WOMEN AND INFLUENCE IN CORPORATE BOARDS:

THE CASE OF NORWAY

Beate Elstad

Associate professor, Oslo University College

Gro Ladegård

Associate professor, Norwegian University of Life Sciences

Under review in Corporate Governance. An International Review.

Please do not quote
ABSTRACT

**Manuscript Type:** Empirical

**Research Question/Issue:** This study seeks to understand the relationship between the proportion of woman and their influence in corporate boards. We investigate whether increased proportion of women directors have impact on individual influence of these directors. We also present hypotheses on the moderation variables through which this relationship may work. Our main assumption is that increased proportion of women will have positive effects on influence only for women who actively participate in social interaction outside the boardroom, are low on conformity, and that have sufficient access to information in the board.

**Research findings/insights:** We test our hypotheses in a sample of 346 female directors in Norway, representing boards with female proportions ranging from 11 to 100 %. The results show a significant positive linear relationship between proportion of women and individual influence. Our moderating hypotheses were also supported. We conclude that increasing the female ratio in a board is a necessary but not sufficient condition for increased influence for women. This poses challenges both for policy makers, board chairs and female directors alike.

**Theoretical/Academic Implications:** The study models and tests internal processes in boards of directors that contribute to the explanation of the relationship between gender diversity and performance. Our results demonstrate the importance of focusing on internal group processes in boards, in order to understand the issue of women and minorities in the boardroom.

**Practitioner/Policy Implications:** From a democratic perspective, a quota rule seems to work according to the intentions of the policy makers, as the individual influence is shown to
increase at all levels of proportions of women. However, the ultimate objective of increasing women's influence and improving corporate governance is dependent on further focus on internal processes in the board.

**Keywords:** Corporate Governance, Diversity, Board of Directors, Gender, Influence.

**INTRODUCTION**

The issue of women on corporate boards of directors has received considerable attention during the last decade, with studies from a variety of different countries such as United States, Canada, UK, France, New Zealand, Australia, Spain, Jordan, Tunisia, Iceland and Norway (Vinnicombe, 2008). Research on gender diversity in boards has studied whether having more women on a board makes organizations perform better (Adams & Ferreira, forthcoming; Brown, Brown, & Anastasopoulos, 2002; Carter, Williams, Reynolds, Westhead, & Wright, 2000; Catalyst, 2004; Erhardt, Werbel, & Shrader, 2003; Francoeur, Labelle, & Sinclair-Desgagne, 2008; Rose, 2007; Tacheva & Huse, 2006). However, the empirical evidence of such a relationship is so far ambiguous (Finkelstein & Mooney, 2003; Johnson, Ellstrand, & Daily, 1996). For example, Browne et al. (2002) conclude that companies with two or more women in the board do practice good governance to a larger degree than those without women, while Adams and Ferreira (forthcoming) conclude that boards with women focus more on monitoring and auditing tasks, which can reduce firm value for well-governed firms.

