have similar political views. However, many of their companies have grown to become global businesses with great diversity of product markets, workforce, customer base and stakeholders. The obvious question is whether company boards need to follow suit and become more diverse, or in other words whether company performance can be improved by more diverse boards. In this paper we therefore examine the effect of board diversity on the economic performance of listed Nordic firms.

Over the past decade Nordic boards have in fact become more diverse in terms of nationality, gender and age as a consequence of legal changes, globalization and social trends. In some cases this is attributable to political intervention, for example the Norwegian gender quota or mandatory employee representation. In other cases, the trend appears to be mainly attributable to economic and social forces, for example the increasing level of foreign board membership.

In Section 2 we outline the theoretical foundations for the study. We argue that there are both costs and benefits to diversity, for example diverse boards may draw on a larger talent pool while homogenous board may find it easier to work together. Ideally companies would maximize shareholder value by balancing these. However, agency problems and inertia may block or slow down the emergence of efficient board structures, and this partial exogeneity makes it possible to study the effects of board diversity statistically while at the same time providing an argument for change.

In Section 3 we describe the data. We examine the relationship between board diversity and economic performance among listed companies in four Nordic countries (Denmark, Norway, Sweden and Finland) over the period 2001-2007. We argue that the Nordic area is an interesting laboratory for research diversity because regulation and other changes have led to a significant increase in board diversity, but with significant country variation within a culturally homogenous group of countries. We measure board diversity by gender, age differences and nationality.

In section 4 we present statistical results. We find that board diversity is generally associated with higher company performance, but the differences are statistically insignificant when we control for corporate governance and other relevant variables.

In section 5 we discuss the results which are not surprising given the many other factors which influence company performance.

3.2 Theory

The theory of board diversity is severely lacking, particularly compared to the volume of empirical studies and to the high hopes held for diversity in the business world (Carter, Simkins, and Simpson, 2003). As a starting point for theorizing, we consider possible costs and benefits of diversity.

Benefits of diversity

One important benefit of a diverse board could be access to a greater pool of qualified board members (Adams and Ferreira, 2007). It would be strange if the best board members of a multinational corporation all happened to have the same nationality, background, education, age and other demographic characteristics. On the contrary such demographic concentration can be regarded as evidence of discrimination. Removing this source of inefficiency might in itself increase board and company performance.

A second argument for diversity is greater independence. According to agency theory boards are a mechanism to overcome the separation of ownership and management, which gives rise to self serving utility maximization by company managers (e.g., Fama and Jensen, 1983; Eisenhardt, 1989). Boards which are independent of managers and other special interest groups may be more effective in monitoring managers on behalf of shareholders (Rosenstein and Wyatt, 1990; Cotter & Shivdasani, 1997).

Third, it may be that diverse boards are more creative and suffer less from groupthink. Hoffman and Maier (1961) suggest that group diversity enhances overall problem-solving capacity. This indicates that the best performing team (board) should have members that represent variation in demographic characteristics. However, the conclusions from the empirical research on heterogeneity and performance are not clear (Hambrick, 1994). For example, Distefano and Maznevski (2000) find that cross-cultural teams are more creative and generate additional and better alternative solutions. But the average performance is not significantly higher for more cross-cultural teams. In fact, the performance variation is higher for teams with greater cultural diversity.

Fourth, diversity may have signaling value. For example, female board members may send an important signal to employees and customers that women's rights are respected and that female employees will meet with a glass ceiling in trying to advance up the corporate hierarchy (Smith, Smith and Verner 2006). Similarly, an international board may signal a credible commitment to international corporate governance standards, including for example shareholder value maximization as a dominant objective (Oxelheim and Randoy, 2003). They find a positive market value effect from Anglo-American board membership among Norwegian and Swedish firms. Their main argument is that foreign (in their case Anglo-American) board members help to boost "good corporate governance" by the means of enhanced board independence.

Costs of diversity

Diversity may reduce teamwork effectiveness because of lower group loyalty. Studies in social psychology (e.g. Zander, 1979) have found that group loyalty depends on the similarity of group members. Athey, Avery and Zemsky (2000) argue that mentoring is more likely to occur between

similar individuals. In management studies, Kanter (1977) proposed that trust is facilitated by similarity in top management teams. She emphasized that this kind of trust may be more necessary when environmental uncertainty is high (Adams and Ferreira, 2002).

Pelled (1996) distinguishes between two kinds of conflict that may emerge from diversity. Job-related diversity (such as job experience, functional background, organizational tenure) may lead to substantive conflicts that end up having a positive impact on organizational performance. In contrast, demographic diversity may cause affective conflicts which reduce organizational performance. However, visible and job-related diversity may be related; as when foreign, young or female board members have different backgrounds that shape their view of the world.

Likewise, according to Arrow (1951), social choice literature has found higher costs of collective decision-making when the decision-makers are heterogeneous. Board diversity may necessitate longer, less efficient board meetings, the probability of misunderstandings and decision errors may increase, and conflicts of interest may be more likely to occur.

Greater diversity could also make boards less efficient and resolute, in monitoring as well as in decision-making. Thus the grandfather of agency theory, Michael Jensen (1993), argues that "suggestions to model the board after a democratic political model in which various constituencies are represented are likely to make the process even weaker."

Balancing cost and benefits

An efficient board may be expected to balance costs and benefits of diversity, e.g. to include a suitable mix of new members that can provide valuable information, but maintain sufficient homogeneity for effective decision-making. This balance would depend on industry and firm specific conditions like information needs and on the appropriateness of other means to ensure efficiency such as authority, performance-related pay or board culture (Adams and Ferreira 2002). In addition, the degree of internationalization matters (Oxelheim et al. 2009). In general, if firms tend to adopt efficient board structures we would not expect to observe any significant relationship between board structure and economic performance (for example, if firms could increase their market value by nominating more diverse board, they would probably have done do so already). In other words board composition may be endogenous in a way that already takes into consideration the costs and benefits of diversity (Adams, Hermalin and Weisbach, 2008). Any observable performance variation would therefore be attributable to unobserved heterogeneity that is not accounted for. Expectations concerning observable relationships between board diversity and firm value must therefore rely on factors, which could cause deviations from efficiency.

One such factor could be inertia (and prejudice). Sociological institutional theories suggest that organizations may for long periods of time operate according to myths or business recipes that are not founded on financial efficiency (Meyer and Rowan, 1977). If boards discriminate against certain groups based on pure prejudice or other grounds that are not motivated by economic performance, this implies possibilities for arbitrage because valuable human capital is not put to efficient use. Ceteris Paribus firms that break the ice should therefore have an advantage that could be reflected in higher expected returns.

Another important factor in this respect is possible conflicts of interest between organizational performance and board group goals (Jensen and Meckling, 1976; Peled, 1997). Board diversity may make board work more complex, unsettle existing power structures and weaken the bargaining

power of the board vis-à-vis shareholders and other influential stakeholders. The incumbent board may therefore resist increasing diversity even in cases where this might improve organizational performance, e.g. from a financial viewpoint (Oxelheim et al. 2009).

Hypothesis

For empirical testing we advance the following hypothesis.

Hypothesis 1: Board diversity has a positive effect on company performance.

The argument for expecting a positive performance effect is that while internationalization, increasing empowerment of women and other trends have increased the value of board diversity, agency problems and inertia have tended to keep board diversity at sub-optimal levels.

3.3 Data

We examine the relationship between board diversity and economic performance among listed Nordic firms over the period 2001-2007. In Table 3.1 we provide a variable list. We measure board diversity by gender, age differences and nationality.

Table 3.1: Variable List

Theoretical variable	**Operationalization**	**Abbreviation**	**Measurement**
Company performance	Performance: market based	Q	(Market value + debt)/ assets
	Performance: accounting based	ROA	Return on assets %
	Performance: Growth	Growth	Annual Asset growth %
Board diversity	Board diversity: international	fboard	Dummy =1 if there is at least 1 foreign board member, otherwise zero
	Board diversity: gender	wboard	Dummy =1 if there is at least 1 female board member, otherwise zero
	Board diversity: age	agediv	Dummy = 0 if the standard deviation of board age is within than the mean +/- one standard deviation, otherwise 1.
	Board diversity: gender	fem	% female board members
	Board diversity: international	foreign	% non-national boards members
	Board diversity: age	sdage	Standard deviation board age
	Board diversity: age	averageage	Average age of board members
	Board diversity: overall	Diversity	Fem + foreign + sdage
Control variables	Board size	bsize	Number of board members
	Ownership concentration	oc	% stock held by the largest owner
	Risk measure: Growth	growth	Growth of net sales %
	Risk measure: Debt	debt	Total debt/ Total liabilities %
	Risk measure (inv): Equity base	ea	Equity/Assets %
	Risk Measure: Earnings volatility	dvolatility	Standard deviation, stock price
	Risk measure: liquidity	cash_sales	Cash/sales %
	Company size: assets (euro)	dtotalassets	Total assets $
	Internationalization	intl	International sales/total sales %

The question of board diversity has been much debated in Scandinavia, and Norway has gone so far as to legislate diversity by mandatory minimum levels of women and men (40%) on listed company boards. A similar quota was proposed in Sweden, but withdrawn after a change of government in 2005. In Table 3.2 we examine the evolution of three different measures of diversity in the four Nordic countries.

Table 3.2 Diversity in listed Nordic companies: gender, nationality and age.

	country code			
year	Denmark	Finland	Norway	Sweden
	------ % Female board members -------			
2001	6.970807	4.205898	7.229888	6.066089
2002	7.211793	4.040269	9.860761	6.348279
2003	6.643551	5.197946	11.81467	9.358688
2004	6.528439	6.623533	14.21369	14.17675
2005	6.359187	7.081645	19.86892	14.78849
2006	5.630912	9.279534	28.97913	14.69304
2007	6.547456	10.7058	39.02302	17.50572
	------ % Foreign board members -------			
2001	6.704476	6.884921	10.64794	6.545621
2002	5.96504	7.668651	8.81724	6.449887
2003	5.953108	7.087302	10.43911	7.349
2004	7.511243	8.727139	11.99799	8.606133
2005	8.325276	8.090594	14.26362	8.509902
2006	9.198173	10.24265	14.71629	8.547688
2007	8.320097	12.4925	14.1568	9.736145
	Standard deviation of Board member age			
2001	7.551779	7.064636	8.502782	7.926743
2002	7.594875	6.859711	8.514968	7.796165
2003	7.87773	6.990679	8.257543	7.701972
2004	7.751204	6.983166	8.404895	8.049953
2005	7.638655	7.015469	8.066025	8.325777
2006	7.689894	7.3903	8.186573	8.70322
2007	7.817022	7.561147	7.949487	8.558676

Looking at 2007 we observe that Norway has the most diverse boards in terms of gender, internationalization and age diversity. This is probably no accident since the Norwegian gender quota may have induced boards to find qualified members abroad and among younger age groups. Generally (with the exception of Denmark) Nordic boards score high on these measures. The fraction of female board members ranges from 6.5% in Denmark, to 10.6% in Finland, 14.4% in Sweden and 34.2% in Norway. The reason why Norway is not up to the full quota 40% is primarily that employee directors are exempted from the gender quota.

The fraction of women in Scandinavia is higher than in most other countries, among which countries like the US (13.6%), the UK (10.5%), Australia (10.7%) and Canada (11.2%) have high diversity, while the Japan (0.2%) or Italy (2%) are at the other extreme (Grosvold, Brammer and Rayton, 2007).

With regard to international directors, we observe less variation from 8% in Denmark to 9% in Sweden, 12% Finland and 14% Norway. Over time Nordic boards have become more international

in all countries, but perhaps most visibly in Finland, where the fraction of foreign board members doubled from 6% to 12% over the period.

Age diversity – as measured by the standard deviation of board member age - is remarkably similar across the four countries and appears to have changed very little over the period. Average board age is 53 years and most board members tend to be 46-60 years old.

Table 3.3 provides descriptive statistics for our variables.

Table 3.3 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
q	5000	1.59837	1.488024	.0888279	10
roa	5095	1.039937	20.43665	-99.92	165.05
growth	4654	19.62722	36.09055	-99.83066	100
fboard	3885	.3124839	.4635656	0	1
wboard	3885	.5217503	.499591	0	1
agediv	3749	.4809282	.4997028	0	1
hom	3749	.2069885	.4052013	0	1
fem	3885	11.88828	14.04473	0	83.33334
foreign	3885	8.951242	16.10614	0	100
sdage	3753	7.932442	2.862289	0	22.62742
bsize	3885	6.609524	2.099522	2	16
oc	4394	25.35018	19.23731	.01	97.19
forown	3955	.1514539	.358536	0	1
fin	4385	.3870011	.4871195	0	1
size	5448	1417.721	7209.418	.02	271117.1
ea	5438	48.7734	23.21944	0	100
intl	2692	52.82584	30.90269	0	100
vol	3598	32.78476	13.54985	5.25	84.84

We observe that the companies in the study had a q-valuation of 1.6 over the period while its return on assets was only 1%, and assets grew by a little less than 20% on a year by year basis. We have truncated these variables to avoid a bias created by outliers.

The companies are quite international in their business with international sales > 50% of total sales, but less so with regard to governance. Some 31.2% of the companies had a foreigner on board. The largest owner is national in 85% of the companies.

Boards are small (7 persons on average) and therefore presumably less subject to free rider problems than in many other countries. The typical ownership structure may be said to be a dominant minority position (Thomsen and Pedersen, 1997). On average the largest owner holds 27% of the shares, which is not a majority position, but enough to exercise significant practical influence, and 38% is held by financial investors (like pension funds).

The average firm has assets of 1417 million US dollars and has a conservative capital structure with 49% equity.

In Table 3.4 we examine correlation coefficients. We observe that the diversity variables tend to be positively and significantly correlated with profitability (return on assets) and growth, but not strongly correlated with company performance measures such as q. We also note that there is some, but limited correlation between the performance variables.

Table 3.4. Correlation Matrix

	q	roa	growth	fboard	wboard	agediv	hom
q	1.0000						
roa	-0.0546*	1.0000					
growth	0.0558*	0.2336*	1.0000				
fboard	0.0711*	-0.0780*	0.0233	1.0000			
wboard	0.0434*	0.1004*	0.0452*	0.1007*	1.0000		
agediv	0.0663*	0.0157	0.0534*	0.0297	0.1026*	1.0000	
hom	-0.0709*	-0.0474*	-0.0433*	-0.3430*	-0.5490*	-0.4918*	1.0000
bsize	-0.0951*	0.1153*	-0.0519*	0.1812*	0.4012*	0.0959*	-0.2961*
oc	-0.0952*	0.1377*	-0.0223	0.0008	0.0360*	-0.0053	-0.0300
forown	0.0454*	-0.0383*	0.0506*	0.2453*	0.0030	0.0061	-0.0611*
fin	0.0226	-0.0577*	0.0180	0.0862*	0.0163	-0.0228	-0.0011
size	-0.0691*	0.0539*	0.0124	0.1506*	0.1247*	-0.0675*	-0.0797*
ea	0.2816*	-0.0484*	0.0263	0.0368*	-0.0493*	0.0459*	-0.0026
intl	0.1279*	-0.0006	-0.0370	0.1523*	0.0612*	0.0031	-0.0446*
cash	-0.0617*	0.0901*	0.0237	-0.0532*	-0.0128	0.0257	0.0159
vol	0.2452*	-0.3347*	0.0677*	0.0915*	-0.0238	0.0584*	-0.0849*

	bsize	oc	forown	fin	size	ea	intl
bsize	1.0000						
oc	0.0851*	1.0000					
forown	0.0371*	-0.1088*	1.0000				
fin	0.1104*	-0.3270*	0.1899*	1.0000			
size	0.2644*	0.0847*	0.0538*	0.0543*	1.0000		
ea	-0.1695*	-0.0413*	-0.0207	0.0017	-0.1243*	1.0000	
intl	0.1467*	-0.0446*	0.0250	0.0654*	0.0187	0.0209	1.0000
cash	0.0180	0.0288	0.0119	-0.0200	0.0081	-0.0550*	0.0531*
vol	-0.2527*	-0.1582*	0.0689*	0.0423*	-0.1089*	0.1238*	0.1456*

	cash	vol
cash	1.0000	
vol	-0.0616*	1.0000

The diversity variables appear to be most highly correlated with board size and company size. Naturally, foreign board membership is correlated with foreign ownership and as expected, company performance co-varies with risk measures like volatility and capital structure (equity-to-assets).

3.4 Analysis

We begin by reviewing performance differences between diverse and homogeneous boards defined by gender, nationality, age and overall homogeneity:

- *International board (fboard*): Whether or not the company has international board members (at least one)
- *Women on board (wboard)*: whether or not there is at least one woman on the company's board
- *Age diversity (agediv)*: whether or not the age diversity (standard deviation) of board members is one standard deviation higher than average

- *Diversity (divmul)*; whether or not the board is completely diverse with regard to nationality, gender and age
- *Homogeneity (hom):* whether or not the board is completely homogenous with regard to genders, age and nationality.

