Gender Balance in Executive Management: Top-Managers' Understanding of Barriers and Solutions from the Demand–Supply Perspective

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The under-representation of women in executive management stands in contrast to their educational attainment, and labor market participation in most countries. This paper examines to what degree top-managers in the gender equal states, Iceland and Norway, agree with established demand–supply explanations of the problem, and suggested instruments for solutions. Drawing on a quantitative dataset of 908 managers in the 250 largest companies, the results emphasize that the divide between demand- and supply-side barriers and solutions may be less clear-cut in practice than theory. Our findings suggest a combination of demand- and supply-policies to enhance gender balance in top-executive management.

Introduction

The under-representation of women in top-positions in business life is receiving increasing attention worldwide. Attention has mostly been directed toward the lack of women on corporate boards (e.g. Gabaldon et al. 2016; Rafnsdóttir and Thorvaldsdóttir 2012; Seierstad et al. 2015; Terjesen, Sealy, and Singh 2009). However, the lack of gender balance in top-executive positions has also been addressed (e.g. Bertrand et al. 2014; Cook and Glass 2014; Gupta and Raman 2014). The gender imbalance stands in contrast to women's educational attainment and their general labor-market participation. Although gender imbalance among key decision-makers is widespread, the largest gap is found within the business sector (e.g. Davidson and Burke 2011), underpinning the need to examine this paradox among corporate top-managers.

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The lack of gender balance in executive management is also apparent in the gender equal countries, Iceland and Norway. In *The Global Gender Gap Report 2017* (World Economic Forum 2017, 10) Iceland is ranked as number one in the world, and Norway number two, with regard to general gender equality. Nevertheless, in terms of the ranking of gender equality in top-positions,[1] Iceland is number 50 and Norway is number 32 (World Economic Forum 2017). As of 2016, women constitute only 20 percent of the members of the executive committees in the 200 largest companies in Norway, and less than 10 percent of the largest companies in Norway and Iceland have a female CEO (chief executive officer) (Institute for Social Research 2017; Statistics Iceland 2017a). This paradox cannot be sufficiently explained by gender differences in education as Norwegian and Icelandic women have long been in the majority of those who have completed a university or college education (Statistics Iceland 2015a, 2015b; Statistics Norway 2015), and they have similar labor market participation to men (World Economic Forum 2017).[2]

To understand the lack of women at the top of the business sector, the explanations and solutions have been analyzed and explained in terms of supply- and demand-perspectives (e.g. Gabaldon et al. 2016; Gupta and Raman 2014; Reskin 1993; Teigen 2002). Demand-side explanations address the action of employers, emphasizing different forms of conscious and unconscious gender discrimination, like statistical or taste-based discrimination, prejudice, implicit bias, and homosocial reproduction/in-group preferences (e.g. Cook and Glass 2014; Gabaldon et al. 2016; Reskin 1993; Turner, Brown, and Tajfel 1979). Supply-side explanations, on the other hand, typically address the action of (potential) employees (Gabaldon et al. 2016; Reskin 1993), explaining different career paths through gender differences in values, attitudes, and gender role expectations (e.g. Niederle and Vesterlund 2007), or through work–family conflict due to gender differences in family responsibilities (e.g. Bertrand, Goldin, and Katz 2010; Halrynjo 2017; Miller 2011). Thus, the concept of work–family conflict could include gender differences in experienced levels of stress and spillover, as well as gender differences in actual division of family responsibilities (Gabaldon et al. 2016).

According to Ragins, Townsend and Mattis (1998), "the problem defines the solution." Thus, they argue that demand-side explanations will be followed by demand-side solutions, while support for the supply-side "pipeline approach" implies a passive wait for women's advancement, placing the burden for change on the individual woman. Gabaldon et al. (2016) state that supply- and demand-related barriers have been more thoroughly studied than policies or instruments for solutions. They highlight the need for research that combines and differentiates supply- and demand-side perspective, and links barriers with instruments to analyze their effectiveness on the identified barriers.

In this article we follow Gabaldon et al.'s (2016) recommendation by combining and differentiating supply- and demand-factors, and examine in what

ways explanations and instruments for solutions are linked. We also contribute to the literature by broadening the scope from gender imbalance on boards, to the under-representation of women in top-executive management. Drawing on a survey dataset of 908 male and female managers serving on the executive committees in the largest companies in Norway and Iceland, we examine to what degree executive top-managers themselves understand the existing barriers and potential solutions for the lack of gender balance in executive management from a demand- vs. supply-perspective. This dataset also allows us to investigate whether the divide between supply- and demand-barriers, and the possible solutions, is as clear-cut in business life as in the existing theory (Gabaldon et al. 2016; Reskin 1993). As top-executive managers are both the principal decision makers in organizations and central as individual actors, their understandings of barriers and possible solutions are of great importance in order to achieve a better gender balance in executive management.

Literature Review: Demand–Supply Framework

The demand–supply framework divides factors linked to persistence and change of gender segregation in organizations into two distinct categories, inside or outside of organizations: while demand-side explanations focus on attitudes, preferences, and practices of employers and structure of organizations, supply-side explanations focus on attitudes, preferences, and practices of (potential) employees, including societal constraints and opportunities. Following Reskin (1993), both demand- and supply-side explanations may be influenced by gender bias and gendered opportunity structures.

Demand-Side Explanations

From the demand-side perspective male dominance in management positions is understood as gendered organizational practices and recruitment norms (e.g. Acker 1990). The preferences of employers is emphasized, and in particular employers' implicit gendering of understandings of competence and other selection criteria (Teigen 2002). Attitudinal barriers in organizations may be of importance, as they relate to individual-level explanations, which either focus on women being exceptional, or their lack of special qualities (Cook and Glass 2014). Stereotypes regarding gender roles and preconceptions of women are thought to be important factors holding women back (Rafnsdóttir and Thorvaldsdóttir 2012; Ragins, Townsend and Mattis 1998).

Decision makers often reserve more attractive positions, including leadership positions, for in-group members (Powell and Butterfield 2002), leading to what Kanter (1977) termed "homosocial reproduction." Social identity-theory predicts that employers may display in-group bias by giving preferential treatment to those they perceive as similar (Turner, Brown, and Tajfel 1979). This implies

that in-group members would receive better evaluations, creating a barrier for the out-group individuals to join these networks (Terjesen, Sealy, and Singh 2009). Thus, if the board is comprised mainly of men, they will prefer a male as the successor CEO (Elsaid and Ursel 2011). Reliance on informal networks for recruitment tends to perpetuate segregation because social networks tend to be segregated (Braddock and McPartland 1987). In contrast, it has been found that formal recruitment procedures facilitate integration (Roos and Reskin 1984). Ragins, Townsend and Mattis (1998) observed that women are more likely than men to consider inhospitable corporate culture and informal networks as an obstacle along their way to a leadership position.