The issue of women in corporate boards has mainly been studied from the perspective that diversity is important to generate productive boardroom discourse, facilitate effective boardroom decision-making, and in general contributes to good governance (Billimoria &
Further, it is argued that women bring different resources and external relationships to the board, which also enhances value for the board (Hillman, Cannella, & Harris, 2002). These arguments are based on three assumptions. First, that good governance actually improves corporate performance (Brown, et al., 2002). This assumption is also implicitly adopted in the present article. Second, that women actually have different resources, behavior or preferences than men, and, third, that the women on boards actually exert influence in the board. There is some evidence indicating that more women on a board increases the quality of board deliberations and corporate governance as a whole (Burke & Vinnicombe, 2008; Clarke, 2005; Fondas & Sassalos, 2000; Huse & Solberg, 2006; Stephenson, 2004; Van der Walt & Ingley, 2003). The assumption that women have different preferences or behavior from men has also gained some empirical support (Adams & Ferreira, forthcoming; Brown, et al., 2002). However, little is known about the conditions for these differences to be manifested in governance practices. We shall argue that a major condition for this to happen is that the women have influence on board decisions, and the basis for this argument is the solid documentation of barriers to influence that are facing demographic minorities in the boardroom (Horwitz & Horwitz, 2007; Westphal & Milton, 2000). Thus, the availability of expertise in a board does not guarantee the use of that expertise (Jackson, 1992:359). A large body of research has focused on the social barriers that reduce the possibilities that minority viewpoints are incorporated into group decisions (Hambrick, Cho, & Ming-Jer, 1996; Nemeth, 1986; O'Reilly III, Caldwell, & Barnett, 1989; K. G. Smith, et al., 1994; Westphal & Milton, 2000), where a minority is defined as the relative size of the subgroup to the group as a whole. Scholars have also argued that disproportionate influence is a problem connected to the number of women in the board, and that a critical mass is necessary for women to exert influence (Konrad, Kramer, & Erkut, 2008; Kramer, Konrad, & Erkut, 2006).
So far, most boards with women have a very small ratio, the largest average female ratio is reported to be in U.S. boards with an average of 14.8% (Adams & Ferreira, forthcoming). Thus, the full relationship between gender minority status and influence has not yet been investigated, as there has neither existed corporate boards with a large minority nor boards with a female majority. In 2005 the Norwegian Government passed a quota legislation that requires Norwegian public limited liability companies (ASAs) to have at least 40 per cent of each gender on their board of directors. The ASAs are the largest companies in Norway, and these have traditionally had a low proportion of women on their boards. The small and medium companies do not apply to this legislation, and we find a large variation in gender diversity among these companies, from no women to a female majority on the board. This provides the opportunity to test the effects of increased proportion of women on individual influence for a broader range of female ratios in a board. Thus, the purpose of this study is to gain knowledge on whether increased female ratio in a board does affect influence, and specifically the conditions for such increased influence to occur.

In the following section, we shall discuss how minority problems are manifested for a female minority in a board, specifically the barriers to exerting influence. We then discuss how increased female ratio may affect group processes in the board, and develop and test hypotheses on the conditions for increased influence to occur when this ratio increases.

GENDER MINORITIES AND INFLUENCE

Research on demographic minorities in boards of directors has indicated that minorities may face social barriers to exerting influence in board decisions (Hambrick, et al., 1996; Nemeth, 1986; O'Reilly III, et al., 1989; K. G. Smith, et al., 1994; Westphal & Milton, 2000). Gender as a demographic characteristic is a highly visible attribute with a long range of historical and
cultural connotations, and may be an attribute of difference whose effects override other demographic differences, such as experience or formal competence. Gender is shown to create associations and assumptions about other hidden differences, for example level of competence or abilities (Anne S. Tsui & O'Reilly III, 1989). These assumptions can be based on established stereotypes or prejudices, and have been shown to affect behavior (Walt & Ingley, 2003). The barriers to exerting influence of a female minority in a group is thoroughly discussed in Rosabeth Moss Kanter’s well-known study of tokenism (Kanter, 1977). Kanter studied women working within male-dominated Fortune 500 firms to explore how the number of women in a group affects group processes. She defined a skewed group as of a ratio of 85:15, where the members of the majority (85% or more) where labeled as dominants. The remaining minority where labeled as tokens. One important consequence of being a token is the contrasts effect (Gustafson, 2008; Kanter, 1977). This implies that the dominants (majority group) become aware of their commonalities and their difference from the token (minority). To preserve their commonalities, they keep the token outside and isolate them from the rest of the group. Furthermore, a token will often be exposed to stereotype prejudices – for example expectations as to what is “suitable behavior” for a woman. Social identity theory has labeled these mechanisms as out-group vs. in-group behaviors (Ashforth & Mael, 1989; Tajfel & Turner, 1986). It is often the case that in-group members (the majority) develop a coherence and confidence that reinforces their own self-esteem and self-perception. This group will thus be more positive to communicating with each other than to communicating with different out-groups. There is also evidence indicating that members of the in-group in a corporate board have a tendency to assess behavior of others in the in-group as more positive compared with the same behavior in the out-group (Singh & Vinnicombe, 2004). Furthermore, the out-group is less committed to the group as a whole, the members identify themselves with the group to only a small extent, and absenteeism is higher (A. S.
Tsui, Egan, & Oreilly, 1992). These results support the assumptions that, first, gender is a salient attribute on which an out-group vs. in-group categorization may be based, and, second, that a female minority will be subject to the out-group problems in a decision making group. Based on these arguments, we suggest that these problems have a negative impact on a female minority’s ability to exert influence on decisions in a board of directors. In general, research support the assumption that individuals who have majority status have the potential to exert a disproportionate amount of influence in decision making (Maass & Clark, 1984). Further, the literature on in-group vs. out-group mechanisms does provide some clues as to how these may have impact on individual influence. First, the minority is isolated from the rest of the group, creating information barriers as well as social distance and thereby less access to discussions in the board (Hambrick, et al., 1996; Nemeth, 1986; O'Reilly III, et al., 1989; K. G. Smith, et al., 1994; Van der Walt & Ingley, 2003). Second, the minority is evaluated as less competent; women may in addition be exposed to stereotype prejudices which reduce their chances of being regarded as legitimate opinion-holders and their arguments may be less weighted in board decisions (Miller & Brewer, 1996; Tajfel, Sheikh, & Gardner, 1964; Westphal & Milton, 2000).