In Table 3.5 we plot mean values of 3 performance variables – firm value (q), profitability (roa) and growth (annual asset growth) – in diverse and homogenous boards.

Table 3.5 Diversity and performance

Board Membership	q	ROA	Growth	N
International				
0	1.500834	3.212181	18.36051	2,671
>0	1.713249	.2237476	20.061	1,214
T-test	-3.9***	4.3***	-1.3 n.s.	
Women				
0	1.501388	.388923	17.24806	1,858
>0	1.621214	3.94279	20.29665	2,027
T-test	-2.5**	-5.8***	-2.7***	
Age diversity				
Low	1.485751	2.0612	17.35896	1,946
High	1.667489	2.616004	20.92984	1,803
T-test	-3.8***	-0.9	-3.1***	
Homogeneity				
Low	1.621737	2.74982	19.7965	2,973
High	1.380583	.6772263	16.21381	776
T-test	4.8***	2.5**	2.5**	
Diversity				
Low	1.545931	2.51097	18.77645	3,387
High	1.824578	.5957276	21.76598	362
T-test	-3.0***	1.5 n.s.	-1.5 n.s.	
Total	1.572714	2.326527	19.06365	3,749

- International board (fboard): Whether or not the company has international board members (at least 1)
- Women on board (wboard) : whether or not there is at least one women on the company's board
- Age diversity (agediv): whether or not the age diversity (standard deviation) of board members is one standard deviation higher than average
- Diversity); whether or not the board is completely diverse with regard to both nationality, gender and age
- Homogeneity : whether or not the board is completely homogenous with regard to both gender, age and nationality.

Note: T-tests with unequal variance.

We observe that companies with diverse boards tend to perform better in most respects. They have higher q-values and higher growth rates in every single case. The differences are in the order of 10-20%, and statistically significant. In contrast, homogenous boards underperform significantly. The magnitude of these effects is notable given the limited impact of board structure found in most other

studies. However, given the many other factors which influence firm performance, even effects of this magnitude can easily drown when control variables and data characteristics are taken into account.

With regard to accounting returns, the picture is more muddled. Firms with foreign board membership appear to have systematically lower return on assets, which also carries over to fully diverse boards. In contrast, completely homogenous boards also have significantly lower accounting profitability.

Interaction effects

In Table 3.6 we check for interaction effects between diversity variables. It may be, for example, that different kinds of diversity support or confound each other.

Table 3.6 Performance and Board Diversity: Interaction effects

Foreign Board membership	Female board membership 0	1	Total	
0	1.48775	1.514006	1.500834	Q
	3.481199	7.978274	5.733529	ROA
	16.73907	19.99676	18.36051	Growth
	1,368	1,303	2,671	N
1	1.542851	1.815488	1.713249	Q
	-2.065417	5.25213	2.529322	ROA
	18.77883	20.83878	20.061	Growth
	490	724	1,214	N
Total	1.501388	1.621214	1.565739	Q
	2.122844	7.016106	4.7621	ROA
	17.24806	20.29665	18.88201	Growth
	1,858	2,027	3,885	N

We observe evidence of positive interaction effects. For example, female board membership is much more strongly associated with firm value when there are international board members, while the association is marginal in a purely domestic board. The positive association between female board membership and accounting returns is also much stronger. Put differently, the negative association between ROA and foreign board membership is much less pronounced with female board membership.

Similar positive interaction effects are found with age diversity and gender or national diversity (not reported here), but not in the sense that combined female and foreign board diversity is more strongly associated with high performance when age diversity is high. However, neither do we find any indication of negative interaction effects which could arise if the diversity had negative effects when overdone.

Non-linearity

As mentioned in the theory section, there are reasons to assume that the effects of diversity may me non-linear. This would, for example, be the case if diversity is in fact important and the fraction of women or non-nationals increases to a point in which it effectively reduces board diversity. Moreover, there may be threshold effects in the sense that, for example, a single foreigner finds it difficult to speak up or be heard, while two foreigners together might find it easier to have an impact.

In Table 3.7 we check for such non-linearity by breaking down our performance variables by number of international and female board members.

Table 3.7 Average performance by number of female board members (nfemales) and number of non-national board members (nforeign).

nfemales	mean(q)	mean(roa)	mean(growth)	Freq.
0	1.501388	.3894107	17.24806	1,858
1	1.599231	3.059423	17.98844	1,160
2	1.552089	5.134451	23.58801	552
3	1.834187	5.416948	23.95525	234
4 or more	1.763312	4.617089	21.358	81
nforeign				
0	1.507948	3.228253	18.57455	2,623
1	1.651824	.1586863	18.90002	585
2	1.659398	2.6364	19.63387	365
3	1.741907	-3.521312	20.19371	181
4 or more	1.869092	-.1168225	21.26542	131
Total	1.565739	2.30304	18.88201	3,885

We observe some indications, but no proofs of non-linearity. For example, firm value appears to increase up to 3 female board members, but to decrease slightly after that. This might very well be an artifact in itself, but we observe the same pattern for accounting profitability and growth. Moreover there appears to be a significant jump in accounting profitability between having no women on board and having just one, or again between having one and having two women on the board. In contrast, firm value and growth appear to increase monotonously with the number of international directors, while accounting returns appear to be more erratic, though generally declining.

The conclusion we wish to draw from presenting these tentative results is that the relationship between board diversity and company performance may well be complex although it appears to be generally positive based on a first impression.

Statistical models

Below, in Table 3.8, we present nine different estimates of the effects of diversity, controlling for other variables. We regress diversity on our three performance variables using three different estimation methods (OLS, panel data and GMM). We believe that each of these 3 methods have strengths and weaknesses which may reveal different aspects of the data. For example, OLS includes cross sectional correlation, which panel data analysis tends to suppress. GMM contributes by allowing for endogeneity of the explanatory variables, but also tends to wash out cross sectional effects.

Table 3.8 Diversity and performance regressions.

Model	1	2	3	4	5	6	7	8	9
Estimation	OLS	Fixed Effects	GMM	OLS	Fixed Effects	GMM	OLS	Fixed Effects	GMM
Dependent Variable	Q	Q	Q	ROA	ROA	ROA	Growth	Growth	Growth
Independent Variables:									
Fboard	0.006	0.050	0.15*	-2.323**	2.111**	2.071*	-0.749	1.755	-2.094
Wboard	0.121	-0.004	0.16**	1.521	0.643	0.625	-2.027	-1.519	-2.354
Agediv	0.110	0.004	0.030	0.752	0.675	0.127	1.286	1.195	-1.944
OC	0.0002	0.005**	-0.001	0.050*	0.053	0.272	-0.008	0.063	0.244
Forown	0.15*	-0.126	-0.084	0.071	-0.701	-0.423	3.567	0.796	1.918
Fin	-0.060-	-0.041	-0.045	0.7980	2.682***	0.970	-0.404	3.963	3.319
Bsize	0.034	-0.035	0.019	0.580**	-0.649*	-0.256	-1.416***	-1.463	0.465
Size	-0.0006**	-0.014*	0.003	-0.000	0.007	0.000	0.000	0.001***	0.001
Debt	-0.013***	-0.034	-0.008**	-0.051	-0.217***	-0.385***	0.093	0.081	0.542
Intl	0.003	0.003***	-0.0002	0.010	0.038	0.055**	-0.023	0.032	0.124
Country dummies	X			X			X		
Industry dummies	X			X			X		
Time Dummies	X	X	X	X	X	X	X	X	X
R-square	0.26	0.07		0.11	0.14		0.14		
Model (F/Wald)		12.5***	30.87**		14.51***			1.81***	22.55**
N (firm years)	1756	1756	1305	351	351	1309	1722	1722	1160
N (firms)	353	353	303	1713	1713	311	353	353	312

Wboard; dummy variable for female board participation (0=no females on the board, 1=1 or more females). Fboard; dummy variable for international board participation (0=no international participation, 1=1 or more international board members). Agendiv: Dummy = 0 if the standard deviation of board age is within than the mean +/- one standard deviation, otherwise 1. Q: (Market value + debt)/ assets. ROA: Return on assets %. Growth: Annual Asset growth %. Bsize: Number of board members.

Oc: % stock held by the largest owner. Debt: Total debt/ Total liabilities %. Debt: Total Debt/Assets%. Size: Total assets million $. Intl: International sales/total sales %. *= significant at 10% level. **=significant at 5% level. ***=significant at 1% level. OLS: Robust standard errors clustered by firm. Significant Hausman tests for all fixed effects regressions.

As might have been predicted, we find many insignificant effects. Among those we find significant we can mention positive effects of both international and female board representation on Q in the GMM estimations. In the regressions on ROA we find a negative effect of international board membership in OLS, but positive effects in fixed effects and GMM estimates. This puzzling inconsistency can be interpreted in various ways. It is possible, for example, that expert foreign board members are brought in help turn around underperforming companies (hence the negative correlation with ROA) and that they actually deliver what is expected (hence the positive change effect uncovered in the fixed effect models). Nothing is significant in the regressions on growth.

Altogether the results of these and similar regressions (with and without endogeneity, non-linearity and interaction effects) are inconclusive. There can be many reasons for this. Two explanations are worth mentioning. First and foremost, the effects of board structure are generally weak compared to other performance determinants. The effects of board structure are therefore difficult to discern. Second, as previously mentioned, there are reasons to assume that board diversity is determined by a range of governance and firm variables (including performance) in a complex web of interactions.

One way to overcome these obstacles is to test extreme values. In Table 3.9 we compare only fully homogeneous and fully diverse companies and the association of these two groups with q.

Table 3.9 Diversity and performance regressions.

Model	1	2	3
Estimation	OLS	Random Effects	GMM
Dependent Variable	Q	Q	Q
Independent Variables:			
Top	1.94**	0.276	0.210
OC	-0.000	-0.004	-0.005
Forown	0.185	-0.007	-0.181
Fin	-0.085	0.013	0.112
Bsize	-0.001	-0.030	0.031
Size	-0.025**	-0.0028**	-0.008
Debt	-0.010***	-0.016***	-0.012***
Intl	0.002	0.000	-0.002
Country dummies	X		
Industry dummies	X		
Time Dummies	X	X	X
R-square	0.32	0.27	
Model (F/Wald)		144.61	52.72***
N (firm years)	464	168	265
N (firms)	168	464	108

Top; dummy variable for fully diverse board compared to a fully homogenous board (0= fully diverse board, 1=completely homogenous board: no female or international members and blow average age diversity). Q: (Market value + debt)/ assets. Bsize: Number of board members. Oc: % stock held by the largest owner. Debt: Total debt/ Total liabilities %. Debt: Total Debt/Assets%. Size: Total assets million $. Intl: International sales/total sales %.

*= significant at 10% level. **=significant at 5% level.

***=significant at 1% level. OLS: Robust standard errors clustered by firm. Insignificant Hausman tests for fixed vs random effects regression.

We find that diverse firms tend to have higher firm value in using OLS and random effects regressions than homogenous firms (fixed effects were rejected by the Hausman test), but there were no significant effects using GMM. Nor do we find significant differences between homogenous and diverse firms in terms of accounting profitability and growth.

3.5 Discussion

In this paper we have found a generally positive association between board diversity and company economic performance. However, the positive association is not robust when controlling for corporate governance structure and other variables which may influence performance.

The lack of robust significance comes as no surprise. First, board structure and board diversity in particular is just one of many factors which influence company performance, and probably not one of the major determinants (Thomsen, 2008). Moreover there is reason to assume that board structure is endogenous (Adams et al. 2008), and that its effects on performance are conditioned by firm specific circumstances which are difficult to measure. Generally, past studies have found insignificant effects of board structure on company performance. Altogether, the lack of significance does not mean that there are no positive effects of board diversity. In fact a significant correlation between board diversity, all else equal, supports the existence of such effects.

Our statistical models indicate that the measured effects of diversity are particularly sensitive to controls for time (year effects), firm internationalization, international ownership and board size. Since board diversity has increased significantly in Nordic countries controlling for time effects effectively neutralizes the positive performance effects of this increase. Thus we cannot statistically exclude the possibility that the positive pair wise correlations between diversity and performance are a result of a spurious correlation between improving company performance in the boom period 2001-2007, and a positive time trend in diversity.

In the same way, the positive effects of foreign board membership tend to become insignificant when we control for foreign ownership or firm internationalization, which has increased over the period. But this does not mean that foreign board membership is not valuable. It seems highly probable that foreign board membership is more beneficial in international companies, or that foreign ownership puts pressure on companies to internationalize their boards (Oxelheim et al. 2009).

The negative association between foreign board membership and accounting profitability could be a warning signal that foreign board membership is bad for performance, but the association turns out to be positive and significant in a fixed effect regression model (while it is negative in OLS regressions). This is consistent with the hypothesis that expert foreign board members are brought in to increase performance in underperforming companies and that they live up to expectations.

We do not doubt that board diversity is endogenous being influenced, for example, by board size, company size, company performance and many other variables. However, in many cases we believe that the positive effects of board diversity work though these variables. For example one of the positive effects of foreign ownership may precisely be that it tends to make the board more

international, in which case it does not make sense to control for foreign ownership when estimating the effects of foreign board membership. However, since we cannot exclude that there are other, direct effects of foreign ownership on company performance, there are also arguments for including it.

We cannot exclude the possibility of reverse causality, i.e. that shareholders of well-performing companies choose to increase board diversity. However, reverse causality begs the question of why shareholders would want to do that if not for the belief that increasing diversity would somehow be beneficial to the company. Note that these are the same shareholders who determine its stock price and market value by buying and holding stock.

Altogether, our impression is that there is a positive effect of board diversity on company performance, but that the effect is small and not strong enough to survive statistical controls for the many other factors which influence company performance.

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4. Paths to Gender Diversity: The Nordic Case

4.1 Introduction

Growing academic evidence suggests that the optimal corporate board should be not composed exclusively by middle- to old-aged directors with executive experience (e.g., Adams and Ferreira, 2008; Carter, Simkins & Simpson, 2003). Despite the latter and the increasing pool of well-educated and experienced females, the representation of women on corporate boards remains small. In 2007, females for instance only held 14 percent of board seats in Fortune 500 firms (Catalysts, 2007; Hillman and Cannella, 2007), 20 percent of seats in the largest companies in Norway and Sweden, 14 percent in Finland and 10.5 percent of board seats in the UK's top 100 companies (Grosvold et al., 2007). Apart from the individual factors that make men and women choose different areas of study and career paths, other factors influence female representation on corporate boards (Powel, 1999). This paper contributes to the literature by providing new evidence on the antecedents of female corporate board appointments.

We analyze female board representation in four Nordic countries, Denmark, Finland, Norway and Sweden; across a 7 year period (2001-2007). Nordic countries are particularly interesting in this regard since they all share a long history of social support to gender equality. In Norway, the debate has materialized into the adoption of a legislative requirement of a minimum percentage (40percent) of board members from each gender. With its unique data, this study is the first European study that systematically addresses the organizational determinants of female appointments in the boardrooms. However, worldwide this issue remains largely unexplored, the only exception being Farell and Hersch (2005), Hillman and Canella (2007) and Kang et al. (2007). Our paper advances the existing studies by exploring the interaction of the different dimensions of board diversity; in gender, age, nationality and values (interests). To be more specific, we test whether the firms with boards that are younger in age, or more heterogeneous in terms of members' interests and nationality, are more inclined to appoint females to their board. With this, we tackle the internal organizational predictors of female board representation. Past research suggests that the impact of these factors is important for a complete understanding of female board appointments, and that this issue has, so far, been unexplored (Hillman et al., 2007).

We find only weak evidence that employee board representation positively impacts female representation on boards. More robust however, is the relation between diversity in nationality and gender. We provide supporting evidence that these two aspects of diversity tend to substitute, rather than complement each other. We find that firms with more foreigners tend to have fewer females, and that an increase in the number of foreigners reduces the probability of new female appointments on that board. Interestingly enough, we find that on average female representation is higher in 'older' boards. Given that female board members are, on average, younger than their male colleagues, the firms with older male directors may feel more pressured or "less threatened" to have females on board. In addition, we find that greater board size and increases in board size have a positive influence on new female appointments to boards, and that firms with a higher number of (existing) female representatives are less likely to increase the number of female directors. Female appointments are furthermore determined by firm's market performance, leverage and industry characteristics. These findings suggest that firms follow a "goal of minimal diversity." Similar to the US study by Fareell and Hersch (2005), we conclude that despite a generally positive attitude towards female appointments in Nordic countries, firms' gender appointments still mostly reflect attempts to satisfy the increasing outside pressure for more diversity rather than their (internal) recognition of the potential benefits associated with female presence on corporate boards.

We start (in section 2) with a brief overview of the related studies and continue with the exposition of our main hypotheses. The third section presents the sample, methodology and main descriptive statistics. The results of the empirical analysis and the related discussion are presented in the fourth section. The fifth section provides a conclusion.