In addition to discrimination and exclusion from network, the lack of supportive institutional environment (general female presence in the labor market, welfare state policies, and strong gender equality policies) is emphasized as a demand-side barrier (Gabaldon et al 2016). However, Korpi, Ferrarini, and Englund (2013) emphasize data indicating that women's access to boards of large corporations appears to be advancing in earner-career countries, most likely because of the political correlates of the family-policies and politically mandated quotas than because of the family-policies themselves.

Supply-Side Explanations

Supply-side explanations of the under-representation of women in management address the action of (potential) employees (Gabaldon et al. 2016; Reskin 1993), thus emphasizing conditions extrinsic to the organization (Teigen 2002). Following Reskin (1993), supply-side barriers include the size of the labor supply and the neoclassical human-capital explanation, but also gender-role socialization, workers' values, and the opportunity structure in society, for example the link between the division of family-responsibility and parental leave. Thus, supply-side explanations may relate to both individual and structural conditions, but with the source being located outside the working organizations.

It has been documented that women have less experience than men of senior management in general and line management, and profit and loss responsibility in particular (Halrynjo, Teigen and Nadim 2015; Institute for Social Research 2017). The reasons behind this picture vary in the literature. Firstly, one strain of research emphasizes gender differences in values, attitudes, and gender identities. One explanation is women's lack of interest in management (Rafnsdóttir and Thorvaldsdóttir 2012), which may arise from travel demands and competition for promotions (Matsa and Miller 2011). According to Niederle and Vesterlund (2007), women avoid competition for promotions. Killeen, López-Zafra, and Eagly (2006) found that women both regarded managerial roles as less possible to achieve, and were ambivalent regarding how managerial roles would influence their close relationships, while men perceived these roles as facilitating their relationships in general.

Another strain of research emphasizes the sociologically inspired lens of work–family conflict due to gender differences in family-responsibility: career interruptions because of childbearing are found to limit women's ultimate professional advancement (Bertrand, Goldin, and Katz 2010), and the timing of childbearing may have career consequences. Research has shown that women in professional and managerial occupations benefit from delayed motherhood in terms of wages and career, by avoiding the more family-friendly, but less career-friendly "mommy-track" (Miller 2011). A study of companies nominated as a "Great Place to Work" in Europe shows that the risks of negative career consequences for those using family-friendly schemes were high even in "best practice companies" (Straub 2007). Even in Norway the gender gap in management is found to increase considerably after the arrival of the first child, explained by parents' unequal division of childcare and family–work (Hardoy, Schøne, and Østbakken 2017). Equal sharing of early childcare is found to be especially demanding in the private sector and at higher career levels with strong family-unfriendly expectations requiring limitless time, flexibility, and energy (Halrynjo and Lyng 2017). Although both mothers and fathers face these expectations, it is typically the mothers who give in to the work–family conflict and find a more family-friendly position at lower career levels or in the public sector, illustrating the dilemmas of "optional family-friendly facilitation" (Halrynjo 2017).

Existing Demand- and Supply-Related Policies

The lack of gender balance in top-executive management also stands in contrast to the existing demand- and supply-related policies for gender balance, i.e. gender quota laws for corporate boards (demand) and extensive family-friendly policies (supply).

Gender Quotas for Boards

According to Gabaldon et al. (2016), the most commonly used tools to fight conscious and unconscious discrimination are affirmative action policies. Affirmative action can be differentiated into "equality of outcomes" typically through quotas, targets, or earmarking, and "equality of opportunity" through soft law initiatives, corporate governance codes, voluntary quotas, or raising awareness (Seierstad and Opsahl 2011). Furthermore, it has been shown that women are more likely to be in favor of gender quotas than men (Rafnsdóttir and Thorvaldsdóttir 2012). Both Norway and Iceland have implemented gender quotas on corporate boards, further emphasizing the contradiction of the low number of women in top-executive management. In 2003, Norway became the first country to adopt mandatory gender quotas on the company boards of public limited companies (PLCs) (Act on Companies no. 120/2004), inter-municipal companies (Act on Inter-Municipal Companies no. 120/2004), and state enterprises (Act on State Enterprise no.

120/2004).[3] In 2012, at least 40 percent of board members of PLCs and state-owned and municipally owned companies were women (Teigen 2015). Gender quotas for corporate boards and boards of savings banks came into force in Iceland on September 1, 2013, applying to companies with fifty or more employees (Act on 40% Gender Quota on Boards of Directors no. 13/2010; Act on Gender Quota on Boards of Pension Funds no. 122/201). Following the legislation, the ratio of female board members has increased by 9 percent from 2012 to 2016 (32.3 percent) in companies to which the legislation applies (Statistics Iceland, 2017a). Furthermore, a discourse analysis of the media and parliamentary debate shows how influential business people who originally opposed the gender quotas later expressed being in favor of them (Axelsdóttir and Einarsdóttir 2017).

High expectations for spillover effects of the quota regulations into executive top management have been articulated: the European Commission has argued that, as board directors play an essential role in appointing the highest level of management and shaping the company's human resources policy, an improved gender balance among board directors is anticipated to increase gender balance in executive top management as well (EUR-Lex 2012). Gender diversity among decision makers on the boards is said to predict reduced "homosocial reproduction" in-group preferences or reduced gender bias (Cook and Glass 2014, 94). If discrimination is the key factor for the under-representation of women, the introduction of gender quotas for the boards is argued to overcome business prejudice by forcing more exposure to talented women in positions of power (Beaman et al. 2009). Nevertheless, despite the improved gender balance on corporate boards, it has been difficult to identify any spillover of the Norwegian and Icelandic quota legislation beyond the boards (Bertrand et al. 2014; Halrynjo, Teigen and Nadim 2015; Statistics Iceland 2017a).

Family-Friendly Policies

The lack of gender balance in top-executive management in Norway and Iceland also stands in contrast with the existing family-friendly policies for enhancing gender balance in the economy. In both countries parents have the right to take parental leave (Act on Maternity and Parental Leave no. 95/2000; Act on Working Environment, Working Hours and Employment etc., 2005), and the municipalities are obligated to ensure daycare resources for every child (Act on Preschools 2005; Act on Preschools no. 90/2008). Furthermore, family-friendly policies address both statutory and contractually based rules in working life, such as the rights to reduced hours for parents with small children, time to breastfeed, and paid leave to care for babies or sick children. However, parents in management careers also have to take into account the informal rules, based on the logic of competition. These careers typically

require more than the regularly working hours/daycare hours (Halrynjo 2017), and may conflict with the intentions of formal rules (Hochschild 1997).