**Effects of increased female ratio**

The question we raise in the present study is whether the minority problems decrease as the proportion of women increase in a board. The argument of disproportionate influence implies that individuals with minority status will have less influence than individuals with majority status (Westphal & Milton, 2000). However, the size of a minority in a group may vary from one individual to 49%, and research has indicated that the minority problems decrease as a function of number of women. Some scholars have studied the number of women rather than the proportion, arguing that a critical mass of women is required to be able to exert influence. (Konrad, et al., 2008) found that if there are three or more women in the boardroom this will
create a normalization of what it means to be a woman: you are no longer regarded as an out-group and you are assigned legitimacy and taken as seriously as others on the board. Social impact theory (Latane & Wolf, 1981) predicts that number of group members affects social processes in the form of a power function in which the first person has the strongest impact and each additional person has a marginally decreasing impact. Later research has modified this theory, and some studies also show that there is a linear relationship between increasing number and impact in the group (for a review, see Maass & Clark, 1984)

An intriguing question is what happens when women becomes a majority in a board. As argued by Westphal and Milton (2000), women can actually have in-group status on boards composed mostly of women. Thus, based on the above reasoning we expect that the larger the proportion of women in a board, the lesser is the individual woman’s probability of being regarded (and regard herself) as an out-group, and consequently the individual influence will increase. We suggest that there is a positive and linear relationship between ratio and influence, such that individual influence increases with increasing ratio at all ratio levels. Thus the following hypothesis:

\[ H1: \text{the larger the proportion of women on a board, the greater the influence of each individual woman} \]

**Group processes as moderators**

The above hypothesis suggests that influence is a direct result of female ratio, i.e. that demographic composition of the board will affect decision results. This is in line with the structural models of boards (Ong & Wan, 2008). The argument is that the out-group problems will disappear as the proportion of women grows. On the other hand, researchers recognize that the effects of minority status vary across situations, social context and personal
characteristics (Schermerhorn, 1970; M. G. Smith, 1987; Westphal & Milton, 2000). As minority problems are based on perceived differences between the in-group and the out-group, the negative effects of minority status on influence can also be moderated through creating other bases for similarities, such as e.g. common membership on other boards (Westphal & Milton, 2000). A study of social distancing among corporate directors showed that individual status in the corporate elite moderated the extent to which a director is subject to social distancing (Westphal & Khanna, 2003). Further, a study of group decision making under majority influence showed that the strength of majority influence varied between groups of different cultural backgrounds as well as degrees of group diversity (Zhang, Lowry, Zhou, & Fu, 2007). Thus, we argue that individual behavior and group processes will moderate the relationship between female ratio and influence. In order to benefit from a growing ratio of women, the female directors must show less typical minority behavior, become more committed to the group as a whole, and increase participation and presence (A. S. Tsui, et al., 1992). Further, for the minority problems to disappear, the in-group should also show less majority behavior, increase informal social interaction and improve the integration of the female directors (O'Reilly, Caldwell, & Barnett, 1989). We shall present three hypotheses on these moderating processes in the following.