4.2 Organizational determinants of corporate boards

The stream of literature studying the composition of corporate boards views the board of directors as an institution that arises endogenously in response to agency problems (Hermalin and Weisbach, 2003), resource dependencies and the regulatory pressure under which firms operate (Pfeffer, 1972).[7] The composition of the board is consequently taken as firm-specific, that is, determined by the firm's governance structure, as well as the need to assure long-term commitment from key external resources and manage institutional pressure. Conditional to her bargaining power relative to the existing directors, the CEO herself may influence the composition of the firm's board (Hermalin and Weisbach, 2003; Pearce and Zahra, 1992). The recognition of managerial power in determining the composition of the firm's board and consequently, the firm's performance[8] has resulted in an increasing public attempt to reform boards towards higher diversity, in particular towards a stronger representation of the outside directors on corporate boards and increased requirements in relation to the professional background of the board members. Along with the increasing board independence from management, the research on groups and organizational behavior suggests a number of other positive benefits from board heterogeneity. It is now largely recognized that the board of directors is a group of individuals, whose behavior, or the way they think, act and perceive different situations, is governed by emotions, norm adherence, values and cognitive biases (Hermalin and Weisbach, 2003; Jensen and Zajac, 2004; Miller et al., 1998). The latter are in turn influenced by the individuals' backgrounds, education, age, gender and other demographic characteristics (see for example, Jensen and Zajac, 2004); compared to homogenous groups, groups of people with diverse background and specialties tend to be more creative. Heterogeneous directors tend to adopt decisions of a higher quality, they are less cohesive; they exert fewer pressures towards conformity and consensus, and are less susceptible to group thinking (Miller et al., 1998).

The recognition of the diversity potential, together with the increasing social pressure for gender equality, is also reflected in increasing 'public' demand for more female directorships in a number of countries over the last decade (i.e. Norway, Sweden, USA; see also Economist, 2008). The gender aspect is important since men and women have different norms, attitudes, beliefs, and perspectives based on these differences (Pelled, Eisenhardt, Xin, 1999 in Hillman et al., 2007). In fact, researchers observe a variety of behavior aspects that distinguish females from their male colleagues. Female directors seem to challenge decisions more and generate a larger number of alternative solutions, which consequently improves the creativity and quality of the board decision making.[9] Female members contribute a different way of thinking and positively influence board discussion; they also change the general tone and interaction of the board, which consequently increases the level of board professionalism (Danisco Case, Jakobsen and Thomsen, 2009). Women have less attendance problems and are more strict at monitoring than the male board members (Adams and Ferreira, 2008). Despite a positive trend, female board representation is still in its infancy. Women directors in most firms act "solo," as a 'token'; the number of female directors rarely reaches the critical mass necessary to make a change with regards to other board functions (see for example Catalyst, 2005).

Empirical studies so far mostly research the individual and personal characteristics that make women advance to corporate boards (see for instance, Hillman et al., 2002). Much less is, however, known about the organizational factors, which influence the firm's demand for female directors. Among the few existing studies, Farrell and Hersch (2005) for example, investigated female additions to corporate boards in Fortune500 and Service500 firms. They confirmed that diversity consideration had an impact on directors' appointments in these firms in the 1990s. The appointments of females seem to be influenced by the firm's

[7] Three main functions of the board have been underlined in the research on the board of directors and optimality of the different board structures: the governance (monitoring) role (for an overview, see Hermalin and Weisbah, 2003); the institutional or resource-acquisition role (see for example, Pfeffer, 1992) and, the strategic function of the board (for more, see Goodstein et al., 1994).

[8] For an overview of the existing studies see, for example, Hermalin and Weisbach, 2003.

[9] For more on the benefits of female board representation see, for example, Hillman et al., 2007.

attempt to gather a "certain" level of females in the boardroom. They also find that the intensity of female appointments is higher in better performing firms and in the firms with a higher percent of institutional investors' ownership and consequently, a higher outside pressure for increased gender diversity. Hillman and Canella (2007) study the organizational determinants of females on the boards of the largest 1000 publicly traded US firms between 1990 and 2003. They find that the likelihood of female representation increases with firm size; the presence of female directors among linked firms (network effect), organizational age and board size. Female representation is lower in riskier firms and in the firms that operate in industries with relatively lower female representation in the labor force. The general implication from the existing research is that gender is an important factor in board nomination and that in appointing directors, the firms (and their owners) trade-off between the benefits and drawbacks associated with having women on board. The choice seem to be, however, largely influenced by the firm's attempt to preserve legitimacy[10], namely to reduce the negative effects associated with firm's non-compliance with outside (public) pressure for female appointments on boards, rather than from the 'internal' recognition of potential female contribution to improving the functioning of the board.

We advance the existing studies by exploring the interaction between different dimensions of board diversity. We believe that exploring the interaction between the different dimensions of board diversity is important since a firm, whose board is more heterogeneous (due to the participation of the employees, foreigners, etc.), may perceive the costs of gender diversity as lower than a firm with more homogenous boards and no experience with the "diversity" in the boardroom. One of the potential drawbacks associated with female representation on boards is, in fact, the 'fear' of potential conflicts arising from the differences in perspectives, values and behavior that differentiates the two genders. Other studies suggest that female directors may increase conflicts in the boardroom, reduce communication and limit board's ability to initiate timely strategic actions in response to critical environmental changes (Hillman and Cannella, 2007; Goodstein et al., 1994; Kosnik, 1990; Zenger and Lawrence, 1989). However, we expect that these issues may be of less importance in firms that have a 'history' of diversity[11] in the board room, or are, in general, more inclined to diversify their boardrooms. We believe that this could be the case in the firms with employee representation on their board, and in the firms whose recognition of the positive effects of diversity is also reflected in the general structure of their board. We thus hypothesize that 'diversity drives diversity,' or more specifically that:

Hypothesis 1: Employee directors have a positive impact on female board representation.

Hypothesis 2: Foreigners on board have a positive impact on female board representation.

Hypothesis 3: Female presence on boards is positively related to the age diversity of the board member.

And finally,

Hypothesis 4: Firms that already have female representatives on board are more likely to appoint new female directors.

[10] In line with the resource dependent theory, a firm may benefit from a board member in three ways: 1) advice and counsel, 2) legitimacy (a society may gain legitimacy to respond to higher social expectations – i.e.), 3) provisions of channels of communication to external entities, gaining influence and support from important elements or access to important resources outside the firm. Consequently, the characteristics of administrators should be related to the context of the organization because those members who are in power and who have the greatest influence over selection are those who have characteristics most useful in coping with the organization's context and contingencies (Pfeffer and Salancik, 1978).

[11] Diversity relates to board composition and the varied combination of attributes, characteristics and expertise contributed by individual board members (Walt and Ingley, 2003). Within this definition, the primary distinction has been made between demographic (i.e. observable) and cognitive dimension of diversity (Maznevski, 1994, Milliken and Martins, 1996).

4.3 Sample and research method

Our initial sample consists of all the listed firms in Denmark, Finland, Norway and Sweden at the beginning of 2007. For each firm we identified the board members by examining each firm's annual account and their web sites. For each board member and CEO, we collected their name and surname, birth year, year of (first) appointment on the board, nationality, gender, information on his/her role in the board (i.e. employee representative, committee membership), education and international experience in boards, work or studies at the end of 2006. In the second round, the collection was extended over the whole 2001-2007 period. We re-checked the collected information and collected new data for the years 2001-2005 and year 2007. Due to limited availability of information, the collection was limited to a set of most relevant variables: directors' name and surname, birth year, first appointment on the board, role in the board (employee representative), gender and nationality. All information was collected by persons having the nationality of each respective country, and alternative data sources (i.e. internet, lists of important individuals, business week, etc.) were used in cases where the identification of name and surname was not straightforward. After the two rounds, we performed a final control of the data by comparing the info for the same board members over different years and, re-checking the collected information for a selected sample of firms (round three). Not all the data was, however, available for every firm; this leaves us with a rich but unbalanced panel consisting of 431 firms in year 2001, 471 firms in 2002, 493 in 2003, 518 firms in 2004, 537 firms in 2005, 757 firms in 2006 and 678 firms in 2007.

The descriptive statistics for the percentage of females on each board in the sample firms are presented in Table 1 below. To complement Table 4.1, Table 4.2 presents the percentage of firms with at least one female on its board.

Table 4.1: Percentage of females on board (unbalanced sample)

	2001	2002	2003	2004	2005	2006	2007
Denmark	7.93	8.03	7.50	7.40	7.13	6.85	7.82
Finland	4.63	4.48	5.48	7.21	7.95	10.10	11.60
Norway	8.45	10.89	13.10	15.52	21.12	29.46	39.07
Sweden	6.71	7.12	10.49	15.39	15.76	15.93	18.40

Table 4.2: The percentage of firms with at least one female on the board of directors (unbalanced sample)

	Denmark		Finland		Norway		Sweden	
	% of firms	Total number of firms	% of firms	Total number of firms	% of firms	Total number of firms	% of firms	Total number of firms
2001	37.50	104	25.00	72	34.38	64	37.70	191
2002	40.00	110	25.00	80	44.44	72	37.80	209
2003	34.45	119	28.24	85	49.37	79	49.52	210
2004	33.33	120	33.70	92	51.00	89	68.66	217
2005	35.00	120	31.91	94	73.08	104	72.15	217
2006	31.11	135	42.62	122	90.15	132	66.03	368
2007	35.34	133	49.50	125	96.53	144	76.81	276

As evidenced in Table 4.1, the percentage of females on boards has been increasing in all countries but Denmark. While there is only a moderate increase in the percent of females in Finland, Swedish and particularly Norwegian firms have substantially increased the female presence on their boards. This trend is confirmed also by an increasing percentage of the firms that have at least one female representative on the board; as expected (given the quota law), nearly every Norwegian firm had at least one female director at the end of 2007. The percentage of firms that have invited females to join their board is relatively high also in Sweden (76.81), and has been increasing in recent years. Finland and particularly Denmark are lagging behind with 49.50 and 35.34 percent of gender-diversified boards.

An important explanation of the observed trend and differences across the countries can be found in differences in the country's regulations, and in general, outside pressure for more female board members. In Norway, discussions on gender diversity materialized in the adoption of a "quota law," which made it obligatory for all listed firms to have at least 40 percent of female directors by the end of January 2008. Discussions on a legislation that would require a certain quota of females in corporate boards has also been going on in Sweden. Much less prominent, on the other hand, is the institutional pressure in Finland and, particularly, in Denmark, where a more serious debate over board diversity has started only recently. However, female directors can be found in these last two countries as well. And, factors other than institutional factors may be underlying each firm's choice to appoint female directors also in Norway and Sweden. It is the aim of the next sections to go beyond the institutional determinants and explore other (firm-specific) antecedents of gender diversity in the boardroom. We start with the description of the main variables and continue with the presentation of the empirical model and discussion of the results.

4.4 Variables

Female board representation. Our key dependent variable is the number of females on the board of directors (***Nfemales***). Alternatively, we construct a multi-category variable (*CFem*), which is coded 1 when the firm has reduced the number of females on board; 2 for the firms where there is no change in the number of variables in a given year, and finally, we label the dependent variable 3 in cases where the firm increases the number of females on the board.

Employee representation. We measure employee representation on the boards by the percentage of board seats that are occupied by the representatives of the firms' employees. The choice of percent rather than number is chosen to avoid collinearity problems (i.e. due to the correlation between the number of employees and board size). The countries of our analysis differ with regards to the legal requirements concerning employee representation on the board. While in Denmark, Sweden and Norway, the employees in larger firms have the right to appoint their representatives on board, no such requirement applies to the Finnish firms.

Foreigners. The second measure of board diversity in our analysis is calculated as the percentage of the all non-national board members in total number board members. In a few cases, where we could not identify the nationality of all the board members, the number of foreigners was reported as the total number of the board members, for which information on the nationality was available.

Directors' age. The age of male directors is primarily used as the standard deviation of the board members' age. In an alternative specification, effect of board age is proxied by the average age of the male directors (finally reported in the regression) and, by the standard deviation of the director's tenure on the board.

Number of females on board. Models 3 and 4 estimate the probability of an increase or decrease (versus no change) in the number of females on board. If "diversity drives diversity" then boards that have already one female representative may be more likely to open the doors to more females. In order to test for this effect, we include the number of female directors on board among our main explanatory variables.

Control variables. The choice of the control variables is determined by the availability of the data and the existing empirical and theoretical findings on the environmental and organizational antecedents of the board structure.

Firm performance and leverage. Firm market performance is measures by the Tobin Q, while we proxy the firm accounting performance with the return on assets. The impact of firm performance on female board appointments may be twofold. On the one side, better performing firms can "afford to care" for diversity. Also, being a scarce commodity, females may be self-selected on better performing firms (Farrell and Hersch, 2004). This implies a positive relation between the number of females on the board and firm performance. However, female appointments may also result from the firm's attempt to improve the functioning of the board; this implies a negative relation between firm performance and female board representation. In addition to firm performance, we control for the level of debt, measured by the debt-to-equity-ratio; given that debt in itself represents a disciplining mechanism, we expect that it has a negative impact on the female board representation. The source for the financial data and stock market data is Thomson ONE Banker data base.

Firm and Board size. Larger firms or firms that are generally more exposed to the public and are consequently, to a larger extent, subject to external pressure for board diversity, may have a stronger pressure to conform to social expectations (DiMaggio & Powel, 1986; Hillman et al, 2007). This implies a positive correlation between the firm size and gender diversity of the corporate board. Board size is measured with the total number of board members and is included to scale the female representation on the board.

Ownership concentration. Ownership concentration is measured as the size of the ownership share held by the first largest shareholder. Data on ownership structure were taken from the Thomson Financial Ownership database. Full control (i.e. ownership share higher than 50 percent) is assumed for the firms with deviation from one-share-one vote structure. According to Adams and Ferreira (2008), boards with female directors are more thorough at monitoring than gender-homogenous boards. Assuming that this holds true, we would expect that the firms with controlling owners may find it less necessary to appoint female directors. Also, institutional investors have been implementing diversity screens as part of their investment practices (Grosvold et al, 2007); this should imply a higher female board representation in the firms with relatively dispersed ownership (i.e. in comparison with the firms that are controlled primarily by individuals, firms or families).

Firm risk. Risk is proxied by the Worldscope price volatility indicator, which measures the stock's average annual price movement to a high and low, from a mean price for each year. For example, a stock's price volatility of 20 percent indicates that the stock's annual high and low price has shown a historical variation of positive 20 percent to negative 20 negative from its annual average price. Controlling for firm risk is important since, when uncertainty is high, board homogeneity is more desirable (Adams and Ferreira, 2003). Firms operating in a more volatile environment may need to adopt decisions more quickly. This increases the cost of potential impasse in decision-making due to the impossibility of balancing the variety of interests and views in a diversified board (Goodstein et al., 1994).

Industry. We include dummies representing each of the two-digit SIC industry categories. The existing empirical studies indicate that females are more present in service-oriented, labor-intensive or womens product's industries, which have a larger pool of females available for board positions. Moreover, female representation may be stronger in the industries, where the success is more conditioned by the customers' and employees' needs (i.e. services, female products industries, etc.). This is in line with the resource-dependence theory, which advocates the role of the board members in providing an important channel of information, facilitating access and strengthening the commitment to important firm constituencies and resources.

Institutional pressure. The countries of our analysis vary according to the public pressure for higher female representation on the board. We account for this by including country and time dummies in our regressions;

country dummies should account for the cross-country differences in the public demands, while the time dummies should capture the "increasing" pressure of these demands, or of any other factors across time. Institutional, cultural and social factors play an important role in shaping board diversity (see for example Grosvold et al., 2007). Although these countries share some common characteristics that are normally attributed to the Nordic societies, the pressure for female board representation has not spread equally across them.

4.5 Methodology

The dependent variable in models 1 and 2 is the number of females on the board of directors. This variable is a 'count' variable, which can be only a nonnegative integer and can have relatively few values (0, 1, 2, 3, 4, 5 and 6). The data are strongly skewed to the right and thus not normally distributed, which makes the OLS regression inappropriate. The nominal distribution for count data is in fact the Poisson distribution; given the panel structure of our data, we rely on the maximum likelihood estimation, or more specifically, the Poisson model for panel data to estimate our regressions (for more, see Green, 2003). The Hausman test indicates that we can maintain the assumption that heterogeneity is uncorrelated with excluded exogenous variables and that the random effect can be used (*Haus* χ*.=18.48; (prob)*$^{\#}$ *= 0.23).* In the alternative specification, the Poisson model is estimated as the population average model; this specification allows us to control for over dispersion (by scaling the standard errors), which is a common problem with the count data, and to account for a specific within-group correlation structure for the panels (i.e. the fact that observations are not independent within the groups). The results of the population-average Poisson regression are presented in model 2.