According to Lister's (2009) review of the "Nordic nirvana," the relationship between the public sphere of the labor market and the private sphere of the family is considered to reinforce gender inequality in Nordic countries. Moreover, aspects of the Nordic work–family model may also be hindering women's career progression (Gupta, Smith, and Verner 2008): while parental leave and family-friendly arrangements enable and encourage employees to take care of childcare responsibilities, even paid and statutory leave may turn mothers into "replaceable" workers (Halrynjo and Lyng 2009), thus creating a "system-based glass ceiling" (Gupta, Smith, and Verner 2008). Despite decades allowing for equal sharing of parental leave in Norway and Iceland, the main part is still taken by the mothers (Halrynjo and Kitterød 2016). Elite educated fathers in Norway who took little or no parental leave were found to have a higher probability of later becoming a top-manager. Further, it seems to be accepted that fathers (not mothers) in career jobs reduce and limit their leave to strengthen their career possibilities (Halrynjo and Lyng 2017). Studies of Norwegian and Icelandic elite professionals and managers show that, despite strong preferences for career and equal responsibility for paid work and family work, female managers have a greater family-responsibility than do male managers, and thus inflexible working hours and excessive absence from the home become a burden for them (Halrynjo and Lyng 2017; Rafnsdóttir and Thorvaldsdóttir 2012).

In summary, despite the high level of general gender equality and the established instruments for gender balance, the under-representation of women in top-executive management in Norway and Iceland is still startling. In the present study, we contribute to the understanding of this paradox by examining whether managers believe the blame for the under-representation of women lies with either the employers/organizations or the employees (women) (Ragins, Townsend and Mattis 1998), and ask: do managers follow a clear-cut demand- vs. supply-divide in their understanding of barriers and solutions for gender balance in executive management? Moreover, previous studies have found that top-managers as a group rely more on supply-side explanations, while female managers rely more on demand-side explanations and solutions than do male managers (Rafnsdóttir and Thorvaldsdóttir 2012; Ragins, Townsend and Mattis 1998; Skjeie and Teigen 2003). Further, it has been observed that CEOs more strongly support supply-side explanations than do other managers (Ragins, Townsend and Mattis 1998), and experience with gender quotas for boards may influence manager's attitudes (Axelsdóttir and Einarsdóttir 2017). Thus, drawing on these findings, we also ask: do manager's perception of the problem, and the possible solutions, vary based on their gender,[4] management position, and whether they work in a company with

gender quotas on company boards? In order to shed light on the research questions the following hypotheses were formulated:

H1: Supply-side explanations gain stronger support than demand-side explanations.

H2: Female managers rely more on demand-side explanations, and less on supply-side explanations, than do male managers.

H3: Male CEOs support supply-side explanations more, and demand-side explanations less, than do other managers.

H4: Support for demand-side explanations predicts support for demand-side instruments (affirmative actions and active recruitment policies), while support for supply-side explanations predicts support for supply-side instruments (gender balanced family-responsibility).

H5: Supply-side instruments gain stronger support than demand-side instruments.

H6: Female managers rely more on demand-side instruments, and less on supply-side instruments, than do male managers.

H7: Male CEOs support supply-side instruments more, and demand-side instruments less, than other managers.

H8: When the gender quota legislation (demand-side policy) applies to companies, managers are more supportive of demand-side instruments (affirmative actions and active recruitment policies) than when it does not apply.

Data and Methods

The analyses were based on a survey of top-management, recruitment, and gender balance, conducted in Norway and Iceland. The questionnaire (fifty-nine questions) was created in Norway, and translated into Icelandic. Managers were asked, among other things, about their attitudes regarding various explanations for the under-representation of women and possible solutions to increase gender balance.

In both countries, the survey was emailed to managers with a position on the executive committee, reporting directly to the CEO in the largest companies (by revenue). In Norway, 1,296 managers (251 women and 1045 men) in 247 businesses were contacted in the spring and summer of 2014, and 404 senior managers in 173 different businesses completed the questionnaire, giving a response rate of 31 percent. Women constituted 28 percent of the respondents ($n = 114$) and 72 percent ($n = 290$) were men, indicating that men were under-represented with regard to the original sample. There was also a certain under-representation of managers in oil-related businesses and firms with

very high turnover. In Iceland, 1,349 managers (354 women and 995 men) in 245 businesses were contacted between November 2014 and January 2015. The effective response rate was 73 percent (984 managers), but only 37 percent of the managers provided information concerning their gender ($n = 504$). Those who did not make their gender known were excluded from the analyses; thus, 366 men (73 percent) and 138 women (27 percent) were included. On the basis of this information, we combined the datasets. We controlled for the skewed ratio of the managers in Norway and Iceland by including the country variable in the analysis. Although Norway and Iceland are similar with regard to the rankings of gender equality in the economy, they also differ in some ways. In January 2017, the population of Norway was barely 5.3 million (Statistics Norway 2017), but the corresponding figure was just over 338,000 in Iceland (Statistics Iceland 2017b). There was also a considerable difference in the revenue of the surveyed companies,[5] and while the Norwegian sample was limited to top-managers in larger firms, the Icelandic sample also included managers of smaller firms.

The combined dataset reveals that the average age of the women was 46.3 years, and was 50.5 years for the men. Men have more children and longer working hours than women, more men are in a CEO position, and have received a technical/scientific education, while more women have a finance/business or social science/humanities education (table 1). Separate analyses of the countries revealed a gender difference in regard to working hours in Iceland, but not in Norway. The average age of the managers in Iceland was slightly lower than of those in Norway, and they have more children.

Table 2 reveals no significant difference between female and male managers in the combined dataset, or the Icelandic or Norwegian datasets with regard to the legal and organizational form of their companies. However, while more men are recruited internally in Icelandic companies, more women are externally recruited.