Social interaction

One of the most salient minority problems is that being an out-group reduces informal social interaction, which creates difficulties in integrating group members (O'Reilly, et al., 1989). Social distancing and isolation from the in-group, lack of communication and attraction are, as mentioned previously, frequently reported effects of being a minority or out-group. At the same time, several studies of board processes have addressed the importance of informal social interaction in decision processes. Qualitative research on influence processes in boards shows that influence is largely exerted through informal discourses, both inside and outside
the boardroom (Parker, 2007). In a study comprising interviews with eight female directors, Huse and Solberg (2006) report that an issue frequently raised by the respondents was the importance of building alliances in order to gain influence. A majority reported that decisions were taken before the board meetings through board members talking on the telephone or getting together outside board meetings. They also reported that the meeting breaks and the periods before and after the meetings were used for informal talks at which decisions were more or less taken. It thus appears that informal interaction outside board meetings is important for acquiring support for one’s own suggestions in advance and for increasing personal influence on arguments in a specific case. Stevenson and Radin (2009) found similar results, and conclude that ”board meetings were often considered pro forma with the real business taking place outside of the meeting” (Stevenson & Radin, 2009, p. 33). These authors found that directors who had strong ties to other members of a focal board who met outside of board meetings more strongly predicted influence than did network ties across boards. Informal interaction may also contribute to reducing perceived differences between an in-group and an out-group by harmonizing perceptions of reality, by the members becoming better acquainted with each other, and by creating better social cohesion in the group (O'Reilly, et al., 1989). This can in turn affect the in-group’s perceptions of the out-group, resulting in evaluating the latter as less different, and in keeping less distance and being more willing to listen and consider this group’s perspectives. Hence the following hypothesis:

**H2: Participating in social interaction outside the boardroom moderates the relationship between female ratio and influence, such that the effects of ratio on influence will be stronger for individuals with a high degree of social interaction than for those with a low degree of social interaction.**
Conformity

The pressure towards conformity is a well-known group phenomenon, described by Janis, among others, in his study from the early 1970s on the development of group thinking (Janis, 1972). Research on conformity in groups shows that if the task being carried out is complex, the conformity pressure in the group increases (Shaw, 1981). It is reasonable to assume that board work largely consists of complex tasks, and that there is therefore a general conformity pressure in many boardrooms. Social impact theory (Latane & Wolf, 1981) predicts that the majority influence is exerted through conformity (the conformity paradigm), which is based on the number of members in the majority. Further, one of the most persistent findings in research on social impact theory is that consistent behavior of a minority is a necessary condition for minority influence to occur (Maass & Clark, 1984). Thus, for the minority influence to increase, the members of the minority group must consistently show non-conforming behavior. In the board as a decision making group this implies that the female directors express opinions openly also when these are deviant from the majority standpoints. Individuals who express their disagreement will make it possible for the board as a whole to consider whether the opinions of these women directors are in fact valid, and thus also to incorporate them in the final decisions. We therefore submit the following hypothesis:

\[ H3: \text{Conformity moderates the relationship between female ratio and influence, such that the effects of ratio on influence will be stronger for individuals with a low degree of conformity than for those with a low degree of conformity.} \]

Information access
Throughout the decision-making process it is important to gain access to information that is relevant to the decisions that are to be taken, and the effectiveness of a board is dependent on information to be shared across all directors. A considerable amount of research has shown that those involved often do not receive complete information during such a process. Research has subsequently been conducted specifically on how information is filtered or “distorted” on its journey through various parts of an organization (O’Reilly & Roberts, 1974). Such filtration may be intentional or non-intentional. Decision-making processes can consist of power struggles between various players with different preferences. Based on our previous discussion on diversity and how an out-group is evaluated by the others in the group, we can assume that players in an in-group can filter out critical information, suppress information completely, or “embellish” information for the out-group. Access to relevant and sufficient information from the in-group, both in the board meetings as well as outside, will be essential for understanding the matters under discussion, and for submitting well-informed proposals. We therefore formulate the following hypothesis:

\[ H4: \text{Access to information moderates the relationship between female ratio and influence, such that the effects of ratio on influence will be stronger for individuals with a high degree of information access than for those with a low degree of information access.} \]