In model 3, the dependent variable is constructed as a 'choice' variable consisting of three different categories. We defined these categories based upon the nominal change in the number of females on corporate boards. We coded the dependent variables as 1 when the firm reduced the number of females on board; as 2 for the firms where there is no change in the number of variables in a given year and finally, we label the dependent variable as 3 in cases where the firm increases the number of females on board. Consequently, we rely on the multinomial logistic regressions (with the cluster corrected standard errors) to predict the probabilities of a given outcome (i.e. increase or decrease in the number of females) over the probability of the reference outcome (i.e. no change in the number of female representatives on board). For the sake of consistency with previous research (see for example, Farrell and Hersch, 2005), all reported estimations (model 1-3) were also performed separately for a reduced sample of non-regulated firms. In the analysis, financial institutions, real estate firms along with insurance companies (SIC 6000-6799), electric, gas and other utilities within the SIC code 4900 were eliminated from the sample, which reduced our sample to 438 firms and 1808 firm-year observations. The results did not significantly differ from the ones in model 1-3 and are thus, not reported. Finally, we address potential multicolinearity problems by calculating the variance inflation factors for all the variables included in our models. In none of the variables did the variance inflation factor exceed 2.6, which is well below the critical level of 10 and thus allows us to reject concerns about the collinearity issues. The descriptive statistics for the variables used in the regression analysis are presented in Table 4.3. The results of our analysis are presented in table 4.4 and 4.5. We estimated other specifications by altering the included explanatory (controlling and main) variables. For the sake of brevity, only the most robust findings are reported.

Table 4.3: Descriptive statistics for the variables used in the regression analysis

	Mean (sd)	Median	N firms
N_females	0.86 (1.03)	1	3885
Employee_percent	10.32 (14.45)	0.00	3826
Foreign_percent	8.90 (16.18)	0.00	3885
Board_size	6.61 (2.10)	6	3885
Male_average_age	53.66 (5.07)	54.00	3059
Tobin Q	1.60 (1.66)	1.11	3456
Roa	1.40 (20.76)	5.39	3481
Sales (mio USD)	1185.71 (4186.42)	125.06	3522
Leverage	22. 78 (20.30)	19.55	3531
Larges owner (%)	25.75 (18.71)	20.09	3350
Risk	32.26 (12.82)	28.8	3522

Note to the table: N_females is the number of females on the board of directors. Employee_percent is the percentage of employee representatives on the board; Foreign_ percent is the percentage of foreign board members. The Board_size is the total number of board members. The Male_average_age is the average age of the male board members in a given firm. Tobin Q is calculated as the ratio between the sum of firm's market capitalization and debt and, the book value of total firm assets. Roa is the return on firm assets. Sales are expressed as the nominal value of the firm's annual sales. Leverage is measured as the percent of debt in total assets. The largest owner is the percent of the shares held by the firm's largest shareholder. Firm risk is measured by the Worldscope price volatility indicator, which measures the stock's average annual price movement to a high and low from a mean price for each year.

Some additional information may be of interest apart for the descriptive statistics presented above. The number of females equals 0 in 47.82 percent of our firm-year observations; in about 30 percent the number of females equals 1, in 14 percent it equals 2, while in the remaining 9 percent of the observations, the number of females is higher than 2 (maximum number being 6). The distribution of observations with regards to the other dependent variable (models 3 and 4) is as follows: no change in 78.80 percent, reduction in the number of females in 4.80 percent and increase in the number of female directors in the remaining 16.4 percent. We observe a change in the number of foreign representatives in about 15 percent of cases and a change in the number of employee representatives in approximately 5 percent of the cases.

Table 4.4: Poisson regression for the number of females on the board of directors

	Model 1: (Poisson, re)	Model 2: (Poisson, pa)
Employee_percent	0.006 (0.03)**	0.0002(0.003)
Foreign_percent	-0.001 (0.002)	-0.005(0.002)**
Board_size	0.2(0.02)***	0.178(0.185)***
Male_age	0.0113 (0.006)*	0.009(0.006)*
TobinQ	0.029(0.02)*	0.024(0.015)*
Roa	-0.002(0.002)	-0.0003(0.001)
Sales (in logarithm)	0.059(.023)***	0.025(0.018)
Leverage	-0.005(0.002)***	-0.003(0.001)***
Risk	-0.002(0.004)	-0.002(0.003)
Largest owner (%)	0.0005 (0.002)	0.004 (0.0016)
Manufacturing	-0.135(0.087)*	-0.107 (0.762)*
Mining	-0.109(0.249)	-0.072 (0.143)
Construction	-0.746(0.276)***	-0.433 (0.156)**
Agriculture	-0.083(0.413)	-0.324 (0.281)
Retail	0.232(0.214)	0.157 (0.181)
Food_apparel	-0.386(0.253)	-0.358 (0.199)*
Wholesale	-0.013(0.165)	0.061 (0.144)
Finland	0.402(0.157)***	0.360 (0.175)**
Norway	1.417(0.135)***	1.487 (0.136)***
Sweden	0.834(0.120)***	0.835 (0.144)***
Year2002	0.036 (0.131)	0.0737 (0.063)
Year2003	0.250(0.125)**	0.291 (0.081)***
Year2004	0.482(0.119)***	0.566 (0.084)***
Year2005	0.571(0.117)***	0.638 (0.086)***
Year2006	0.746(0.114)***	0.820 (0.092)***
Year2007	0.876(0.113)***	0.948 (0.093)***
Cons.	-3.696(0.479)***	-3.239 (0.453)***
Log-likelihood	-2439.71	

Sample size	2412	2224

Notes to the table: The dependent variable is the number of females on the board. Model1 is random-effect Poisson regression model, model2 is the population-average Poisson regression (with standard errors adjusted for autocorrelation, within-cluster correlation and overdispersion). Employee_percent is the percentage of employee representatives on the board; foreign_ percent is the percentage of foreign board members. The variable Board_size is the total number of board members. The Male_average_age is the average age of the male board members in a given firm. Tobin Q is calculated as the ratio between the sum of firm's market capitalization and debt and, the book value of total firm assets. Roa is the return on firm assets. The two variables are lagged one year. Sales are expressed as the nominal value of the firm's annual sales. Leverage is measured as the percent of debt in total assets. The largest owner is the percent of the shares held by the firm's largest shareholder. Firm risk is measured by the Worldscope price volatility indicator, which measures the stock's average annual price movement to a high and low from a mean price for each year.

Table 4.5: Multinomial logit regression for the change in the number of females on the board of directors

Model 3	Decrease in the number of females versus no change	Increase in the number of females versus no change
Change in board size	-0.838(0.176)***	0.8223 (0.100)****
Increase in empl_rep	0.175 (0.285)	-0.173 (0.216)
Increase in foreign_rep	0.429 (0.237)*	-0.396 (0.140)***
Board_size	-0.040(0.114)	0.2311 (0.055)****
N_females	1.073 (0.176)***	-0.582 (0.103)***
employee_percent	0.017(0.117)	0.003 (0.05)
foreign_percent	-0.0003(0.009)	-0.006 (0.005)
male_age	-0.009 (0.028)	0.025 (0.016)*
TobinQ	-0.089 (0.09)	0.126 (0.05)***
Roa	0.002(0.007)	-0.009 (0.004)**
Sales (in logarithm)	-0.065(0.099)	0.121(0.05)***
leverage	0.002 (0.006)	-0.003(0.003)
risk	0.044(0.0123)***	0.007 (0.006)
largest	-0.001 (0.006)	0.0003 (0.003)
Industry dummies	included	Included
Time dummies	included	Included
finland	0.453 (0.511)	1.15 (0.293)***

Norway	-1.177(0.536)**	2.81 (0.27)***
Sweden	-0.276 (0.503)	1.458 (0.239)***
Cons.	-5.291 (1.932)	-6.585 (1.163)***
Log-pseudolikelihood	-1067.3138	-1067.3138
Sample size	2126	2126

Notes to the table: The reference group showed no change in the number of females on board. Model 3 evidences the probability of the firm reducing the number of females in relation to the probability to keep the number of females constant. Model 4 reports the probability of the firm increasing the number of females in relation to the probability of keeping the number of females constant. The regressions accounts for within-group correlation. Change in board size is expressed as the change in the number of board seats in a given year. In the same vein, the Increase in empl_rep reports the increase in the number of the employee representatives in the given year; the variable Increase in foreign representatives reports the increase in the number of foreign members on the board in a given year. Employee_percent is the percentage of employee representatives on the board; foreign_ percent is the percentage of foreign board members. The variable, Board_size is the total number of board members. N_females is the number of (existing) females on the board. The Male_average_age is the average age of the male board members in a given firm. Tobin Q is calculated as the ratio between the sum of firm's market capitalization and debt and, the book value of total firm assets. Roa is the return on firm assets. Apart from the change variables, all variables are lagged one year. Sales are expressed as the nominal value of the firm's annual sales. Leverage is measured as the percent of debt in total assets. The largest owner is the percent of the shares held by the firm's largest shareholder. Firm risk is measured by the Worldscope price volatility indicator, which measures the stock's average annual price movement to a high and low from a mean price for each year.

4.6 Discussion of empirical results

The Nordic case of female board representation shows that recognition for the female's role in society that, in general, characterized these countries was not equally reflected in female board membership – as of the early 2000s. This escalated the external pressure for higher board diversity. Our results provide support to the relevance of this external pressure for board diversity; the number of female representatives significantly increases after the year 2003, which marks the beginning of a more intense public debate about mandatory female representation in Sweden and Norway (see the significant and positive effect of the year dummies in the models 1 and 2, Table 4 and of the country dummies for Norway and Sweden). Not only is the percent of female directors in these two countries much higher than in other Nordic countries (i.e. Finland and Denmark), but also, Norwegian and Swedish firms are more likely to have more than only one female per board. It is interesting to see that a significant institutional impact is observed also in Sweden, where the public debate has not yet materialized into a quota law.

Coinciding with the other studies (e.g. Farrell and Hersch, 2005 for US companies), we confirm that board and firm size play a significant role in increasing the likelihood of female board representation (see the positive and significant sign of the variable *Board_size* and the *Sales* variable in Model 1 and 2). In addition, an increase in board size positively affects the likelihood of an increase in the number of females (versus no change in the number of females) but decreases the likelihood of the reduction of females on board (versus no change); see model 3 and the variable *Change in board size*. The latter finding implies that some female appointments are taking place upon increases in the board size. In line with previous empirical findings, we see also differences in the female representation across the industries; in comparison to the service industry, females are less represented in construction and manufacturing and, surprisingly, food and apparel industry. Other industry effects are in line with the expectations, but insignificant. The impact of firm risk is negative

but insignificant; however, higher risk significantly increases the likelihood of the decrease in the female board direction versus no change (see the positive sign of the variable *Risk* in the first column of Model 3). In line with other studies, we get some evidence on the fact that female representation is higher in the firms with stronger market performance (*Tobin Q*); better performing firms are also more likely to add new females on board (see Model 3). A possible explanation to this finding may be that the pool of women from firms can select female directors is still relatively small and that consequently better (and more visible) firms find it easier to attract females on their board positions.

The percentage of shares owned by the largest owner has no significant impact on female board representation. However, we do observe a very robust negative effect of firm leverage; more indebted firms tend to have fewer females on board. One of the possible explanations to this may be that, in line with Adams and Ferreira (2008), females improve the monitoring role of the board. Having too many women could lead to over-monitoring. Thus, given that the large owners already provide rigorous monitoring by their capital providers (shareholders or debt holders), the firms with stronger involvement of the providers of financial funds (i.e. higher debt or more concentrated ownership) should consequently have fewer females on board.

In line with the hypothesis 1, firms with a higher percent of employees on board, have on average a higher number of female directors. We believe that, rather than being due to the experience with diversity in leadership and control, the positive relation between employee and female directors arises from the alignment of the female and employee values (i.e. a stronger orientation for social issues, stakeholder orientation, etc.; see also Adams et al., 2008). However, this effect is not robust across all specifications. Also, we find no evidence of the fact that increases in female board representation may be partly promoted by the employees and reflected by female appointments in case of new employee directorships (see the variable *Increase in empl_rep*). However, the lack of any effect may be due to the relatively low number of the changes in the employee directorships (in only 5 percent of firm-year observations) and the fact that we cannot check for the cases where the employees replace a current female employee directors with a new one. This is certainly an interesting issue for further research.

The impact of foreign directors on the likelihood of gender diversity (hypothesis 2) is negative, suggesting that these two aspects of diversity tend to substitute rather than reinforce each other. A higher percent of foreigners reduces the probability of females on board (see model 2, Table 4.4); an increase in the number of foreign directors increases the probability of a decline in the number of female directors versus no change (see column 1, table 4.5) and decreases the probability of the increase of female board representation versus no change in the number of female directors (column 2, table 4.5).

The impact of the standard deviation of age is positive but not significant (results not reported). However, we find that females are better represented in the firms with older male board members (contrary to the hypothesis 3). Most likely, the firms with older board members feel more subject to criticisms on board malfunctioning and are, consequently, more likely to appoint females on board. Female appointments not only lead to gender but also to age diversity since female board directors are significantly younger than their male colleagues (49 year against 54 years for female and males in our sample, t=-28.4464).

Finally, the probability of increasing female representation (versus no change) is less likely in the boards that already have females on board (see column 2, table 4.5). In line with the findings by Farrell and Hersch (2005), we see the “glass-ceiling connotation” that a higher percentage of women in place eliminates the need for more appointments and that diversity considerations are one of the primary reasons underlying female appointments on boards.

4.7 At the place of Conclusion: Is quota good?

In many countries, the public pressures for a stronger role of females in the society and, at the same time, the recognition of the still limited participation of women in corporate boards, motivate discussions on the benefits of regulatory action, which would force firms to appoint a certain percent of females ("quota law"). A common concern related to these discussions is that, given the limited pool of females that qualify for a director position, such quotas would lead to "bad" board appointments. Looking at Tables 6 and 7 for the recently appointed females, we can see that less Norwegian female directors have international board or work experience but the level of internationally educated women in Norwegian boards is higher then, for example, in Sweden and Finland. On the other hand, female directors in Finland and Sweden are older and have more international working experience. A more detailed analysis should be done in order to detect if there was any change in the "qualifications" of female directors who were appointed under the "quota law." In any case, descriptive statistics suggest no major concern about potential deterioration of board expertise, following the increasing participation of females on boards.

Table 4.6: Age of female directors with less than 2 years of board tenure at the end of 2007

	n	mean	min	max
Denmark	21	45.10	33	59
Finland	35	50.43	29	61
Norway	168	45.95	24	64
Sweden	126	49.27	28	70

Table 4.7: Percentage of female (male) board members with international education, international board or work experience in 2007 (the sample is based on the females appointed in the last 2 years)

	International Education %	International Board %	International Work %
Denmark	38.71 (25.68)	12.24 (31.55)	28.57(26.83)
Finland	10.87 (7.12)	45.07 (26.81)	39.68 (30.28)
Norway	25.71 (23.31)	18.60 (26.65)	18.71 (26.52)
Sweden	18.98 (10.57)	21.45 (24.87)	38.59 (44.01)

However, the results of our empirical analyses confirm that, despite the long history of gender equality, the appointments of females to boards come with some "costs." Existing theoretical and empirical literature suggest that these costs may be associated with a higher potential of conflicts, disagreements and impasses in board decision making. Our results indeed confirm that firms follow a goal of "minimum" diversity and that different aspects of diversity tend to substitute, rather than complement each other. Imposing a certain percent of female board representation may consequently have a negative effect on other (equally or more relevant) aspects of board diversity and in the long run, harm the board's contribution to firm performance. Also, excessive outside pressure may crowd-out any internal recognition of the benefits of female board by the firms or, to put it differently, their intrinsic motivation for female appointments on boards[12].

[12] For an overview on the interaction between institutional pressure and intrinsic motivation, see for instance Bowles, S. (1998).

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5. Internationalization of the firm and its board

5.1 Introduction

After a number of corporate scandals at the end of the last century and beginning of the current century, such as Enron and Parmalat, corporate governance and corporate board composition became a key issue for policy makers (OECD, 2004). The current global financial crisis then further fueled the demand for more competent boards – particularly as it relates to the globalization of firms. As a parallel global trend an enhanced social and political interest in diversity issues has emerged (e.g., Economist, 2008). Taken together this development raises a question about the adequate composition of the corporate supervisory board[13] to deal with increased globalization which in 2007 manifested itself in global inflows of foreign direct investment (FDI) exceeding the previous all time high from 2000 (UCTAD, 2008). The globalization, however, also demands more sophisticated management skills. Though cross-border harmonization as part of the globalization has come a long way, the increased number of national borders to cross has meant an increasing number of idiosyncratic factors for management to successfully monitor and control. Hence, globalization calls for special capabilities of the supervisory board in order to control, guide and in all relevant aspects monitor the management in the interest of the owners.