We used Statistical Package for the Social Sciences computer software (version 24) to analyze the data. Regarding hypotheses, examining explanations for the under-representation of women in executive top-positions, twelve statements in a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), were analyzed. We used principal component analysis and divided the statements into demand vs. supply dimensions (eigenvalue = 2.738 for supply and 2.472 for demand).[6] A reliability analysis showed $\alpha = 0.724$ for the demand-side and $\alpha = 0.713$ for the supply-side. The demand-side dimension included five statements: *too much of the recruitment for management positions happens through informal networks*; *recruitment of women into management positions is not a priority within the business sector*; *women applicants are disadvantaged in the recruitment process*; *a lot of men have problems working with female managers*; and *the business sector is dominated by men with insufficient trust in women*. The supply-side dimension consisted of four statements: *there are too few women applying for management*

Table 1. Demographic information regarding the managers in the surveys

	Iceland		Norway		Combined	
	Women	Men	Women	Men	Women	Men
Working hours per week						
≤50	62.2%	36.1%	43%	40.1%	53.4%	37.9%
51–60	28.1%	43.7%	37.7%	42.9%	32.5%	43.4%
≥60	9.6%	20.2%	19.3%	17%	14.1%	18.8%
Total	100% ($n=135$)	100% ($n=366$)	100% ($n=114$)	100% ($n=289$)	100% ($n=249$)	100% ($n=655$)
χ^2	($2, N=501$) = 28.066, $p<0.001$		($2, N=403$) = 0.947, $p>0.05$		($2, N=904$) = 17.894, $p<0.001$	
Position in executive management						
CEO	13.8%	33.3%	10.6%	26.3%	12.4%	30.3%
Other managers	86.2%	66.7%	89.4%	73.7%	87.6%	69.7%
Total	100% ($n=138$)	100% ($n=366$)	100% ($n=113$)	100% ($n=285$)	100% ($n=251$)	100% ($n=651$)
χ^2	($1, N=504$) = 19.039, $p<0.001$		($1, N=398$) = 11.671, $p<0.01$		($1, N=902$) = 30.767, $p<0.001$	
Type of education						
Finance/business	59.1%	50.5%	59.2%	50.7%	59.1%	50.6%
Law	7.1%	1.9%	4.9%	3.2%	6.1%	2.5%
Social science/ humanities	15%	6.5%	16.5%	8.5%	15.7%	7.4%
Technical/ scientific	18.9%	41.1%	19.4%	37.6%	19.1%	39.4%
Total	100% ($n=127$)	100% ($n=309$)	100% ($n=103$)	100% ($n=282$)	100% ($n=230$)	100% ($n=591$)
χ^2	($3, N=436$) = 28.234, $p<0.001$		($3, N=385$) = 13.745, $p<0.01$		($3, N=821$) = 39.837, $p<0.001$	

Table 1. *Continued*

	Iceland		Norway		Combined	
	Women	Men	Women	Men	Women	Men
Age						
≤40	31.8%	16.7%	14.9%	6.6%	24%	12.1%
41–50	42.40%	34.5%	53.5%	38.6%	47.6%	36.3%
51–60	22.7%	40.1%	28.9%	45.2%	25.6%	42.4%
≥60	3%	8.8%	2.6%	9.7%	2.8%	9.2%
Total	100% (n = 132)	100% (n = 354)	100% (n = 114)	100% (n = 290)	100% (n = 246)	100% (n = 644)
χ^2	(3, N = 486) = 24.875, p < 0.001		(3, N = 404) = 21.223, p < 0.001		(3, N = 890) = 44.840, p < 0.001	
Number of children						
None	13.1%	4.7%	12.4%	3.5%	12.8%	4.2%
1	7.3%	5%	16.8%	7.1%	11.6%	5.9%
2	37.2%	24.5%	49.6%	49.5%	42.8%	35.4%
≥3	42.3%	65.8%	21.2%	39.9%	32.8%	54.5%
Total	100% (n = 137)	100% (n = 363)	100% (n = 113)	100% (n = 283)	100% (n = 250)	100% (n = 646)
χ^2	(3, N = 500) = 26.119, p < 0.001		(3, N = 396) = 26.394, p < 0.001		(3, N = 896) = 48.324, p < 0.001	

Note: Data for Iceland, Norway, and the combined dataset.

Table 2. Organizational factors

	Iceland		Norway		Combined	
	Women	Men	Women	Men	Women	Men
Legislation applies						
Yes	70.6%	66.5%	44%	43.1%	58.8%	56.1%
No	21.3%	28%	44%	46.5%	31.4%	36.2%
Does not know	8.1%	5.5%	11.9%	10.4%	9.8%	7.7%
Total	100% ($n=136$)	100% ($n=361$)	100% ($n=109$)	100% ($n=288$)	100% ($n=245$)	100% ($n=649$)
χ^2	$(2, N=497)=2.947, p>0.05$		$(2, N=397)=0.291, p>0.05$		$(2, N=894)=2.331, p>0.05$	
Recruitment						
Internally	43.7%	53.6%	57.1%	53.4%	49.8%	53.5%
Externally	56.3%	46.4%	42.9%	46.6%	50.2%	46.5%
Total	100% ($n=135$)	100% ($n=364$)	100% ($n=112$)	100% ($n=283$)	100% ($n=247$)	100% ($n=647$)
χ^2	$(1, N=499)=3.837, p=0.05$		$(1, N=395)=0.464, p>0.05$		$(1, N=894)=0.971, p>0.05$	
Organizational form						
State/municipally owned company	2.9%	3%	5.3%	5.5%	4%	4.1%
Other forms	97.1%	97%	94.7%	94.5%	96%	95.9%
Total	100% ($n=137$)	100% ($n=366$)	100% ($n=113$)	100% ($n=289$)	100% ($n=250$)	100% ($n=655$)
χ^2	$(1, N=503)=0.003, p>0.05$		$(1, N=402)=0.008, p>0.05$		$(1, N=905)=0.007, p>0.05$	

Note: Data for Iceland, Norway, and the combined dataset.

positions; *women choose to pursue a career path with profit and loss responsibility to a lesser extent than do men; women are less interested in positions of responsibility than are men;* and *women are less willing to fight for their career than are men.*

In order to examine what the managers rated as important solutions for improved gender balance in the executive management, another twelve statements were analyzed using a five-point Likert scale.[7] Principal component analysis identified three dimensions of solutions: "gender balanced family-responsibility" (eigenvalue = 1.665 and α = 0.832), "affirmative actions" (eigenvalue = 4.244 and α = 0.755), and "active recruitment policies" (eigenvalue = 1.101 and α = 0.936). The dimensions of "gender balanced family-responsibility" included three statements: *more equal distribution of parental leave between mothers and fathers; more equal distribution of responsibility for children and family between mothers and fathers;* and *better opportunity for career-comeback after the "toddler phase."* "Affirmative actions'" comprised three statements: *requirements for reports and visibility of gender balance at the executive level; preferential rights for female applicants when faced with applicants of equal competence;* and *gender quotas on boards.* Finally, *the dimension of* "active recruitment policies" involved two statements: *active recruitment policies for middle management* and *active recruitment policies for the executive level.*