**METHOD**

**Sample**

The design of the study is cross-sectional. The data were collected by a survey, with a web-based questionnaire sent to 1260 women. These women were contacted through the Female Future program me of the Confederation of Norwegian Enterprise, which has a database of
board candidates (193 persons), and through Innovation Norway, which has a similar database consisting of 1067 persons. Completed questionnaires were received from 524 respondents, i.e. a response rate of 48.5% (We also received 179 returned e-mails because of non-existing addresses). All the individuals registered in these databases had undergone a type of training or competence enhancement related to board work. The amount of training received varied from a few hours of information (respondents from the Innovation Norway database) to a systematic, network-based training program (respondents from the Female Future database). As the training varied systematically with type of company, this bias is considered accounted for with the inclusion of company type in the analysis. The training factor may create a bias in representativity of the sample, with the probability of the dependent variable, influence, to have larger values and lower variance than in the population. However, the effects of this bias will tend to make it more difficult to detect effects, and we do not expect it to contribute to overestimation of effects in our model. Of the 524 respondents, 66 did not hold board positions at the time of the survey and were therefore excluded. Further, 112 were chairs of the focal board, and were also excluded. The final sample on which the analyses are based thus consists of 346 respondents.

Measurement

Several of the respondents reported to have more than one board post, and they were asked to relate their replies to the board on which they had longest experience. Thus, the focal board is the board where each respondent is a director at present. All the measures are self-reported. As we wanted the measures to be directly related to board processes, we developed items for this purpose. The measures are based on the QPS-Nordic instrument (Dallner, et al., 2000) designed to measure a wide range of job-related psychological and social factors, and modified to be relevant for our setting.
Woman ratio was measured as the ratio of women to the total number of board members in the focal board, based on the numbers reported by the respondents (deputy members not included). Thus, woman ratio is an individual measure of the ratio to which each respondent belong (similar to the majority/minority status concept in Westphal and Milton’s study of influence (Westphal & Milton, 2000). Social interaction was measured by four statements, all indicating the degree to which the respondents interacted with other directors in the focal board outside the board meetings (e.g. “I socialize with other board members outside the boardroom”), with a Likert-type response format (ranging from 1-completely disagree to 5-completely agree). Information access was measures by four items, indicating the degree to which the respondent received all necessary information (e.g. “To my experience, the other board members share all relevant information with me”), also with responses ranging from 1-5. Conformity was measured via three items indicating the degree to which the respondents refrained from expressing deviant opinions in the board (e.g. “Did you ever refrain from expressing your true opinion, to avoid discussion?”) with responses ranging from 1 (seldom or never) to 5 (often or always), where 5 indicates a strong degree of conformity. One of the statements was reversed (“I state my opinions even if other members disagree”), and this item had a weak correlation with the two other items, and was therefore removed. The final variable of conformity is therefore based on two items. Influence was measured via three statements (e.g. “My opinions are approved when decisions are made”) with answer alternatives from 1 - “completely disagree” to 5 - “completely agree”.

We included three variables to control for individual background attributes that may affect the results. We measured age, formal competence (as a categorical variable indicating number of years in higher education) and experience (defined as the number of years as a director in the focal board). Further, we controlled for the type of firm, categorized as public limited
company (for which the quota legislation apply), ordinary limited companies, or “other”. The questionnaire was pre-tested in a group of ten women with board experience, not included in the sample.

**ANALYSES**

The data were analyzed in several phases. First, a confirmatory factor analysis (principal component analysis with varimax rotation) was performed on the scale items for the three mediating variables to determine item retention. The four hypotheses were tested by using regression analysis. The most commonly used method for estimating moderating effects is moderated multiple regression (MMR), where an interaction term (the moderator multiplied with the independent variable) is included in a regression equation together with the independent variables (Berry & Feldman, 1985; Lewis-Beck, 1990). In our case, this method is not the most suitable, for two reasons. First, the MMR method is built on the assumption of a linear relationship between the interaction term and the dependent variable (Aguinis, 2002; Aguinis, Beaty, Boik, & Pierce, 2005). This is a quite strong assumption, and our hypotheses are built on the assumption of a categorical difference between two subgroups of the sample, those with high vs. low values on the moderators. Further, there is almost invariably a problem of multicollinearity between the interaction term and the main effect variable (Lewis-Beck, 1990), and this is also the case in our sample. Thus, we decided to follow the procedure described by (Baron & Kenny, 1986), where the sample is split in two halves – one with high and one with low levels of the moderator, and influence is regressed on ratio for the two sub samples separately. The regression coefficients in the two sub samples are then compared.