A firm can be internationalized basically in two ways; through commercial activities, and through financial activities. Commercial international involvement embraces export and import, foreign direct investment and foreign employees. Internationalization of the firm's financial activities means internationalization of the firm's capital providers – via equity market, bond market and financial intermediation and implies also that the firm faces corporate governance regulations and investor expectations from multiple countries. For example, in a highly integrated global financial market a German firm can tap savings in the US to invest in Singapore. It may also cross-list in a foreign market with the aim of reaching a new clientele of investors, or in case of the most prestigious capital markets, to boost its cost of capital (e.g., Stulz, 1999). When internationalization refers to corporate governance, the firm can act to internationalize the monitoring by importing foreign members as a means to signal compliance with a corporate governance system with harsher monitoring, as the US system (Oxelheim and Randøy, 2003).

The number of multinational firms has grown from slightly more than 7000 in 1970, to about 79000 in 2006. Multinationals employ more than 82 million people outside their home country. Some countries operate in about one hundred countries with Deutsche Post in the lead (111 counties), followed by Royal Dutch Shell (98) and Nestlé (96), (UNCTAD, 2008). Following the increased financial integration companies are, to an increased extent, also operating in global financial markets. This development poses an immense challenge to a board supposed to monitor and support the management. How has this degree of internationalization of the firm impacted the composition

[13] In this chapter we use the term supervisory board – which in most of this report has been referred to as the board or the corporate board.

of the board of directors? Has the supervisory board kept pace with the internationalization of the firm?

We argue in this paper that the internationalization of a firm should reflect itself in the composition of its supervisory board. Following internationalization new competencies are called for. Our research question is to analyze and discuss the drivers of the internationalization of the supervisory board.

A first research challenge is to respond to the causal order. Is the board internationalized prior to the internationalization of the firm or just as a response to a *de facto* internationalization? History shows that many countries for long periods have had rules that restricted the internationalization of the board.[14] Foreigners were not welcome, or if welcome, they were discriminated against in one way or another. In many cases where they were welcome they had to take residence in the home country of the firm. The world is still not entirely free from restrictions and discrimination in this area. Legal restrictions may also explain why the internationalization of the boards has remained an under-researched area. However, qualitative studies support the view that the internationalization of boards is borne out of the internationalization of the firm and not the reverse (Piekkari and Vesanen, 2009). It is not self-evident that international board members are more likely to endorse international expansion. In fact, they may be less easily impressed by proposals for international acquisitions and more demanding of their value creation potential.

What does then the internationalization of the supervisory board mean? Internationalization in this respect is a complex issue and even more so when it comes to the operationalization of the concept (Sambarya, 1996; Elron, 1997; Hambrick et al 1998, Carpenter et al. 2001, Athanassiou and Nigh, 2002). Basically, we can identify two venues for a firm to undertake such internationalization; first, by recruiting non-nationals to the supervisory board; second, by hiring nationals with international experience to that board. Does a foreign passport imply that a board member behave as a non-national? Not necessarily, and to argue for an effect on performance of the firm makes a significant research challenge. Hence, the use of proxies like these can only be seen as indicative of cross-country board influences - but after a thorough scrutinizing, the best at hand.

In this paper we analyze the link between the internationalization of the supervisory board and a number of relevant firm-specific features the preceding year. We argue that the highest need for internationalization of the board should be found in small open economies, previously sheltered by capital controls. Some of the countries with the largest relative share of multinational firms are found in Northern Europe (UNCTAD, 2008). These countries can also be classified as political economies formerly sheltered by extensive capital controls. Thus, we find it particularly relevant that our sample firms are drawn from four small and open political economies: Denmark, Finland, Norway and Sweden.

The concept of boards needs to be discussed – as it varies by country. We make a distinction between a management board and a supervisory board. Based on the existence of these two boards,

[14] For such a discussion in relation to the Nordic countries see Oxelheim et al. (1998).

we can identify two board systems: Two-tier and One-tier. The first-mentioned system is characterized by a separation between the management board and the supervisory board. In some countries there is a small overlap with some members of the management board, predominantly the CEO, also being a member of the supervisory board – as commonly seen in the US. The firms in the four countries analyzed are headquartered in countries with a two-tier system – or a semi-two tier system (Sinani et al., 2008)[15]. Nordic supervisory boards are quite independent vis-à-vis managers and are mainly composed of non-executives. Furthermore, CEO duality is not allowed by law. The one tier-system combines the two boards into one but with strong emphasis on outside and inside members. Also within two-tier, or semi two tier systems, we can find differences. For instance, the four countries in our study have different recommendations for the nomination committees. In Sweden, representatives for the major owners constitute this committee with the Chairman of the board as a potential member. Norway comes closest to this model, whereas in the other two countries the members of the committee predominantly are members of the supervisory board.

Using a Poisson panel regression on 559 firms from four small open economies, we find a clear and robust message. Competencies called for by the financial internationalization of the firm are found relevant whereas the degree of internationalization in the commercial area seems to have no impact on the internationalization of the supervisory board. However, the national board members may have international experience themselves and have realized the value of such experience. It is found that the higher the number of national board members with such experience, the higher is the number of foreign supervisory board members. A significantly positive impact is also found for foreign ownership; the higher such ownership of a firm, the higher the number of foreigners we can expect on the firm's supervisory board. The only variable that is found with a significantly negative impact on the prevalence of foreigners on the supervisory board is average board tenure. The negative impact is here interpreted as reflecting conservatism and a potential reluctance of having future communication difficulties due to language problems.

The rest of the article is organized in the following way. The theory and the conceptual framework are discussed in Section 2. Here we also discuss some of the measurement problems. In Section 3 we formulate our hypotheses, whereas in Section 4 we provide some stylized facts for the four countries involved; all representing the Nordic corporate governance model. In Section 5 we present the methodology used, our definitions of variables and the data. Our results are then analyzed and presented in Section 6. Finally, concluding remarks and policy recommendations are given in Section 7.

[15] The Norwegian board system actually consists of no management board, but with the option of using one or two levels of boards ("styret" and "bedriftsforsamling").

5.2 Theory and conceptual framework

Internationalization of the firm

The internationalization of the firm can be expressed in many dimensions; by individual variables or by an index (see e.g. UNCTAD 1995; Aharoni 1971). Measures of the internationalization of the firm is predominantly focusing on the commercial side of it paying attention to foreign sales/total sales, foreign direct investment; number of foreign employees/total number of employees or - like suggested by UNCTAD - an index based on a construct of these variables. Here we argue in line with Oxelheim and Randøy (2003), that the internationalization of the financial side of the firm is of equal importance. Variables to use as measures are; foreign loans, foreign financial assets or as an expressing for the aggregate involvement of the firm in foreign financial markets, the prevalence of a foreign listing or of foreign market places where the firm's shares are traded. Financial internationalization may also have an important corporate governance dimension reflected in the number of foreign members of the board representing a more demanding corporate governance system assumed to contribute to the firm receiving an international cost of capital.

As was mentioned in the introduction we are not in a position here to analyze if internationalization of the firm precedes internationalization of the board. One key explanation to the development during the 20th century is discrimination towards foreigners based on legal restrictions. The two global telecom giants in our sample may serve as examples. The Swedish Ericsson was established in 1876 and began to internationalize its operations some decades later. In 2008 about 95% of Ericsson's sales came from outside Sweden, the share of foreign employment was about 73% and it was listed on three major stock markets. Internationalization of the board started in 1996. In 2004 it recruited its first board member from outside Europe. In 2008 Ericsson had three foreign members out of 10 (13 including the employee representatives). The roots of Finnish Nokia go back to 1865. It began international operations (somewhat different from the current form) in 1940. In 1967, Nokia Corporation was formed. Nokia started internationalizing its board in 1997. In 2008, Nokia was listed on three major stock markets. At the time, four out of eight board members (ten including the employee representatives) were foreigners. Common to these two companies is the ban on discrimination in the EU (and in the bigger EEA) – coming into force as of 1994. The ban seems to have a high explanatory value to the late internationalization of the supervisory board. Hence, regulations matter for the understanding of the board internationalization process.

Internationalization of the board

The separation of ownership and control was, early on, foreseen to create problems (Smith, 1776). Berle and Means (1932) addressed this problem in more detail. and the principal-agent relationship was then further discussed by Jensen and Meckling (1976). The role of the board - assumed to

represent the principal - is to set main goals and targets for the business, to decide the strategies to reach these goals, to continuously evaluate the management board and - when called for - to appoint a new and remove the current CEO, to ensure control systems are effective, to ensure transparency and accuracy in the companies external communication, ensure satisfying control of the boards compliance with laws, regulations, and corporate responsibilities and ensure that other ethical rules are adequately adopted. The theory behind the internationalization of the board to fulfill these tasks is fragmented. We argue that the different theoretical "components" can be found in the resource-based theory of the firm, institutional theory and the principal-agent theory. Our analytical approach builds on these three theories.

The *resource based theory* addresses the need for adequate competencies and resources to make the company able to pursue value-creating strategies and to enhance its competitiveness (Barney and Clarke, 2007). Resources can be physical, financial, human and intellectual. The two last-mentioned categories - often labeled intellectual capital – constitute relevant competencies in the context of internationalizing of the supervisory board. The intellectual capital encompasses experience, information, knowledge relationships, and routines for value creation (Leblanc and Gillies 2005). Teece (2002) includes human capital in the intellectual capital and adds two more pillars; social capital and the structural capital. Social capital refers to the board members' social competence and outcomes based on the link between individuals where information is transferred. Also included here is the ability of board members to build relations to outside stakeholders and to create networks, and to build bridges with the management in particular. Competencies are firm and time specific, but their key features may be summarized in co-ordination, contracts, experiences, knowledge, leadership/guidance, skills and values.

Many case studies report that the internationalization of the board is an issue of finding missing pieces of competence rather than satisfying a specific geographic need (see e.g. Piekkari and Vesanen, 2009). The particular resource called for may be a board member who is able to understand and communicate with customers and markets, suppliers, banks and financial institutions, and regulators and politicians. The new dimension related to internationalization is that the board member should be able to do this, and at the same time, meet specific international criteria.

These international criteria may be general or specific. However, it is naïve to believe that one international board member should be able to cover the entire international dimension. For instance, having a French director recruited to the board does not guaranty any general international perspective and insight, or any answers to questions about the Asian markets more than what a North American board member can contribute with regards to Latin American business conditions. Hence, the requirements on the recruited competencies have to be more detailed. The company may need to recruit a board member familiar with the business conditions in its major market. For example, it may also be interested in recruiting a board member familiar with the Chinese political setting or with the regulatory body in the US. Furthermore, such recruitment might affect firm performance. For example, the recruitment of an Anglo-American board member has shown to be value creating for Norwegian and Swedish firms (Oxelheim and Randøy, 2003). The effectiveness

of the supervisory board is given by the interaction between the individual board members as the sum of their competencies - including synergies. This means to measure the extent to which the board's support to and governance of management has added to the value creation of the firm. In longitudinal evaluations it may be worth noting that the role of the supervisory board may gradually have changed over the recent years, from having been entirely a monitoring device to becoming an active part of a firm's competitive advantage (Nicholson and Kiel, 2004; Leblanc and Gilles, 2005).

The *agency theory* addresses problems originating from the separation of ownership and control, and emphasizes the issues arising when decision-making authority is delegated to an agent (Jensen and Meckling, 1976). The supervisory board is a monitoring device to align the interest of the principal and the agent and to minimize any problems between shareholders and management (Monks and Minow, 2004). In the context of board internationalization, the theory addresses the adequacy of emphasizing the interest of a foreign owner (principal) in having a voice in the way the CEO (agent) manages the company, and to exercise his/her control rights. In addition to truly benign reasons, the foreign owner might also – like the domestic one – have his/her own agenda. Having a representative on the board might increase the chances of having that agenda come true. Different ownership categories may then act differently. Foreign institutional owners are often claimed to show too low an interest in an active role in the governance process.

Institutional theory may to some extent explain why supervisory boards are internationalized. The emergence of new regulations and corporate governance codes has increased dramatically during the last 20 years. The Cadbury code in the UK in 1992 has now received its followers in most countries. In Europe, in 2008 it was an exception not to have a code of that kind (Oxelheim and Wihlborg, 2008). As regards the bridging of the incentive gap between the owners and the management, the code suggests in most cases a "comply or explain" solution. With relevance for the internationalization of the supervisory board the code normally contains recommendations about the size and composition of this board with the general recommendation that the composition should enable the firm to embrace various qualifications and experiences needed and to meet the independence criteria required to manage and monitor the firm's businesses effectively and independently. The corporate governance codes also contain recommendations about the launching of a nomination or election committee, and about its composition.

In general corporate governance codes contain no direct guidance for the internationalization of the supervisory board. Neither dot they provide any clear indirect guidance in addition to a general appraisal of diversity in terms of background experiences and qualifications of members of the supervisory board. In this context gender distributions and the independence of members receive explicit attention contrary to the internationalization issue. The institutional framework may however, in a resource perspective, call for board members able to handle foreign corporate codes and regulations like the Sarbanes-Oxley Act (2002). Increased economic and financial integration increases the number of layers of regulations that exert influence on corporate cross-border activities and increases the need for board members with that particular international competence. However, this need will not necessarily have to be met inside the supervisory board but, for instance, in terms of adjunct experts or an advisory board.

The firm is operating in a social environment that makes it opt for social acceptability and credibility (Scott, 2001). The search for corporate legitimacy may here become a driver of the internationalization process. As part of that process it may need competencies able to read societal signals and to form behavior in accordance with stakeholder pressures regarding corporate social responsibility. To meet expectations from foreign employees, internal signaling can take the form of an international board member, whereas external signaling can take the form of recruiting an international board member to signal the firm's dedicated interest in a particular foreign market.

How to define and operationalize the international dimension of the supervisory board?

Measuring the internationalization of the supervisory board is a complex task. When it comes to the issue of how to operationalize the international dimension of the supervisory board the literature offers mainly five different characteristics; degree of multinationality; international experience; international network ties; foreign language proficiency and cultural differentiation. Within each of these are a number of dimensions to consider.

The supervisor board member's nationality is the most obvious measure to reflect the internationalization of the board. Nationality reflects not only an individual's values, cognitions and behavior, but also his/her native language and the ease with which other foreign languages are learned (Hambrick et al., 1998). Empirical studies of management teams show that a greater degree of alignment between strategy and managers' characteristics is associated with superior performance (Gupta and Govindarajan, 1984; Govindarajan, 1989, Thomas et al., 1991). Considering a complementary view between the supervisory and management board it can be assumed that these results can be extended also to the case of the profiles of supervisory board members. Hence, an internationalized firm should have a need for an internationalized supervisory board. Buckley et al., (2002) support this argument by emphasizing that increasing internationalization increases the need of incentives to work with differences, especially cultural differences.

How then should we measure nationality in a way that captures all relevant aspects? The most common way is to register nationality as birthplace or passport nationality. However, this definition fails to embrace values, cognitions and behavior. Nationality based on a passport does not guarantee that the holder has lived in the respective country at all. To cope with that shortcoming an alternative definition of nationality may be "the country in which an individual spent the majority of his or her formative years" (Hambrick et al., 1998). A further refinement of the definition may be to consider the parents' identity. If a potential board member may have been raised in Italy, but with a Turkish mother and a US father he or she will have additional – as compared to the Italian - insights and values to contribute to the board work.

A potential board member may not have a foreign passport that fits the search profile or have been raised in the country of interest, but may have spent much of his/her time in that country and

gathered international experience that qualifies him/her for the board position. International experience can become valuable to an extent that it dominates origin and early phases of life. Support is given by Gregersen et al. (1998) that report that executives find international assignments the "most powerful experience in (their) life for developing global leadership capabilities". The manager's international experience functions as a valuable, rare, inimitable, and non-substitutable resource for a firm (see e.g. Daily et al. 2000 Carpenter et al. 2001). Some studies have emphasized the link between the international experience of a firm's top management and the firm's international strategy (see e.g. Sambarya, 1996; Reuber and Fischer, 1997). Here we extend this link and reasoning to members of the supervisory board.

International experience can be expressed and measured in many ways – single dimensional (see e.g. Sullivan, 1994; Carpenter and Fredrickson 2001) or multidimensional (see e.g. Roth 1995, Reuber and Fisher 1997; Hermann and Datta, 2002). Experience that counts is related to the individual's education and work life. International experience can in its simplest form be expressed by a dummy variable – international experience or not (Reuber and Fisher, 1997; Tihany et al, 2000; Wally and Becerra, 2001). The next higher step is to set a lower limit for the duration of the experience (for example one year) that should count (Carpenter et al, 2001). Alternative measures are to exact number of years an individual spent abroad (Sambarya, 1996; Herrman and Datta, 2002); or relative number of years spent abroad (Carpenter and Fredrikson, 2001). A further alternative is to include the number of assignments abroad (Daily et al, 2000) and the possession of a foreign university degree (Carpenter et al, 2001). Moreover, some researchers argue that international experience can also be gained within a domestic firm, for instance, by having responsibility for an international department (Wally and Becerra, 2001) or by working in an international division (Sambaraya, 1996; Herrmann and Datta, 2002).