To answer H1 and H5, we compared the means of female and male managers on the outcome variables (demand-side, supply-side, affirmative actions, gender balanced family-responsibility, and active recruitment policies). The significance was tested using the chi-square test. Multiple regression analyses were performed to answer other hypotheses. To carry out the analyses, the predictor variables were transformed into dummy variables; *gender* (women, men), *position in executive management* (CEO, other managers), *country* (Norway, Iceland), *working hours per week* ($\leq$50, 51–60, and $\geq$61), *type of education* (finance/business, law, social science/humanities, technical/scientific), *number of children* (no children, one or two children, three or more children), *whether the gender quota legislation applies* (legislation applies, legislation does not apply), *recruitment procedure* (internally, externally), *organizational form* (state/municipally owned company, other organizational forms), *support for demand-side explanations*[8] (not demand-support, demand-support), and *support for supply-side explanations* (not supply-support, supply-support). Women, other managers', Iceland, $\leq$50 hours per week, technical/scientific, three or more children, legislation applies, recruited internally, other organizational forms, not demand-support, and not supply-support were selected as the comparison groups within those variables. Age was used as a continuous variable. An interaction variable *men* $\times$ *CEO* was created to examine the combined influence of gender and management position on the outcome variables. The outcome variables were measured on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). In order to answer our hypotheses, the

Table 3. Demand-side and supply-side explanations for the under-representation of women in the business sector

	Gender	*n*	*M*	SD	*F*	Sig.
Demand-side (Combined)	Women	239	2.96	0.699		
	Men	632	2.44	0.689	97.912	***
Supply-side (Combined)	Women	236	3.18	0.876		
	Men	633	3.15	0.757	0.384	
Demand-side (Norway)	Women	111	2.82	0.702		
	Men	281	2.34	0.610	45.065	***
Supply-side (Norway)	Women	110	3.52	0.735		
	Men	284	3.33	0.637	6.635	*
Demand-side (Iceland)	Women	128	3.08	0.675		
	Men	351	2.52	0.738	56.849	***
Supply-side (Iceland)	Women	126	2.89	0.886		
	Men	349	3.00	0.813	1.584	

Notes: Data for combined dataset, Norway, and Iceland. $^*p < 0.05$, $^{***}p < 0.001$.

significance of gender (Model 1) and gender × CEO (Model 2) was tested on all the outcome variables. The support for demand-side/supply-side explanations (Model 3) and significance of gender quotas for boards (Model 4) were only tested on affirmative actions, active recruitment policies, and gender balanced family-responsibility. The level of significance was set at $p < 0.05$.

Results

The results support H1 (table 3), with managers having greater support for supply-side explanations than for demand-side explanations: female managers ($M = 3.18$) and male managers ($M = 3.15$). However, the low means indicate a neutral attitudes toward them.

Second, we hypothesized that female managers rely more on demand-side explanations, and less on supply-side explanations than male managers. The analysis (table 4) in Model 1 for demand-side explanations shows that, after controlling for age, type of education, country, number of children, recruitment procedures, and working hours, the male managers considered them significantly less important (–0.56 points) than did the female managers ($p < 0.001$), supporting the first part of the hypothesis. However, the second part was not supported, as gender was not significant in Model 1 for supply-side explanations ($p > 0.05$). Furthermore, the means (table 3) for supply-side explanations reveal contradictory attitudes among female managers in Norway and Iceland. The strongest support for supply-side explanations was

Table 4. Multiple regression analysis for demand and supply explanations: influence of gender and position

| | Demand-side | | | | | | Supply-side | | | | | |
| | Model 1 (gender) | | | Model 2 (gender × CEO) | | | Model 1 (gender) | | | Model 2 (gender × CEO) | | |
	b	SE	β	b	SE	β	b	SE	β	b	SE	β
Constant	2.565	0.160		2.539	0.162		2.900	0.182		2.966	0.184	
Age	0.013***	0.003	0.146	0.014***	0.003	0.149	0.005	0.004	0.050	0.005	0.004	0.047
Finance/business	-0.067	0.051	-0.046	-0.066	0.051	-0.045	-0.067	0.058	-0.043	-0.066	0.058	-0.042
Law	-0.096	0.137	-0.023	-0.089	0.138	-0.021	-0.195	0.156	-0.043	-0.222	0.156	-0.049
Social/humanities	0.040	0.088	0.015	0.039	0.088	0.015	-0.280**	0.100	-0.101	-0.280**	0.099	-0.101
Norway	-0.246***	0.049	-0.168	-0.249***	0.049	-0.170	0.431***	0.056	0.272	0.432***	0.056	0.272
No children	0.286**	0.094	0.100	0.276**	0.094	0.097	-0.039	0.104	-0.013	-0.023	0.105	-0.008
One/two children	-0.005	0.051	-0.004	-0.005	0.051	-0.003	-0.061	0.058	-0.037	-0.069	0.058	-0.042
Recruited extern.	-0.011	0.047	-0.007	-0.008	0.048	-0.006	-0.090	0.054	-0.057	-0.103	0.054	-0.065
51–60 work hours	-0.133*	0.051	-0.089	-0.129*	0.052	-0.087	0.006	0.059	0.004	0.017	0.059	0.011
≥61 work hours	-0.256***	0.067	-0.133	-0.246***	0.068	-0.127	0.078	0.075	0.037	0.078	0.076	0.037
Men	-0.562***	0.055	-0.344	-0.540***	0.060	-0.330	-0.091	0.063	-0.051	-0.158*	0.068	-0.089
CEO				0.064	0.139	0.038				-0.431**	0.157	-0.239
Men × CEO				-0.120	0.151	-0.069				0.478**	0.171	0.253
Adjusted R²	0.163			0.162			0.079			0.085		
R² change				0.001						0.009		
Sig. F change										*		

Note: *p < 0.05, **p < 0.01, ***p < 0.001.

found among female managers in Norway ($M = 3.52$), followed by male managers in Norway ($M = 3.33$), then male managers in Iceland ($M = 3.00$), and female managers in Iceland ($M = 2.89$).[9]

After adding the management position and the interaction effect between gender and management position to the model (Model 2, table 4), the explanation for supply-side increased by 0.009 points (R^2 change). The b value for the explanatory variable of gender (men) indicated that the men significantly ranked an average of 0.16 points lower on supply-side explanations than did the women ($p < 0.05$). Moreover, CEO position significantly ($p < 0.05$) changed the association between gender and the outcome variable, wherein the male CEOs ranked 0.32 points ($-0.158 + 0.478$) higher on supply-side explanations than did the women. In addition, the interaction effect revealed that the difference between women in different management positions was significant. These findings support the first part of H3, that the male CEOs supported supply-side explanations more than did the other managers; however, the results do not support the second part of H3, in that the male CEOs displayed less support for demand-side explanations than the other managers.

We wanted to test whether support for demand-side explanations predicts support for demand-side instruments, while support for supply-side explanations predicts support for supply-side instruments (H4). Model 3 (table 5) shows that the first part of the H4 was supported. When the managers supported demand-side explanations they significantly supported affirmative actions' (1.05 points, $p < 0.001$) and active recruitment policies (0.64 points, $p < 0.001$) more than when they did not support demand-side explanations. However, the support for supply-side explanations did not significantly correspond with support for gender balanced family-responsibility. It may be important to note that the support for demand-side explanations was fairly weak, while the support for supply-side explanations was neutral, while support for demand- as well as supply-side solutions was strong .