To further prepare the data for analysis, we computed the three moderating variables into dummies with value 0 (low) and 1 (high), using the median value as the splitting point. We
further standardized the independent variables and the control variables. The interaction hypotheses were tested using six regressions analyses, two for each moderator (high vs. low values). The control variables were included in all the regression equations.

**Results**

The result from the factor analysis showed that one item on the information access scale cross-loaded on two factors so we excluded this item. All other items had a factor loading of 0.6 or higher, and a cross-loading of less than 0.35 (Kuvaas, 2008). The inspection of the variable properties showed that conformity was quite skewed to the left (1.6), with 3 as the highest value; however, as the analysis is based on the standardized variables, this should not inflate the results. The correlation matrix, including Cronbach’s alpha scores, means and standard deviations of the variables, are reported in Table 1. The measurements are listed in Appendix 1.

**Insert Table 1 about here**

*Sample characteristics.* In our sample most of the women are from limited company boards (62%), while only a small proportion are directors on the boards of public limited companies (6%). In addition there is a relatively large group (31%) of directors on boards in public, political or voluntary organizations. The female ratio varies from 11 % to 100 % with a mean of 43,9 %. 44 % of the sample is in the forties, and 35 % in the fifties. 93% have university education of more than one year, 65% more than three years. The average number of years of experience from the focal board is 3.68.
The results of the regression analyses are shown in Table 2.

**Insert Table 2 about here**

The table shows that for social interaction, the regression model is significant for high levels of social interaction, but not for low levels, and $R^2$ is more than doubled. Further, the beta coefficient for influence on ratio is significant for high levels of social interaction, but not for low levels. This supports the hypothesis for social interaction (hypothesis 2). The results for conformity show the regression model is significant for low levels of conformity, but not for low levels. $R^2$ is slightly larger for low levels of conformity. Further, the beta coefficient for influence on ratio is significant for low levels of conformity, but not for high levels. This supports hypothesis 3. The results for information access show that the regression model is significant for high levels, but not for low levels, and that $R^2$ is almost doubled for high levels. Further, the beta coefficient for high levels is significant, but not for low levels. This is supportive of hypothesis 4.

**DISCUSSION**

Overall, our study shows that women ratio is related to increased influence, also in boards with a large proportion of women. We find a positive and significant relationship between proportion of women and each woman’s influence on the board. Our findings support the assumption that when the proportion of female directors increases, the influence of the women will not only increase additively, but each woman perceives their individual influence
as larger. Since the proportion of women in our selection of boards varies substantially, this strengthens the argument that the female ratio is important.

This is contrary to the predictions in critical mass theory, where the disproportional low influence for each woman should disappear at a number of three women in the board. Thus, we conclude that proportion of women is more important than number. Thus, the size of the board plays a major role in determining the actual influence of the minority. The policy implications of this result is that if the goal for recruiting women is to incorporate women’s perspectives in board decisions making, we should take into consideration that women’s influence will increase more than the mere additive effect when the proportion of women increases.

Consistent with suggestions from various researchers, we opened the”black box” between structure and performance, and studied the board as a decision making group (Forbes & Milliken, 1999; Huse, 2008; Pettigrew, 1992). Overall, our results support our hypothesis about moderating effect of information access outside board meetings. For women with high degree of information access, the relationship between proportion of women and each woman’s influence is stronger than for women with low degree of information access. Power is crucial to understand the dynamics in decision making in top management teams and corporate boards (Klenke, 2003; Pettigrew, 1992). Still, the information sharing and access to information for minorities have received little attention in the literature.