A third dimension of the internationalization of the board is the extension of board members' international network and ties. One measure focuses on official mandates like board appointments in international companies. Such appointments should be a valuable resource for an internationally operating firm (Carpenter and Westphal, 2001). In addition to board appointments an increased number of board member's network ties may constitute a valuable resource for the firm. Network ties can for instance, be expressed by the number of international contact person concerning a specific issue (Athanassiou and Nigh, 2002). Obviously not all appointments and ties are of equal importance (Geletkanycz et al, 2001). Which ones that should count are related to the operations of the firm in which the supervisory board is evaluated?

Foreign language proficiency is another dimension of supervisory board internationalization. Following the logics of Piekkari et al, (1999), supervisory board members with superior language skills are better able to build broad contact networks within an international firm and consequently are instrumental in the internationalization of the board. As stressed by Buckley et al. (2002), language proficiency of the sending as well as the receiving counterpart is crucial to successful knowledge transfer. However, language may also act as a barrier in the internationalization process (Piekkari and Vesanen 2009). Language proficiency may be best captured using different tests - written or oral - or via self-evaluations.

Finally, based on arguments from the literature on cultural distance (Tihany et al. 2005), measuring the internationalization of the supervisory board should also aim at including a cultural differentiation. This is a way to take account for cultural differences and the marginal contribution of a supervisory member. It seems evident that a Norwegian member of the supervisory of a Swedish firm adds less internationalization than a Japanese member. In the same vein, a French manager will encounter more "foreign" perspective from an assignment in Singapore than from one in Belgium. Given the particular task a potential board member is assumed to solve, the precise nationality or the exact location of his/her assignment should be taken into account in the recruitment process. Measures to use for evaluation of cultural differentiation are measures of cultural distance (Kogut and Sing, 1988) or of cultural clusters (Ronen and Shenkar, 1985).

To summarize, internationalization of the supervisory board is a multidimensional concept and many measures have been suggested above. It is still an open question which measures are the most relevant ones. Are we missing some? Should the task of the supervisory board member be matched with the measure of internationalization to see if internationalization adds value? In the search for answers to these questions our empirical analysis will provide some guidance.

5.3 Internationalization of the board – the hypotheses

The review in the previous section has shown how different strands of literature add to an understanding of the board internationalization process. However, it is also obvious from the review that most of the existing literature addresses management teams or one-tier boards. The construction of the two-tier system makes it relevant to ask if the supervisory board should act as a complement, or a supplement to the management board. The question it not answered in the current literature and here we argue that the board is supposed to play both roles and together with the management board form a critical mass for successful decision-making. What are then the expected gains and costs of internationalizing the supervisory board? In addition to the legal barriers mentioned earlier, a traditional cost-benefit analysis of board internationalization could be carried out. The elements on the benefit side would be: new competence, increased legitimacy externally as well as internally, and a bigger pool of talented candidates. The elements on the cost side would be: frictions due to linguistic barriers, economic effects due to conflicts of interest, increased travel costs, economic effects from minimized informational interaction due to physical distance, and extra the cost of having at least two of the same sort not to have the foreign member captive.

Which are the actors that work for and against an internationalization of supervisory boards? Sometimes internationalization is just a by-product and the result of a cross-border merger. For instance, the merger between the US pharmaceutical company Upjohn and the Swedish Pharmacia in the 1990s resulted in an US-based firm with five Swedes on the board (one-tier board). However, we can identify actors that may drive the case of the internationalization of the supervisory board based on the different reasons we identified in the literature review.

First we may ask in accordance with the resource-based theory if there may be any need for international competence in a particular firm. We argue that such a need will be found in terms of the degree of internationalization of the firm. A high degree of international operations expertise from foreign markets is called for in the supervisory board. As was stressed in the previous section internationalization of the firm can be expressed in many ways and by single indicators or by index capturing many dimensions. Having many dimensions involved also increases the uncertainty of poor data in the field, and of genuine uncertainty in capturing behavioral aspects. Most of all, the multidimensional indices can be criticized by the fact that the choice of weighing system almost always boils down to an arbitrary choice of a system with equal weights. Considering these measurement problems, we will here use the most common definition of firm internationalization – the relative magnitude of foreign sales. Hence, we hypothesize that a higher degree of internationalization of the firm from the commercial perspective increases that firm's propensity to increase the number of foreigners on the supervisory board.

H1: The higher the proportion of foreign sales, the higher the number of foreign members of the supervisory board

With the exception of Oxelheim and Randøy (2003)[16], the financial internationalization of the firm is not explicitly recognized in studies of the internationalization of the board. These authors address the particular virtue of signaling compliance with a harsher monitoring system by adding to the supervisory board a member representing that demanding system. Hence, they discuss a particular type of competence. In Oxelheim and Randøy (2005) these authors list a number of benefits from the financial side of adding an international member to the supervisory board. This person may represent insight in a particular financial market or in the regulatory body of that market. He/she may also have the competence of being able to communicate with investors in that market. Hence, we here suggest that the firm's presence in a particular international financial market, by a listing or by having its shares traded in that market, may signal a need for internationalization of the supervisory board. Here, we hypothesize that increased financial internationalization of a firm will increase the propensity of that firm to recruit a supervisory board member with the particular aim of signaling compliance with a harsher monitoring system or of bringing insight and network ties from a foreign financial market into the supervisory board.

H2: The higher the presence on foreign financial markets, the higher the number of foreign members of the supervisory board

From the perspective of the resource-based theory the existence of complementary resources inside the firm has to be recognized. Knowledge of a particular market may already exist in the supervisory board. For instance one of the members may have spent 20 years of his business career working in that market. Language barriers and cultural distance may mean that this member has not fully grasped the intrinsic features of that market. Moreover, with knowledge becoming obsolete

[16] Oxelheim and Randøy (2003) shows that such internationalization is value creating.

increasingly fast maybe this member just has a general view of the importance of understanding the market but with details that are not useful any longer. Hence, increasing existing international experience by nationals inside the supervisory board is here hypothesized to work as an eye-opener and to increase the propensity of the firm to recruit a foreign board member.

H3: The higher the proportion of national supervisory board members with foreign experience, the higher the number of foreign members of the supervisory board

From the agency theory we find drivers of the internationalization of the supervisory board in the internationalization of the ownership of the firm. Though some studies report a weak interest of foreign institutional owners in participating in the corporate governance process, private owners may have such an interest. We hypothesize that with a large share of foreign ownership will also follow an increased interest from that group in how the firm is run and in having a chance to influence the prospects of the firm by being represented on the supervisory board.

H4: The higher the foreign ownership, the higher the number of foreign members of the supervisory board

By combining the agency and institutional theory we may find a driver of the internationalization of the supervisory board in the implementation of corporate governance codes that have been so prominent in most countries after the corporate scandals in the last decade. Candidates for the supervisory boards are here suggested to be nominated by a special nomination or election committee. Hence, initiative to board internationalization is generated in that committee. A conceptually interesting comparison can be made here since the Swedish (and to some extent the Norwegian) nomination committee is, as was previously mentioned, representing the major owner categories, while in the other countries analyzed here the members of the nomination committee are current supervisory board members. Hence, the Swedish system acknowledges the direct influence from the owners whereas the other three countries have the indirect influence from the owners via the board. The Swedish system – as opposed to the other countries - may have a drawback in the fact that it opens up for power conflicts at the expense of competence addition to the board.

We hypothesize here that an internationalized nomination committee will increase the probability of having foreign members of the supervisory board.

H5: The higher the presence of foreigners on the nomination committee, the higher the number of foreign members on the supervisory board

Finally, we refer to the resource-based theory and recognize that the lack of some resources on the board may act as a hindrance for the recruitment of a foreign member of the supervisory board (Piekkari and Vesanen, 2009). Since language ability is difficult to measure directly we assume that this ability reflects itself in the length of tenure of the supervisory board. That length may also reflect conservatism and prejudices that may work against recruitment of a foreign member to the board. We assume that the longer the tenure, the lower is the inclination to communicate in a foreign language and the higher is the degree of conservation and strength of the old-boys network.

Based on that view we hypothesize that the longer the tenure the lower is the propensity of the firm to open up the supervisory board for foreign members.

H6: The longer the tenure of the supervisory board, the fewer the number of foreign members on the supervisory board

4.4 Internationalization of boards – some stylized facts from the Nordic region

The empirical analysis in this study is based on companies from a region in the northern part of Europe. The region is called the Nordic Region and in addition to the Scandinavian Region encompassing Denmark, Norway and Sweden it also embraces Finland and Iceland. Because of its small size, the latter country is excluded from this study. The borders between the five nations have moved around over the last five centuries implying that the cultural setting is shared between these nations. The four nations under scrutiny here can be seen as siblings facilitating excellent cross-country comparisons.

The corporate governance systems in the four countries are very similar and can be seen as a modified version of the German system, with a strong focus on the alignment of interests between managers and industrial (corporate) owners (Angblad et al. 2001). In a review of national culture and corporate governance, Peace and Osmond (1999) identify similarities between the “civil law” corporate governance system in the Nordic studies and the system in countries such as The Netherlands and Israel. The intra-regional similarities are also reflected, as previously mentioned, in the legal requirement regarding employee representation on company supervisory boards. However, with slightly different details as regards the size of the representation. La Porta et al (1998) argue that investor protection in the Nordic countries under investigation here - as one important aspect of corporate governance – is equal to or almost equal to that in “common law” countries such as Ireland or Australia. A high proportion of stock market capitalization owned by foreigners has characterized the four countries. This pattern has developed gradually starting in the early 1980s when the restrictions on foreign ownership on Nordic firms were eased (Oxelheim, 1997). By the beginning of 1994 the use of restricted shares (for domestic owners only) was banned in accordance with the European Economic Area (EEA) treaty (Oxelheim, 2001). Since the mid-1990s about one-third of the market capitalization of the Nordic exchanges has been owned by foreign investors.

Sample characteristics for the relevant variables in our six hypotheses for the supervisory board internationalization are found in Table 5.1 and for firm internationalization in Table 5.2. Further descriptive data are found in the Appendix.

Table 5.1 shows that the highest relative number of firms that have recruited foreign members to their supervisory board is found in Norway, reflecting to some extent the international character of the oil industry. Norway also exhibits the highest commercial internationalization of her firms as seen in Table 5.2. On the other extreme we find Denmark with the lowest figure for both board and

firm internationalization. The firm structure may, to some extent, explain this observation, since Denmark is a country characterized by small firms. The view of Denmark as the country with the least internationalized supervisory boards is further strengthened if the average number of supervisory board members with international experience is considered. Danish boards also exhibit the longest tenure, which may have slowed down the internationalization of the board. The low share of foreign ownership among the top five reflects the non-institutional ownership picture. Here, Norway also holds the top-position.

Table 5.1 Internationalization of Nordic boards - Average numbers 2001-2007

	Foreign mem-bers	*Listing abroad*	*Listing US-UK*	*Listing other EU*	*In market capitalization*	*Foreign sales*	*Age Chairman*	*Board total members*	*Foreign ownership among top 5*	*Average board tenure*	*Numb with foreign experience*	*Number of foreigners election committee*	
Foreign members	1.00												
Listing abroad	0.23*	1.00											
Listing US-UK	0.10*	0.15*	1.00										
Listing other EU	0.28*	0.86*	0.08*	1.00									
In market capitalization	0.32*	0.43*	0.11*	0.51*	1.00								
Foreign sales	0.16*	0.20*	-0.01	0.24*	0.20*	1.00							
Age chairman	0.03	0.01	-0.00	0.03*	0.15*	0.07*	1.00						
Board total members	0.24*	0.27*	0.14*	0.31*	0.55*	0.15*	0.19	1.00					
Foreign ownership among top 5	0.32*	0.07*	-0.02	0.09*	0.14*	0.04	-0.05*	0.08*	1.00				
Average board tenure	-0.12*	-0.05*	-0.02	-0.06*	0.06*	-0.01	0.26*	-0.01	-0.13*	1.00			
# with foreign experiene	0.38*	0.31*	0.05*	0.33*	0.44*	0.28*	0.10*	0.39*	0.13*	-0.06*	1.00		
# of foreigners election committee	0.28*	0.08*	0.02	0.09*	0.15*	0.04	0.10*	0.07*	0.07*	0.07*	0.21*	1.00	

5.5 Methodology and data

Data
The data is based on the population of all publicly traded firms headquartered in Denmark, Finland, Norway and Sweden during the period 2001-2007. This produced 739 companies to analyze and companies belonging to every industry are included. 180 companies were later excluded because information was missing for one or more variables of each of these firms. This left us with data from 559 firms; 130 Danish firms, 76 Finnish firms, 126 Norwegian firms and 227 Swedish firms. No systematic pattern is revealed for the companies that are excluded.

Financial data was collected from the Thompson Database. Information about corporate governance variables and boards was collected from annual reports. However, data such as the nationality of board members and their mandates was not available from secondary sources. Telephone interviews, with fax-follow ups, were used to identify the nationality of board members and to verify some variables.

Model specification
The model for testing our hypotheses was developed with a variety of independent variables to minimize specification bias. In our panel regression over the period 2001-2007, we use a Poisson regression with averaged population effects.

The correlation matrix in Table 5.3 shows a significant correlation between the number of foreign board members and the foreign sales/total sales and foreign listing respectively. Hence, the first impression from this matrix is that resource theory may explain most of the internationalization of the board. However, many other variables show significant correlation with the board internationalization variables and we therefore proceed the testing of our 6 hypotheses. No indications of problematic multicollinearity are found.

In our model we use a number of explanatory variables in accordance with our hypotheses. They are expressions for the commercial as well as financial internationalization of the firm, for the international experience of the non-national board members, for the foreign ownership of the firm, and for the tenure of the board. In a separate regression for Sweden and Norway (with its specific features of the nomination committee) we also use the internationalization of the nomination committee as an explanatory variable.

Past research indicates that the composition of the board may be a cause as well as an effect of internationalization and to mitigate that problem we use all explanatory and control variables lagged by one year.

Definition of variables
As was discussed in Section 5.3 internationalization of the board can be measured in many ways. Each of them has its pros and cons. In this study we choose – as commonly used in the literature – to use *number of foreign members* on the supervisory board as our dependent variable. Facing different difficulties in more elaborated data gathering, the reason why we opt for this variable is its appealing simplicity.

We use five kinds of variables to reflect drivers of the internationalization of the board. The explanatory variable to proxy for a firm's commercial internationalization is *foreign sales as percentage of total sales* of a firm. We have not been able here to match major sales market with the nationality of board members. To proxy for a firm's involvement in international financial markets we use a variable reflecting international cross-listing and equity trading. The variable expresses the *number of international markets where a company's shares are listed or traded*. If traded on more than one markets in a country the variable scores only once. We have not been able here to match major financial market involvement with the nationality of board members. The variable that is expected to proxy for the international experience of the board is expressed as the *number of national members of the current board that has international experience*. International experience is binary registered in accordance with what is reported in annual reports or as a response to our follow up questions. However, due to lack of panel data in this demanding category of mostly primary data we had to make the assumption that the experience of 2006/2007 is valid for the entire period. As was discussed in Section 2.3, this is one of the least demanding ways of defining international experience but has its virtue in its simplicity and lack of arbitrary labeling. The explanatory variable *foreign ownership* is measured as the percentage foreign (non-institutional) ownership among the top five owners of a firm. We use an *interaction variable* between foreign ownership and foreign listing and as the proxy for ownership connected international financial involvement. The explanatory variable *average board tenure* is expressed as the average number of years the national board members have served on the supervisory board. In addition to the five categories mentioned above we also include – in regressions for Sweden and Norway - *number of foreigners on nomination committee* as an explanatory variable. Also in this case we make the assumption that the figures for 2006/2007 are valid indicators for the entire period under investigation.

Finally, we control for firm size as expressed by the *logarithm of market capitalization* and for *total number of board members*. Moreover, as general control variables we use 9 different *industry categories* and *country dummies.*

5.6 Empirical results

We started our analysis with univariate tests and found, as previously indicated, significant correlations between the number of foreigners on the supervisory board and our proxy for the commercial internationalization of the firm. Likewise, we found a significant relation between the number of foreigners on the supervisory board and the financial internationalization of the firm. Both observations provided strong support for the resource based theory and our Hypotheses 1 and 2. However, these variables are not the only ones that show significant correlation with the dependent variable, which made us proceed to a multivariate analysis.

Multivariate tests

As presented in Table 5.4, our variable for commercial internationalization becomes insignificant once we introduce other explanatory variables. This makes us reject Hypothesis 1.[17] In contrast to commercial internationalization financial internationalization seems to call for foreign board members. We find a significant positive relationship, and we accept our Hypothesis 2. As stressed

[17] In plain statistical jargon, we find no support to reject the working hypothesis about no relationship or a negative one.

previously we have not been able to match markets with nationalities of board members. Neither have we been able to match financial markets with financial competencies on the supervisory board. With this caveat, we may suggest that financial competencies are special in character and may call for recruitment once a particular problem arises like the financing of a foreign acquisition or in dealing with international financial regulatory bodies.