The means (table 6) reveal that managers believe that "active recruitment policies" are the most important instrument for achieving greater gender balance:[10] female managers ($M = 4.27$) and male managers ($M = 3.71$), closely followed by increased "gender balanced family-responsibility." Thus, the results do not support a preference for supply solutions; rather a combination of demand- and supply-solutions (H5).

Based on earlier research we hypnotized that female managers would rely more on demand-side instruments, and less on supply-side instruments, than male managers. Affirmative action did not receive much support (table 6): the male managers considered this unimportant ($M = 2.48$), and the female managers revealed neutral attitudes ($M = 3.24$). Thus, although lacking support from women, the results show a significant gender difference with regard to beliefs in solutions ($p < 0.001$). The results in Model 1 (table 7) for affirmative action and active recruitment policies confirm the gender gap in support for demand-side instruments (H6). After controlling for age, type of education,

Table 5. Multiple regression analysis for affirmative action, active recruitment policies, and gender balanced family-responsibility: influence of gender quotas and support for demand/supply-side explanations

	Affirmative actions						Active recruitment policies						Gender balanced family-responsibility					
	Model 3 (support for demand-side expl.)			Model 4 (gender quotas)			Model 3 (support for demand-side expl.)			Model 4 (gender quotas)			Model 3 (support for supply-side expl.)			Model 4 (gender quotas)		
	b	SE	β	b	SE	β	b	SE	β	b	SE	β	b	SE	β	b	SE	β
Constant	1.432	0.477		2.548	0.261		3.074	0.512		4.069	0.238		4.759	0.421		4.304	0.249	
Age	0.015	0.009	0.114	0.007	0.005	0.054	0.008	0.010	0.057	−0.004	0.004	−0.035	−0.023**	0.008	−0.184	−0.010*	0.005	−0.081
Finance/business	−0.110	0.139	−0.053	−0.133	0.081	−0.066	0.097	0.149	0.044	−0.005	0.074	−0.003	0.164	0.145	0.084	0.057	0.078	0.029
Law	−0.503	0.326	−0.095	−0.022	0.205	−0.004	0.713*	0.345	0.127	0.174	0.184	0.035	0.158	0.367	0.029	0.135	0.196	0.025
Social/humanities	−0.070	0.230	−0.020	0.107	0.143	0.029	0.261	0.245	0.070	0.188	0.131	0.054	0.235	0.248	0.066	0.127	0.137	0.035
Norway	0.530***	0.137	0.254	0.176*	0.081	0.086	0.693***	0.146	0.314	0.429***	0.074	0.227	−0.195	0.152	−0.099	−0.228**	0.077	−0.116
No children	−0.074	0.288	−0.016	−0.036	0.144	−0.009	−0.587	0.306	−0.119	−0.078	0.132	−0.022	0.458	0.236	0.129	0.205	0.140	0.054
One/two children	−0.033	0.138	−0.015	−0.061	0.081	−0.029	−0.039	0.146	−0.017	−0.015	0.074	−0.008	−0.157	0.141	−0.078	−0.058	0.077	−0.029
Recruited extern.	−0.117	0.132	−0.056	0.005	0.075	0.003	−0.293*	0.140	−0.133	0.040	0.068	0.021	−0.037	0.134	−0.019	0.071	0.071	0.036
51–60 work hours	−0.048	0.143	−0.023	−0.165*	0.082	−0.080	0.028	0.152	0.012	−0.111	0.074	−0.058	0.065	0.141	0.033	−0.021	0.078	−0.011
≥61 work hours	−0.126	0.169	−0.051	−0.317**	0.105	−0.119	−0.185	0.182	−0.070	−0.259**	0.096	−0.104	−0.216	0.170	−0.088	−0.246*	0.100	−0.096
State/municipal owned company	0.427	0.270	0.095	0.045	0.184	0.009	0.418	0.261	0.096	0.041	0.162	0.009	0.059	0.307	0.013	0.012	0.169	0.003
Legisl. not applies				−0.227**	0.078	−0.109				−0.277***	0.072	−0.143				−0.151*	0.075	−0.075
Demand support	1.047***	0.186	0.350				0.644**	0.200	0.201									
Supply support													0.246	0.149	0.122			
Adjusted R^2	0.165			0.021			0.156			0.050			0.038			0.033		

Note: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

Table 6. Instruments for change: affirmative actions, gender balanced family-responsibility, and active recruitment policies

	Gender	n	M	SD	F	Sig.
Gender balanced family-responsibility	Women	240	4.05	0.865		
(Combined)	Men	632	3.53	0.971	53.603	***
Affirmative actions (Combined)	Women	240	3.24	0.979		
	Men	627	2.48	0.948	108.238	***
Active recruitment policies (Combined)	Women	246	4.27	0.792		
	Men	631	3.71	0.964	66.791	***
Gender balanced family-responsibility	Women	108	3.82	0.793		
(Norway)	Men	286	3.42	0.908	16.571	***
Affirmative actions (Norway)	Women	111	3.17	0.908		
	Men	283	2.63	0.899	29.548	***
Active recruitment policies (Norway)	Women	113	4.35	0.741		
	Men	284	3.95	0.786	21.501	***
Gender balanced family-responsibility	Women	132	4.24	0.877		
(Iceland)	Men	346	3.62	1.012	38.572	***
Affirmative actions (Iceland)	Women	129	3.29	1.036		
	Men	344	2.37	0.973	82.383	***
Active recruitment policies (Iceland)	Women	133	4.21	0.831		
	Men	347	3.51	1.049	47.502	***

Note: ***$p < 0.001$.

country, number of children, recruitment procedure, working hours, and organizational form, the male managers significantly supported affirmative action (–0.86 points) and active recruitment policies (–0.59) to a lesser extent than did the female managers ($p < 0.001$). However, the results do not support the second part of the hypothesis. In fact, the male managers significantly supported gender balanced family-responsibility to a lesser extent (–0.45 points) than did the female managers ($p < 0.001$). In other words, the support for demand- as well as supply-side instruments is stronger among female managers than male managers.