The results also show that social interaction with board members outside board meetings is a strong mediator between women ratio and influence. This accentuates a challenge for female directors. It is crucial to participate in networking with both men and women outside the board meetings if you really want to have an impact on board performance. The results related to the moderating effect of conformity, is also supported. Thus, women that are not adaptive
to conformity will experience higher influence when women ration increases compared to more conforming women. Research on boards clearly states that cognitive conflict is essential to avoid groupthink (Janis, 1972) and to make creative and effective decisions (Forbes & Milliken, 1999; Ong & Wan, 2008). Kramer et al. (2006) found that in a number of cases, male and female CEO respondents reported that women directors, more than men, were prepared to push the “tough issues” at the board (McInerney-Lacombe, et al., 2008). Our study indicates that lack of conformity is important if each woman want to increase their influence when woman ratio increases.

**LIMITATIONS AND FUTURE RESEARCH**

In our study we have investigated factors that can explain female directors’ own perceptions of their influence on board decisions. This approach has also been applied by other researchers such as Westphal and Milton’s (2000) study of influence of demographic minorities on corporate boards. However, self-reported measures do always pose a danger for measurement biases. Stevenson and Radin (2009) validated measures of influence in a board through comparing others’ ratings of influence with self-reported ratings, and found that these were highly corresponding. However, influence is not a zero-sum game, and cannot be measured objectively. We need more in-depth studies of individual boards, where measures of influence are compared with decision results.

Another relevant question is what effects does increased women influence have on corporate board processes and outcomes? Does it lead to other and qualitative better decisions? And will women to a larger degree take strategic, controlling, service, or resource provision roles in boards (Daily & Dalton, 2003; Ong & Wan, 2008; Zahra & Pearce, 1989)? A study of Adams and Ferreira (2008) indicates that gender-diverse boards allocate more effort to
monitoring. Furthermore, what is the relationship between the distribution of different board roles and board performance?

We gained support for the main hypothesis about a positive relationship between proportion of board women and influence each woman experience. Thus, it seems that our argument about the majority as an in-group and the minority as an out-group can be useful to understand women in corporate boards. We cannot however conclude from our study that our results are valid across different cultures. Minority status vary across situation, time and social context (Schermerhorn, 1970; M. G. Smith, 1987), and it can vary whether women are perceived as an out-group related to power and appropriate competence in different countries. If they are considered as an out-group in general society, they may have disproportionate level of influence in the board even if they become a majority in the board. Thus, it would be interesting to replicate our study across different countries. Furthermore, we cannot conclude whether it is a gender effect per se that impact the influence process, or if it is a general effect of being a part of a minority or majority group. It is therefore necessary to study whether men in corporate boards experience the same problems of influence when they are a minority in a board. Will men also be perceived and experienced as an out-group when they are a minority in a board, or will this not happen because we are more familiar with men in leading positions in general in society? Thus, it will be interesting to study whether the results here are applicable for men across different cultures on boards of directors as well.

Our results give knowledge that might be of significance for policy makers in the discussion on quota-setting in the future. Many countries monitor what happens in Norway, but most of them are skeptical towards the quota rule, and a female ratio of 40 per cent represents a considerable change from the current proportion in most countries. If it is a general objective to increase women’s influence, it is clearly a necessary condition that the proportion of women increases. However, increased ratio is a necessary but not sufficient for this objective
to be fulfilled. The moderating effects of groups processes points to challenges and responsibilities of board chairs, to facilitate information sharing and an open, non-conformist culture. Most of all, women directors do share that responsibility.

Although our study points to the importance of group processes in determining influence in the board, we did only study three moderating variables. Future research are needed on other variables such as effort norms, boardroom cultures, board leadership, power and conflict, and board roles (Forbes & Milliken, 1999; Huse, 2008; Klenke, 2003; Pettigrew, 1992) Overall, research on board processes is still a relatively unexplored field with a need for more research on the relationships between structure, process, and effective task performance on the board.

REFERENCES


deliberation. In S. Vinnicombe, V. Singh, R. J. Burke, D. Bilimoria & M. Huse (Eds.),
Women on corporate boards of directors. International research and practice. MA, USA
Edward Elgar.