The international experience of national board members is also found positively related to the number of foreign board members. The result is significant and we have found support for Hypothesis 3. Hence, we suggest that international experience among national board members make these more inclined to support an opening up of the supervisory board to foreign board members since the know how to appreciate the value of that kind of knowledge but have themselves lost up-dated knowledge.

In accordance with the agency theory we find that foreign ownership matters for the number of foreigners on the supervisory board. A significant positive relationship makes us accept our Hypothesis 4. In this test we also use an interaction variable between foreign listing and foreign ownership. We find no support for such an interaction effect

We also test for a tentative barrier to the internationalization of the supervisory board as expressed by our Hypothesis 5. We find support for the existence of a significant negative relationship between the average tenure of national board members and the number of foreign member of the supervisory board. Regressions not included shows that this is not a genuine age effect expressing a kind of fear for a foreign language but rather an expression of an old boys' network effect or differently expressed; when we have managed to successfully deal with board issues for so many years why should we start talking to each other in a foreign language?

Finally, due to the special recommendations for the composition of the election committees provided in national governance codes we test Hypothesis 6 only on data for Sweden and Norway. We find significant support for this hypothesis and the fact that an increased number of foreigners on the nomination committee leads to an increased number of foreigners on the supervisory board [18].

Among our control variables we find significance at the 10% level for an importance of the size of the firm as expressed by the logarithm of markets capitalization. The total number of board members does not significantly add to our understanding of the number of foreign members on the board. We find no significant difference between the countries and between industries.

[18] The regressions are not reported here but will be sent to the reader upon request.

Table 5.4 Foreigners on supervisory board - Poisson panel regression with population average effects

```
GEE population-averaged model                   Number of obs      =      1304
Group variable:                       nisin     Number of groups   =       284
Link:                                   log     Obs per group: min =         1
Family:                             Poisson                    avg =       4.6
Correlation:                   exchangeable                    max =         6
                                               Wald chi2(23)      =    191.29
Scale parameter:                    1.262251   Prob > chi2        =    0.0000
------------------------------------------------------------------------------
foreign board members   Coefficient  Std. Err.  z    P>|z| 95% Conf. Interval
-------------+----------------------------------------------------------------
lag rel.foreign sales     -.001      .001    -0.48   0.63    -.004    .002
lag marketcapitalization   .063      .037     1.72   0.09    -.009    .134
lag board totalmembers     .036      .023     1.55   0.12    -.010    .082
lag listing europe         .367      .150     2.44   0.02     .072    .662
lag foreign ownership      .010      .003     4.04   0.00     .005    .016
intern. experience 0607    .150      .036     4.16   0.00     .079    .220
lag average board tenure  -.048      .016    -3.07   0.00    -.079   -.017
Denmark                   -.025      .184    -0.13   0.89    -.385    .336
Finland                    .224      .178     1.26   0.21    -.125    .573
Norway                    -.152      .193    -0.79   0.43    -.529    .226
y02                       -.102      .082    -1.25   0.21    -.262    .058
y04                        .058      .075     0.78   0.44    -.089    .206
y05                        .105      .078     1.35   0.18    -.047    .257
y06                        .195      .080     2.45   0.04     .039    .351
y07                        .249      .085     2.94   0.00     .083    .416
Manufacturing             2.738     2.339     1.17   0.24   -1.848   7.323
Construction              2.374     2.380     1.00   0.32   -2.291   7.038
Wholesale                 2.075     2.372     0.87   0.38   -2.575   6.724
Transport/Utilities       3.289     2.344     1.40   0.16   -1.304   7.883
Financials                2.755     2.354     1.17   0.24   -1.859   7.369
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Retail                    1.668     2.474     0.67   0.50   -3.112   6.517
Mining                    3.553     2.344     1.52   0.13   -1.041   8.148
Services                  2.848     2.342     1.22   0.22   -1.742   7.438
Cons                     -4.325     2.353    -1.84   0.07   -8.937    .287
------------------------------------------------------------------------------
(Standard errors scaled using square root of deviance based dispersion)
```

5.7 Concluding remarks and policy recommendations

In this paper we have studied drivers behind the internationalization of corporate supervisory boards. In a panel study using Poisson panel regression on 559 firms from four small open economies we find a very clear and robust message. Competencies called for by the financial internationalization of the firm are found having a high explanatory value for the internationalization of the supervisory board, whereas the degree of internationalization in the commercial area seems to have no impact on the internationalization of the supervisory board. However, the national board members may have international experience themselves and may have realized the value of such an experience. It is found that the higher the number of non-national supervisory board members with international experience, the higher is the number of foreign board members. Hence, we find as hypothesized, a complimentary relationship rather than a substitutional relationship that could be generated if the value of up-to-date knowledge of current non-national board members were overrated. A significantly positive impact is also found for foreign ownership; the higher such ownership of a firm, the higher the number of foreigners we can expect on the firm's supervisory board. The only variable that is found with a significantly negative impact on the prevalence of foreigners on the supervisory board is the average board tenure. The negative impact is here interpreted as reflecting conservatism and a potential reluctance of having future communication difficulties due to language problems. Finally, we find indications that firm size matters above what is accounted for by our explanatory variables. Moreover, we do not find any differences between the Nordic countries or between industries.

The major barrier to having the supervisory board internationalized may be the board's (and maybe the employee representatives) lack of language proficiency (Piekkari and Vesanen, 2009). Internationalization of the supervisory board may, however, create value as reported by Oxelheim and Randøy (2003). Their main argument is the need for financial internationalization of the firm through the recruitment of Anglo-Americans to the supervisory board. However, Buckley et al (2002) stresses a more general need for international competencies in the internationalized firm. Our results (for Sweden and Norway) indicate that having the nomination committee internationalized may be a first step to also having the supervisory board open up for foreign board members.

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Appendix Descriptive statistics

SWEDEN	Mean	Std. dev	Min	Max	Number of observations
Foreign board member	0,60	1,13	0	6	1690
Foreign board member (per cent)	8,11	15,00	0	100	1690
Market capitalization ($)	1357,49	4772,61	1,14	64170,29	1458
Ln market capitalization	5,04	2,06	.13	11,07	1458
Foreign sales/Total sales	53,71	29,70	0,00	100,00	784
Age on chair member	57,84	7,86	29	79	1671
International experience	2,89	2,06	0	9,5	227
Total board members	7,00	2,20	3	13	1690
Average age of the board members	53,61	4,33	30	67	1678
Foreign ownership (per cent)	5,49	10,25	0	100	1416
Foreign on election committee	0,12	0,41	0	3	316
Average tenure	4,36	2,82	0	18,43	16577

DENMARK	Mean	Median	Std. dev	Min	Max	Number of observations
Foreign board member	0,49	0,0	0,99	0	8	841
Foreign board member (per cent)	7,58	0,00	15,16	0	100	841
Market capitalization ($)	1030,49	82,83	3954,11	0,15	43889,11	769
Ln market capitalization	4,70	4,42	2,08	-1,90	10,69	769
Foreign sales/Total sales	47,15	43,72	34,46	0,00	100,00	420
Age on chair member	58,81	58,81	7,43	36	76	716
International experience	1,87	1	1,59	0	6	130
Total board members	6,38	6	2,31	2	16	841
Average age of the board members	54,40	54,43	5,50	32	72	792
Foreign ownership (per cent)	5,85	0,11	12,04	0	74,31	741
Foreign on election committee	0,04	0	0,29	0	3	120
Average tenure	5,88	5,21	3,81	0	30	821

FINLAND	Mean	Median	Std. dev	Min	Max	Number of observations
Foreign board member	0,59	0	1,14	0	6	670
Foreign board member (per cent)	9,21	0,00	16,83	0	85,71	670
Market capitalization ($)	1989,05	132,76	10380,24	2,57	149115,70	647
Ln market capitalization	5,42	4,89	1,87	0,94	11,91	647
Foreign sales/Total sales	53,29	56,73	27,97	0,00	99,37	497
Age on chair member	56,12	57	7,60	32	73	664
International experience	2,07	1	1,88	0	7	76
Total board members	5,97	6	1,58	2	11	670
Average age of the board members	53,72	54,17	4,36	39,40	67,33	668
Foreign ownership (per cent)	5,13	0,00	8,81	0	54,87	570
Foreign on election committee	0,17	0	0,51	0	3	119
Average tenure	5,14	4,40	3,56	0	21,25	662

NORWAY	Mean	Median	Std. dev	Min	Max	Number of observations
Foreign board member	0,79	0	1,14	0	6	684
Foreign board member (per cent)	12,68	0,00	18,72	0	80	684
Market capitalization ($)	1372,68	138,72	5572,52	1,17	99175,55	595
Ln market capitalization	5,31	4,93	1,84	0,16	11,50	595
Foreign sales/Total sales	61,80	59,08	28,17	0,00	100,00	326
Age on chair member	54,16	53	8,54	30	84	665
International experience	2,51	3	1,58	0	7	126
Total board members	6,46	6	1,76	3	12	684
Average age of the board members	50,22	50,13	4,88	36,57	69,67	684
Foreign ownership (per cent)	6,04	1,31	10,97	0	94,75	761
Foreign on election committee	0,24	0	0,98	0	9	109
Average tenure	3,39	2,25	3,84	0	19,80	488

ALL COUNTRIES	Mean	Median	Std. dev	Min	Max	Number of observations
Foreign board member	0,61	0,0	1,11	0	8	3885
Foreign board member (per cent)	8,99	0,00	16,18	0	100	3885
Market capitalization ($)	1405,40	131,53	6206,25	0,15	149115,70	3469
Ln market capitalization	5,08	4,89	2,01	-1,9	11,91	3469
Foreign sales/Total sales	53,55	56,01	30,41	0	100	2027
Age on chair member	57,06	58	8,02	29	84	3716
International experience	2,45	2	1,88	0	9	774
Total board members	6,61	6	2,10	2	16	3885
Average age of the board members	53,19	53,50	4,90	30	72	3822
Foreign ownership (per cent)	5,73	0,23	10,66	0	100	3337
Foreign on election committee	0,13	0	0,55	0	9	664
Average board tenure	4,64	3,88	3,42	0	27	3787

6. The Effect of Board Diversity on CEO Pay

6.1 Introduction

In this study we address how board and remuneration committee diversity affect CEO pay. We do so without making a judgment whether CEO pay is too high or too low. Whereas the issue of board diversity has been addressed in relation to corporate governance and firm performance (e.g., Campbell and Minquex-Vera, 2007; Adams and Ferreira, 2004), the issue of CEO pay and board and remuneration committee diversity has to our knowledge not been addressed by past research. We argue that this issue is particularly interesting, since several Nordic policy makers have called for stronger monitoring of CEO pay (for example: www.regjeringen.no/nn/dep/aid), this issue is also of great concern in many other nations.

During the last decade CEO compensation has increased globally (Economist, 2007), as well as in the Nordic countries (Oxelheim and Wihlborg, 2008). Stock option compensation plans became common among the Nordic countries by the end of the 1990s – and stock options were the major vehicle for large pay increases (Oxelheim and Randøy, 2005). Whereas there is a strong element of globalization of CEO pay practices – the convergence in executive pay levels across countries is much weaker (Ruigrok and Greve, 2008). Hence, we argue that the institutional setting and corporate governance practices of the specific country still matter for the determination of CEO compensation. Specifically, the impact of board diversity on CEO pay would most likely vary with the corporate governance system.

In this empirical study we use data from the four Nordic countries: Denmark, Finland, Norway and Sweden. We argue that by focusing on these four countries we get a "natural laboratory" in terms of variation in board diversity – but within the context of a culturally and economically homogenous region (Sinani et al., 2008). Furthermore, the Nordic countries are known for their corporate transparency (Randøy and Nielsen, 2002), which provides us with relatively easy access to firm specific information on board diversity. This allows us to address issues that are harder to address in less transparent countries.

6.2 Theoretical background

Agency theory has been one of the major theoretical pillars of studies on CEO compensation. Agency theory focuses on the incentive and monitoring challenges between owners and managers (particularly the CEO). Agency theory takes a positive approach to the CEO compensation issue. In other words, how can the interests of potentially absent and less informed owners become aligned with that of powerful and sometime opportunistic executives (Fama, 1980; Fama and Jensen, 1983)? Within this framework, a potential weak link between CEO pay and firm performance is due to a lack of correctly designed incentives – some policy makers have suggested that more board diversity is a way to promote better corporate governance (OECD, 2008). In order to reduce the conflict of interest between absent owners and insightful CEOs, the linkage of pay and company performance is the number one suggested remedy. We argue that board diversity promotes CEO monitoring and thus is expected to reduce CEO pay – beyond what is an appropriate pay level to

provide sufficient incentives to the CEO. Given that past research has highlighted that the pay-performance relationship is rather weak – or even not significant in some studies (Tosi et al, 2000), we need to look beyond agency theory to understand how board diversity affects CEO pay.

Organizational theorists have addressed some of the limitations of the agency theory by examining CEO compensation as a political process, and thus taken a descriptive approach to the issue. This is a line of reasoning that goes back to Berle and Means (1932) work on managerial power in large US firms. Organizational scholars have focused particularly on CEO power and board power in attempting to open the "black-box" of what affects the CEO compensation decision (Findelstein, 1992; Boyd, 1994; Zajac and Westphal, 1996). The argument is that CEOs are in a unique position to determine their own compensation, based on their ability to influence board decisions. The ability to affect the remuneration committee, however, might be more limited, as the existence of such a committee (with no CEO presence) is an acknowledgement of the need for independent decision making vis-à-vis the CEO. Previous studies suggest a number of factors that potentially affect CEO power in relation to the board, and we have included the following in this study – with the indicated expected effect on CEO pay; ownership concentration (-), board size (+), and remuneration committee size (+).

This paper specifically addresses how board diversity might affect CEO pay, and we explicitly address three diversity issues; board nationality, board age and female board membership. We also address the two diversity issues in relation to the remuneration committee; female and foreign committee membership. The antithesis of good corporate governance is unrestricted CEO power (at the expense of the board) and fragmentation of board power, and we seek to identify how board and remuneration committee diversity affects CEO pay. We address both the *level* of CEO pay (Model 1), and the *growth* in CEO pay (Model 2). First, we want to understand the structural reasons for why CEOs are paid as they are (Model 1 – below). This does not imply that we get a complete picture of what drives CEO pay. Our second approach (Model 2 – below), addressing CEO pay growth, is therefore very important in order address what causes CEO pay changes. Such knowledge can potentially be used by national policy makers, owners, board members, and members of remuneration committees – to determine CEO pay in the future. Based on the above discussion, we address the research issue with two models:

Model 1: log of CEO pay level 2006 = f (board diversity 2005 + control variables in 2005)

Model 2: log CEO yearly pay growth$_t$= f (board diversity$_{t-1}$+ control variables in 2004$_{t-1}$)

6.3 Expected effect of diversity on CEO pay

From an agency point of view, greater board diversity might lead to a higher level of board independence - which is something that should benefit shareholders. Specifically, we expect that independent directors have greater incentives to take actions consistent with value maximization since they have concerns about their reputation affecting their ability to take on additional board appointments (Fama, 1980). We suggest that greater diversity is a sure way to promote greater board independence – and therefore we expect that diversity might promote appropriate CEO incentives. However, from an *agency point* of view – the *level* of pay should not be affected by greater board diversity – but the incentive alignment with owners (i.e., the combination of fixed and variable pay).

We will argue that from a *managerial power* perspective greater board diversity increase managerial discretion – including the CEOs ability to influence pay. Specifically, with great managerial power the CEO is able to take away the linkage between pay and performance; such that greater diversity produces higher salary. This is similar to the effect that previous studies on CEO pay have found for other board composition variables; such as board size – which is also expected to enhance managerial discretion (Yermack, 1996). This argument is also consistent with the social choice literature, specifically arguing for higher costs of collective decision making when the decision-makers are heterogeneous (Adams and Ferreira, 2004). Board diversity may necessitate longer, less efficient board meetings, the probability of ambiguities, misunderstandings and decision errors may increase, and conflicts of interest may be more likely to occur. Specifically, great diversity makes it hard to develop the board as a coherent unit – and from a managerial power perspective – this can enhance the CEOs bargaining power vis-à-vis the board. We therefore suggest that:

Hypothesis 1a: *There is a positive relationship between female board membership and CEO compensation.*

Hypothesis 1b: *There is a positive relationship between female remuneration committee membership and CEO compensation*

In line with past research, we argue that there is also a special effect from greater internationalisation of the board on CEO compensation – specifically an effect from Anglo-American board membership in Scandinavian firms (Oxelheim and Randøy, 2005). Such Anglo-American board membership provides a risk premium (of being dismissed) from the harsher monitoring commonly provided by independent board members from Anglo-American countries (Oxelheim and Randøy, 2003). Specifically, Oxelheim and Randøy (2005) show how the likelihood of dismissal given poor performance – is enhanced with Anglo-American board membership. The rational CEO will ask to be compensated for such harsher monitoring – and the thus the level of CEO pay increases with foreign board membership. Social choice theory also would support the notion that a foreign board member would add complexity and communication problems within the board room – and thus weakens the board's power vis-à-vis the CEO. This observation, together with the previous arguments, underpins our next hypotheses:

Hypothesis 2a: *There is a positive relationship between foreign board membership and CEO compensation.*

Hypothesis 2b: *There is a positive relationship between foreign remuneration committee membership and CEO compensation.*

One of the main political arguments for greater board diversity, and then more age variation of board members, is the potential greater board independence. The argument is that so-called "old boys" networks tend to develop in similar age groups – often affiliated with common educational institutions, and as such provides strong social ties between board members and the CEO – and thus

less independence. This is clearly a pattern in the Nordic countries, with a limited number of significant business and law scholars (often with a national champion – such as Copenhagen Business School or Helsinki School of Economics). This same argument can also be applied in the context of performance sensitivity – as greater variation in board age makes the CEO less able to influence (increase) CEO pay.