We then hypothesized (H7) that male CEOs support supply-side instruments more than do other managers, and support demand-side instruments less than do other managers. Table 7 reveals that the interaction of gender and management position was only significant ($p < 0.05$) in Model 2 for affirmative action, partially supporting the hypothesis. After adding the interaction variable to the model, the explanation increased by 0.006 points (R^2 change, model 2). The b value for the explanatory variable gender (men) indicated that the men significantly ranked an average of 0.78 points lower on

Table 7. Multiple regression analysis for affirmative action, active recruitment policies, and gender balanced family-responsibility: influence of gender and position

	Affirmative actions						Active recruitment policies						Gender balanced family-responsibility					
	Model 1 (gender)			Model 2 (gender × CEO)			Model 1 (gender)			Model 2 (gender × CEO)			Model 1 (gender)			Model 2 (gender × CEO)		
	b	SE	β	b	SE	β	b	SE	β	b	SE	β	b	SE	β	b	SE	β
Constant	2.479	.223		2.391	0.225		3.942	0.215		3.895	0.218		4.473	0.222		4.425	0.224	
Age	0.020***	0.004	0.161	0.021***	0.004	0.167	0.006	0.004	0.047	0.007	0.004	0.055	-0.007	0.004	-0.058	-0.006	0.004	-0.048
Finance/business	-0.186*	0.072	-0.092	-0.185*	0.072	-0.092	-0.048	0.069	-0.025	-0.046	0.069	-0.024	0.002	0.071	0.001	0.004	0.071	0.002
Law	-0.188	0.190	-0.033	-0.164	0.190	-0.029	0.064	0.181	0.012	0.069	0.181	0.013	0.002	0.189	0.000	0.005	0.190	0.001
Social/humanities	0.065	0.123	0.018	0.069	0.123	0.019	0.129	0.119	0.038	0.125	0.119	0.037	0.095	0.123	0.028	0.092	0.123	0.027
Norway	0.151*	0.069	0.075	0.143*	0.069	0.071	0.356***	0.066	0.186	0.347***	0.066	0.182	-0.233**	0.068	-0.120	-0.243***	0.068	-0.126
No children	-0.157	0.128	-0.041	-0.185	0.129	-0.048	-0.229	0.124	-0.063	-0.249	0.125	-0.068	0.134	0.129	0.036	0.113	0.129	0.030
One/two children	-0.142*	0.072	-0.068	-0.137	0.072	-0.065	-0.054	0.069	-0.028	-0.056	0.069	-0.029	-0.106	0.071	-0.053	-0.108	0.071	-0.054
Recruited extern.	-0.051	0.066	-0.025	-0.039	0.066	-0.019	-0.048	0.064	-0.025	-0.046	0.064	-0.024	0.042	0.066	0.022	0.042	0.066	0.022
51-60 work hours	-0.070	0.073	-0.034	-0.064	0.074	-0.031	-0.010	0.070	-0.005	0.005	0.071	0.003	0.028	0.072	0.014	0.048	0.073	0.024
≥61 work hours	-0.148	0.093	-0.056	-0.127	0.094	-0.048	-0.101	0.090	-0.040	-0.076	0.091	-0.030	-0.174	0.092	-0.069	-0.142	0.093	-0.057
State/municipal owned company	0.047	0.168	0.009	0.055	0.167	0.011	0.151	0.156	0.032	0.157	0.156	0.033	0.084	0.161	0.018	0.091	0.161	0.019
Men	-0.857***	0.077	-0.378	-0.777***	0.083	-0.343	-0.588***	0.074	-0.277	-0.556***	0.080	-0.262	-0.452***	0.077	-0.209	-0.420***	0.083	-0.194
CEO				0.348	0.194	0.150				0.006	0.184	0.003				-0.046	0.191	-0.021
Men × CEO				-0.490*	.210	-0.202				-0.136	0.201	-0.059				-0.109	0.208	-0.047
Adjusted R^2	0.149			0.154			0.105			0.105			0.070			0.071		
R^2 change				0.006						0.003						0.004		
Sig. F change				*														

Note: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

affirmative action than did the women ($p < 0.001$). Again, CEO position significantly ($p < 0.05$) changed the association between gender and the outcome variable, and the male CEOs ranked 1.27 points ($-0.777 + -0.490$) lower on the affirmative action policies than did the women. Moreover, the interaction effect revealed that the difference between the women in different management positions was significant.

Model 4 (table 5) reveals the significance of the gender quota legislation for the outcome variables, after controlling for age, type of education, country, number of children, recruitment procedure, working hours, and organizational form. When the gender quota legislation does not apply, the managers significantly supported affirmative actions (-0.23 points, $p < 0.01$), and active recruitment policies (-0.28 points, $p < 0.001$) less than when the quota legislation does apply, supporting H8. However, they also support gender balance family-responsibility to lesser extent (-0.15 points, $p < 0.05$), thus the division is not clear-cut.

Furthermore, all the models revealed the significance of the country variable for the outcome variables. A surprising finding was that, although the managers in Norway showed significantly less support for demand-side explanations, and significantly more support for supply-side explanations, than did the managers in Iceland (table 4), the former supported affirmative actions significantly more (0.15 points) than did the latter ($p < 0.05$) (table 7). The managers in Norway also showed stronger support for active recruitment policies (0.36, $p < 0.001$), but less support for gender balanced family-responsibility (-0.23 points, $p < 0.01$) than their counterparts in Iceland, although the support for these two instruments were strong in both countries.

Discussion and Conclusion

In this paper we contribute to the literature on the persistent male dominance in top-positions in the business sector by addressing the principal decision makers in corporations. We examine to what degree executive top-managers understand the existing explanations and related solutions for the lack of gender balance in executive management within the established demand–supply perspective (Gabaldon et al. 2016; Gupta and Raman 2014; Teigen 2002). We firstly asked: *do managers follow a clear-cut demand- vs. supply-divide in their understanding of barriers and solution for gender balance in executive management?* The findings show that top-managers do not have a clear-cut understanding of demand vs. supply explanations of barriers. The support for supply-side explanations was slightly stronger than support for demand-side explanations, in accordance with earlier research (Ragins, Townsend and Mattis 1998). However, neither demand nor supply explanations received strong support, with means around three or lower (H1), indicating that the traditional way of formulating demand and supply

explanations, as were tested here, do not relate strongly to top-managers' understanding of the problem.[11]

Turning to top-managers' understanding of demand- vs. supply-instruments to increase gender balance, the means were higher, indicating that some of the instruments fit the up-to-date discourse among top-managers. Again the demand- vs. supply-divide was blurred: top-managers most strongly agree with the need for more active recruitment policies *for top and middle management* (demand), closely followed by the need for a more gender balanced family-responsibility, including *more gender equal distribution of parental leave and responsibility for children and family between the parents*, and *better opportunity for career-comeback after the "toddler phase"* (supply). However, affirmative actions including *reports of gender balance, preferential rights for women*, and *gender quotas on boards* (demand) are not receiving substantial support. Thus, the demand–supply divide is not clear-cut, indicating how a combination of demand and supply instruments was ranked as most important (H5). Further, the results show that support for demand-side explanations predicted support for affirmative actions and active recruitment policies, but support for supply-side explanations did not predict support for gender balanced family-responsibility (H4), again emphasizing that managers do not follow the clear-cut demand vs. supply-division.