<table>
<thead>
<tr>
<th></th>
<th>Alpha scores, Means, Standard Deviations and Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alpha</td>
</tr>
<tr>
<td>1. Experience</td>
<td>3.68</td>
</tr>
<tr>
<td>2. Age</td>
<td></td>
</tr>
<tr>
<td>3. Formal competence</td>
<td></td>
</tr>
<tr>
<td>4. Women Ratio</td>
<td>.42</td>
</tr>
<tr>
<td>5. Social interaction</td>
<td>.84</td>
</tr>
<tr>
<td>6. Information access</td>
<td>.67</td>
</tr>
<tr>
<td>7. Conformity</td>
<td>.62</td>
</tr>
<tr>
<td>8. Influence</td>
<td>.77</td>
</tr>
</tbody>
</table>

*p<=.05  **p<=.01
### MEASURES

<table>
<thead>
<tr>
<th><strong>Social interaction:</strong> (Responses 1=Completely disagree, 5= completely agree)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha=.84</td>
<td></td>
</tr>
<tr>
<td>1: Both male and female board members socialize outside the boardroom</td>
<td></td>
</tr>
<tr>
<td>2: Male board members socialize outside the boardroom</td>
<td></td>
</tr>
<tr>
<td>3: Female board members socialize outside the boardroom</td>
<td></td>
</tr>
<tr>
<td>4: I socialize with other board members outside the boardroom</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Information access:</strong> (Responses: 1= Completely disagree, 5=completely agree)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha=.77</td>
<td></td>
</tr>
<tr>
<td>1: To my experience, the other board members share all relevant information with me.</td>
<td></td>
</tr>
<tr>
<td>2: To my experience, all the members of the board have a genuine intention to share all relevant information with each other</td>
<td></td>
</tr>
<tr>
<td>3: Have you ever experienced that information was withheld from you?</td>
<td></td>
</tr>
<tr>
<td>4: Have you ever experienced to be too short of information to be able to make up your mind on a topic?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Conformity:</strong> (Responses: 1=Very seldom or never, 5=very often or always)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha: .62</td>
<td></td>
</tr>
<tr>
<td>1: Do you sometimes express other than your true opinions, to comply with the majority?</td>
<td></td>
</tr>
<tr>
<td>2: Did you ever refrain from expressing you true opinion, to avoid discussion?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Influence:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Responses: 1=completely disagree, 5=completely agree)</td>
<td></td>
</tr>
<tr>
<td>Alpha= .77</td>
<td></td>
</tr>
<tr>
<td>1: It is easy to make my views and propositions heard</td>
<td></td>
</tr>
<tr>
<td>2: I experience that my opinions are taken seriously in the board</td>
<td></td>
</tr>
<tr>
<td>3: My opinions are considered when decisions are made.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 2
Regressions of influence on ratio for high and low levels of social interaction, conformity and information access. All variables are standardized.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>t</th>
<th>F</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control variables</td>
<td>.39</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman ratio</td>
<td>.21</td>
<td>.05</td>
<td>.21**</td>
<td>4.01</td>
<td>3.57**</td>
<td>.04</td>
</tr>
<tr>
<td>Soc. interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>.10</td>
<td>.08</td>
<td>.10</td>
<td>1.22</td>
<td>1.09</td>
<td>.04</td>
</tr>
<tr>
<td>High</td>
<td>.30</td>
<td>.07</td>
<td>.29**</td>
<td>4.06</td>
<td>3.76**</td>
<td>.09</td>
</tr>
<tr>
<td>Conformity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>.19</td>
<td>.11</td>
<td>.16</td>
<td>1.74</td>
<td>1.02</td>
<td>.04</td>
</tr>
<tr>
<td>Low</td>
<td>.18</td>
<td>.05</td>
<td>.22**</td>
<td>3.24</td>
<td>2.22*</td>
<td>.05</td>
</tr>
<tr>
<td>Info access</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>.19</td>
<td>.10</td>
<td>.17</td>
<td>1.42</td>
<td>1.14</td>
<td>.05</td>
</tr>
<tr>
<td>High</td>
<td>.19</td>
<td>.06</td>
<td>.23**</td>
<td>3.42**</td>
<td>2.95**</td>
<td>.07</td>
</tr>
</tbody>
</table>

Note 1: *p<.05  **p<.01  
Note 2: Control variables: experience, age, formal competence, board type