Hypothesis 3: *There is a positive relationship between age variation of board and CEO compensation.*

6.4 Methodology, choice of control variables and data

Data

We use data as described in Chapter 1: the database of all publicly traded firms in Norway, Sweden, Denmark and Finland. From this database we have figures on firm characteristics, ownership structure, board structure and financial data. We have CEO pay figures for all countries in 2006, and between 2005 to 2007 for Norway and Sweden. Getting access to CEO compensation data provided multiple challenges, and secondary databases do not provide these figures consistently. We collected this data based on the information provided in annual reports. Sweden and Norway require that CEO pay figures to be displayed in the annual report, whereas Finland and Denmark only require such figures for the total top management team (however, a number of firm still present these figures separately).

Whereas the cash part of CEO compensation has been a reporting requirement for a long time in Norway and Sweden, the stock option plans have not been consistently reported. However, due to a new 2005 International Financial Reporting Standards (IFRS) requirement, the Nordic companies now provide consistent reports on the total value (cost to the firm) of all elements of CEO compensation (this implies using the Black-Scholes option pricing model).

Methodology

A cross-sectional ordinary least-square (OLS) regression model is used to test the hypotheses presented in model 1 – focusing on the level of CEO pay in 2006. Drawing on previous research on corporate governance and CEO compensation (OECD, 1999; Core et al., 1999), Model 1 is tested with a variety of independent variables to minimize specification bias in the hypothesis testing. Specifically, we control for financial performance (ROA), industry, country, ownership structure, board size and size (sales). Analysis of the regression residuals did not indicate any problems with either heteroscedasticity or non-normal distributions.

To address the CEO pay growth issue, we apply an unbalanced data set of firms. Due to data limitations we only have these observations from Norway and Sweden between 2005 and 2007. While a fixed-effect specification could be attractive, the analysis includes industry, and other variables (remuneration committee figures) that are invariant over time, such that a random effect model is necessary.

There is no established literature on how rapid board characteristics; including diversity, firm performance and other characteristics of the firm - affect CEO compensation. Past studies tend to apply a one-year time lag (e.g., Coombs and Gilley, 2005). Given that CEO pay is determined at least annually – a one year time lag seems appropriate.

Measures

Since the objective of this study is the effect of board diversity on total CEO pay, we use the aggregate figure of CEO compensation – including fixed pay, cash bonuses, pension contributions, stocks, stock options etc. The CEO pay figure is measured in Euros at the exchange rate at the end of the year – as only Finland uses the Euro in the study period. In order to reduce heteroscedasticity, the natural log of CEO compensation is used as the dependent variable. This approach was previously used by Finkelstein and Hambrick (1989), Boyd (1994), and Elhagrasey et al. (1998/1999). The CEO pay growth figure is produced by taking the log of CEO pay in $year_t$, and then subtracted by the CEO pay in $year_{t-1}$.

The female board percentage is calculated based on all board members – including possible employee elected members. Foreign board membership is based on the citizenship of the board members – which might both understate and overstate the actual degree of non-national influence in the board. Dual nationalities have not been identified among the board members. The age variation of the board is measured as the standard deviation of the age of the individual board members. Similar to the measures of female and foreign board membership, we also measure female and foreign remuneration committee membership.

We apply a number of control variables in line with past studies. We use the log of total sales (measured in US dollars) as the measure of firm size. Another control variable is ownership concentration which is measured as a percentage of ownership by the largest owner. In the case of more than one share class, we used the share class most actively traded. Firm performance is measured using return on assets (ROA), with a one year lag. Board size and remuneration committee size – is measured by the total number of members – including possible employee elected members.

6.5 Discussion

Among the sample firms, the average Nordic CEO received 415 000 Euros in total pay in 2006. CEO pay was highest in Finland with the lowest salary in Denmark. These numbers can not be directly compared – since the sample includes more or less all publicly traded firms from Norway and Sweden – but a much smaller sample of firms from Finland and Denmark. Furthermore, the structural differences between the countries also make it inappropriate to compare these figures directly.

Table 6.1 Correlations - CEO pay and diversity

	CEO pay (ln) in Euro	*# Female board*	*Anglo-American board*	*Sales (US$)*	*# of member remuneration com.*	*# Foreign Renum. Members*	*# Female remun. Committee*	*Leverage*	*Foreign board members*	*Standard dev. Board age*	*# Total employees*	*# Board members*	*Total assets (US$)*	*Market capitalization (US$)*	*ROA*
CEO pay (ln) in Euro	1.0000														
# Female board members	0.1227*	1.0000													
Anglo-American board	0.2345*	0.0504*	1.0000												
Sales (US$)	0.4493*	0.1104*	0.1237*	1.0000											
# of member remu. com.	0.3942*	0.1436*	0.1465*	0.2715*	1.0000										
# Foreign Board Members	0.2877*	-0.0060	0.3085*	0.3039*	0.3050*	1.0000									
# Female remun. Committee	0.1680*	0.2270*	0.1294*	0.1562*	0.5685*	0.1740*	1.0000								
Leverage	0.0393	-0.0586*	-0.0519*	-0.0001	-0.0739*	-0.0690*	-0.0441*	1.0000							
Foreign board %	0.2413*	0.0515*	0.5880*	0.1640*	0.1858*	0.3906*	0.0829*	-0.0420*	1.0000						
Standard dev. Board age	-0.0283	0.0949*	0.0535*	-0.0803*	-0.0084	0.0238	0.0047	-0.0450*	0.0356*	1.0000					
# Total employees	0.2850*	0.1890*	-0.0697*	0.2010*	0.0744*	0.0176	0.0212	0.0292	-0.0498*	0.1136*	1.0000				
# Board members	0.4744*	0.2282*	0.0272	0.3569*	0.4009*	0.1328*	0.2144*	0.0291	0.0527*	0.1107*	0.6886*	1.0000			
Total assets (US$)	0.2494*	0.1284*	0.0543*	0.5881*	0.1586*	0.1406*	0.1177*	0.0378*	0.0960*	-0.0469*	0.1687*	0.2644*	1.0000		
Market capitalization	0.4950*	0.1117*	0.1445*	0.7686*	0.2245*	0.4001*	0.1452*	-0.0295*	0.1653*	-0.0486*	0.1361*	0.2803*	0.4623*	1.0000	
ROA	0.1524*	0.0876*	-0.1210*	0.0822*	0.0742*	0.0170	0.0783*	0.0667*	-0.1440*	0.0190	0.1219*	0.1334*	0.0530*	0.0829*	1.0000

The correlations show that there is a significant association between two of our measures of board diversity and CEO pay. The correlation with female board membership is 0.13, with foreign board membership 0.24 – both in line with H1a and H2a. These findings do not imply causality – as the level of compensation is also driven by a number of other factors – and the causal direction could potentially by reversed (as highly paid CEOs also could attract foreign board members and more female directors). Furthermore, in line with past research, we see that particular firm size (measure either in terms of employees, sales or market capitalization) is highly correlated with CEO pay. As expected, financial performance (ROA) is significantly associated with higher pay (but only at 0.15), as well as board size (.47) and the size of the remuneration committee (0.39). Other control variables that show significant correlation with CEO pay are: ownership concentration (-.17), dual share classes (0.39) and three out of the four country dummies.

Table 6.2: The effect of board diversity on CEO pay (ln) in 2006.

OLS regression (standard errors reported in the brackets)

OLS REGRESSION Dependent variable: CEO Pay (in logarithms)	
Percentage of females on board	0.005 (0.003)**
Percentage of foreigners on board	0.007(0.002)***
Board age (standard deviation)	0.008 (0.013)
Sales (in logarithms)	0.1777(0.025)***
Largest owner share (in percent)	-0.006(0.002)***
Board size (n of members)	0.072(0.02)***
Norway	-0.456(0.173)***
Sweden	-0.189(0.158)
Finland	-0.317 (0.176)*

Return on assets	0.0013 (0.002)
Remuneration committee (size)	0.127 (0.033)***
Number of foreigners on the remuneration committee	0.090 (0.869)
Number of females on the remuneration committee	-0.139 (0.081)
Industry dummies	Included
Const.	11.547 (0.216)***
R-squared	0.588
Number of observations	373

**Significant at 10 percent level.*

***Significant at a 5 percent level.*

****Significant at a 1 percent level.*

The multivariate test in Table 6.2 reveals that after controlling for other factors, female board membership (H1a) is significantly associated with higher CEO pay. We emphasize that our tests shown in Table 6.2 can not detect causality – as we do not test the effects over time and do not control for unobserved firm effects (or other such effects). As we argue in the theory section, there is still a theoretical argument that heterogeneous board membership (one gender versus both genders) might produce weaker collective decision-making, and thus provide the CEO with potentially stronger bargaining power over the pay setting process. This does not imply that woman are less successful or less valuable board members – only that board diversity might have both costs and benefits – and higher CEO pay might be one of the cost factors. When we look at the effect of female remuneration committee membership – we actually see the opposite effect: a female membership is associated with lower CEO pay (significant at the 5%-level with one-side test). The argument could be that whereas heterogeneous (with females in this case) boards have abridged monitoring capabilities, this is less of an issue when diverse board members are given a specific task – such as setting CEO pay in the context of a remuneration committee.

Our data shows that foreign board membership (H2a) is significantly associated with higher CEO pay. Whereas Oxelheim and Randøy (2005) found a positive CEO pay effect of Anglo-American board membership in Norwegian and Swedish firms – we identify the same kind of effect related to

all foreign board members. Whereas Oxelheim and Randøy (2005) emphasized the contagion effect from highly paid Anglo-American CEOs (and with this harsher monitoring of the CEO), our findings indicate that there is a broad effect from international board membership. We will argue that this effect can be explained by both a contagion effect from abroad, as the Nordic countries have among the lowest CEO pay in the OECD, and due to the weaker monitoring abilities of a diverse board. In line with social choice theory, we argue that differences in culture, language and values makes board coordination and decision making more challenging, and thus the CEO enhances his/her managerial power vis-à-vis the board. We failed to get significant support for the same effect of foreign membership with respect to the remuneration committee. One possible explanation could be that the when a board has foreign board membership – and thus have already been "infection" by this effect – then the additional effect of adding foreign remuneration committee members is rather small.

However, the third diversity factor – variation in board age - does not show a significant association with CEO pay. Furthermore, the age diversity of the remuneration committee does not show significant association with CEO pay. Our main argument (H3) has been that board age diversity produces more board independence, whereas, social choice literature makes the opposite prediction. For example, Adams and Ferreira (2004) found higher costs of collective decision making when the decision-makers are heterogeneous. Given that, we find no consistent relationship between the age diversity of the board and CEO pay – a possible explanation might be that the positive effect of more board independence, is cancelled out by the negative effect of more board conflict.

Table 6.3: The effect of board diversity on the growth in the CEO pay (ln) in the Nordic countries over 2001-2007 period OLS regression (standard errors reported in the brackets)

OLS REGRESSION **Dependent variable: Growth in the CEO pay (lnCeopay(t) - lnCeopay (t-1)** **All explanatory variable are lagged**	
Percentage of females on board	-0.0002 (0.001)
Percentage of foreigners on board	0.003(0.001)**
Board age (standard deviation)	0.005 (0.005)
Sales growth	0.067(0.026)***
Largest owner share (in percent)	-0.000(0.001)
Board size (n of members)	-0.005(0.009)
Norway	-0.0001(0.093)
Sweden	0.038 (0.086)
Finland	0.179 (0.316)

Return on assets	0.0006 (0.0001)
Remuneration committee (size)	-0.012 (0.014)
Number of foreigners on the remuneration committee	-0.018 (0.04)
Number of females on the remuneration committee	-0.032 (0.035)
Industry dummies	Included
Year dummies	Included
Const.	-0.12 (0.14)
N of observations	735
R-squared	0.12

**Significant at 10 percent level.*

***Significant at a 5 percent level.*

****Significant at a 1 percent level.*

Using CEO pay growth as the dependent variable provides several advantages to the cross-sectional approach applied in Model 1 and shown in Table 6.2. First, the need for control variables are limited since changes in CEO pay is regressed against changes in the same firm. Second, this provides a stronger case to assess causality.

Table 6.3 shows that sales growth is the most important factor driving changes in CEO pay in Norway and Sweden between 2005 and 2007. This is in line with other studies from Finland (Mäkinen, 2008), and the UK and US (Conyon and Murphy, 2000). We also see that a high level of foreign board membership significantly increases CEO pay growth – in line with the predictions of H2a. Again, as previously seen in Norway and Sweden in the late 1990s (Oxelheim and Randøy, 2005), foreign board membership appears to continue to spread a culture of high CEO pay to the relatively low paid Nordic executives. We failed to find a linkage between female board membership and CEO pay growth There might be two offsetting effects leading to this finding. On one hand, female board membership provides potentially weaker monitoring as argued by the social choice theory (as seen in Table 6.2) – on the other hand – this effect might be offset by the stronger

in**Feil! Fant ingen stikkord.**dependence of female directors – as expected from agency theory. Given that female directors can not be members of "the old boy's network" – they need to be recruited from new social networks. Such recruitment will most likely reduce the CEOs ability to influence recruitment, and thus reduce the CEOs wage setting power vis-à-vis the board. Unfortunately, we do not have any data to support such an argument.

6.6 Conclusion

In this study we have addressed the impact of board and remuneration committee diversity on the level and growth of CEO pay in four Nordic countries. We apply two models to assess the impact of board and remuneration committee diversity: one focusing on the CEO pay level across countries and firms in 2006, and another model on the annual CEO pay growth – limited to Norway and Sweden between 2005 and 2007.

We find that female board membership significantly increased the CEO pay level in 2006, and argue that this effect might be explained by the higher coordination and decision making difficulties associated with heterogeneous groups. Furthermore, such board diversity might lead to a stronger pay bargaining position of the CEO vis-à-vis the board. When assessing the impact of female board membership on CEOs annual pay growth – we find a no significant effect. This suggests that female board membership does not contribute to further increases in CEO pay. From a corporate governance point of view – this suggest that female board membership might produce higher CEO pay (or rather in the past) – but that the present and future impact is uncertain.

We find that foreign board membership significantly increases CEO pay and that there is also a significant effect on pay growth. This suggests that foreign board membership reduces the monitoring capabilities of the board – partly motivated by the fact that foreign board members are used to much higher CEO compensation in non-Nordic countries. We do not find a significant effect of board age diversity on CEO pay. This might reflect the fact that age is a "weaker" diversity variable then gender and nationality - at least in relation to the CEO pay setting processes.

We find that remuneration committee gender diversity does significantly reduce the pay level (2006) – but not the annual pay growth (2005-2007) in our sample firms. We argue that the "costs" of diversity, as particularly argued by the social choice theory, are smaller in very task oriented groups – such as a remuneration committee. In fact, the pay reduction from female remuneration committee membership suggests females are better monitors of the pay process. This could potentially be explained by a greater independence vis-à-vis the CEO of female remuneration committee members. One control variable should be noted. Larger remuneration committees pay higher CEO salaries – similar to the effect from board size.

One limitation of this study is the fact that we look at the effect of board and remuneration committee diversity in the context of four civil law countries – with rather similar corporate governance systems. Whereas our main theoretical arguments are built on agency theory, social choice theory and managerial power theory – these arguments should also be applicable to other contexts. However, given the fact that countries vary extensively with regards to dimensions such as the present level of board diversity (as illustrated by Economist, 2008) and the fact that there are limits to diversity (i.e., when the female board percentage reached 50% - then gender diversity can only go down), we expect that the relative impact of diversity is country and time-specific.

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Nordic Innovation Centre

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The Nordic Innovation Centre initiates and finances activities that enhance innovation collaboration and develop and maintain a smoothly functioning market in the Nordic region.

The Centre works primarily with small and medium-sized companies (SMEs) in the Nordic countries. Other important partners are those most closely involved with innovation and market surveillance, such as industrial organisations and interest groups, research institutions and public authorities.

The Nordic Innovation Centre is an institution under the Nordic Council of Ministers. Its secretariat is in Oslo.

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