Secondly we asked: *do managers' perception of the problem, and the possible solutions vary, based on their gender, management position, and whether they work in a company with gender quotas on company boards?* The analyses of the impact of gender and position on supply vs. demand explanations further substantiate that the expected division is not clear-cut: although male managers support demand-side explanations less than female managers do in line with earlier findings (Rafnsdóttir and Thorvaldsdóttir 2012; Ragins, Townsend and Mattis 1998; Skjeie and Teigen 2003), they do not support supply-side explanations more strongly (H2). Moreover, while male CEOs endorse supply-side explanations more than other managers did, in line with Ragins, Townsend and Mattis (1998), we found no evidence that male CEOs rely less on demand-side explanations than do other managers (H3). On the one hand, this reveals a gender difference in attitudes and the importance of interaction of gender and management position. On the other hand, it contrasts earlier conclusions that female managers "blame" the under-representation of women on the employers/organizations, while male managers "blame" the women (Rafnsdóttir and Thorvaldsdóttir 2012; Ragins, Townsend and Mattis 1998, Skjeie and Teigen 2003).

Looking at solutions, we found the same patterns: while female managers rely more on demand-side instruments (active recruitment policies and affirmative actions) in line with earlier research (Rafnsdóttir and Thorvaldsdóttir 2012), they also rely more on supply-side instruments (gender balanced family-responsibility) than male managers (H6). These findings reveal a gender difference in attitudes as female managers support all instruments more

than male managers, but also indicate that the clear-cut demand–supply division for possible instruments is not supported. Following this pattern, male CEOs significantly support the demand-side instrument "affirmative actions" to a lesser extent than other managers. However, they do not support supply-side instruments more than do other managers (H7), contradicting Ragins, Townsend and Mattis (1998).

The analysis in regard to the impact of gender quota legislation further underlines the mixed pattern: when the gender quota legislation (on boards) applies to companies, the managers were significantly more supportive of the demand-side instruments, affirmative action, and active recruitment policies than when it does not apply (H8). Nevertheless, this also applied to gender balanced family-responsibility. Summing up, regardless of how we frame the analyses, rejection of the established divide and support for a mix of demand- and supply-instruments become apparent.

The methodological strength of the present study lies in the questionnaire and the sample size. By examining the attitudes of 908 managers from the 250 largest companies in Norway and Iceland, we offer a unique context of the countries rated as the very best in general gender equality. The biggest limitation we faced, while analyzing the data, concerns the differing sizes of Norwegian and Icelandic companies, which might have influenced the managers' perceptions. Improved information regarding the Icelandic companies' revenue might have given more accurate results. The low means, demonstrated in the results, imply that managers question the given supply- and demand-side explanations. Other explanations and qualitative research could shed further light on the discourse for the lack of gender balance in top-executive management. Differing attitudes among managers in Iceland and Norway also indicate that it might be of relevance to explore the discourse separately for Norway and Iceland to fully understand it. However, we argue that the highly rated instruments *active recruitment policies* and more *gender balanced family responsibility* indicate important areas of interest for further exploration and further action:

Our findings suggest that top-managers have fairly strong beliefs with regard to the need for changing the opportunity structure, both within organizations and in society, to increase the gender balance in executive management. The support for active recruitment policies points toward managers' belief in companies' responsibilities to increase the gender balance. And by stating the importance of improved gender balance in family-responsibility, the results demonstrate how the societal opportunity structure entails a gender traditional division of family-responsibility among top-managers, illustrating how the Nordic work–family model, despite all the advantages, might also be a hindrance to women's executive careers (Gupta, Smith, and Verner 2008; Halrynjo 2017). The claim highlights the relevance of both societal and organizational responsibility to encourage a more equal distribution of parental leave and responsibility between parents. The

interpretation of Ragins, Townsend and Mattis (1998), that support for the supply-side "pipeline approach" implies a passive wait for women's advancement and places the burden on the individual woman, may therefore be a fallacy. Instead our findings highlight the need to further explore how women's career trajectories are influenced by the interaction between (lack of) active recruitment policies, at the middle as well as executive level, and (lack of) gender balanced family-responsibility, including more gender equal division of parental leave and the responsibility for children. The supportive attitudes toward active recruitment policies should encourage corporations to take action when recruiting to the top as well as to middle level. This may be particularly important since spillover effects of the quota laws have not been identified in the countries (Halrynjo, Teigen and Nadim 2015; Statistics Iceland 2017a). Further, support for a more equal gender balance in family-responsibility (including parental leave) should motivate political as well as corporate decision makers to ensure a more gender equal use of family-friendly policies.

In conclusion, our analyses of top-managers, understanding of supply- and demand-side perspectives indicate that the existing perspectives of barriers for women's career progression, and possible instruments to achieve more gender balance in the executive management, may need to be revised. Following our findings, a combination (and interaction) of supply- and demand-side explanations and solutions should be considered for future policy development, as well as for further research.

Funding

Notes

Laufey Axelsdóttir is a PhD Student in Gender Studies at the University of Iceland. Her PhD project aims to contribute to an improved understanding of the under-representation of female top-managers by examining how corporate gender quotas, recruitment policies, and family responsibility influence gender balance in top-level positions. Her fields of interest include gender equality, labor market issues, and people's educational and vocational choices.

Sigtona Halrynjo, PhD Sociology, is a Senior Research Fellow at the Institute of Social Research and Center for Research on Gender Equality. Her research fields are gender equality, work–family dynamics, parental leave, career logic, and gender (im)balance in top management.

1. Legislators, senior officials, and managers.
2. A total of 83 percent of women in Iceland compared to 88 percent of men, and 76 percent of women in Norway compared to 80 percent of men.
3. In 2008, cooperative companies were included (Act on Cooperatives no. 114/2008) and municipal companies in 2009 (Act on Municipal Companies no. 91/2009).
4. We use gender when we refer to the biological sex of the managers.
5. While the revenue of the biggest companies in the Icelandic sample was approximately 893 million EUR, it was around 98.143 million EUR in the Norwegian sample.
6. The analysis found three factors, but since only two of them received an alpha score over 70, we proceeded only with the latter two.
7. Strongly disagree (1) to strongly agree (5).
8. The outcome variables demand-side and supply-side were transformed into dummy variables to answer hypothesis 7. Neutral answers were excluded.
9. The demand-side explanation that received the greatest support was: *too much of the recruitment for management positions happens through informal networks.* Icelandic women ($M = 4.03$), Norwegian women ($M = 3.59$), Icelandic men ($M = 3.13$), and Norwegian men ($M = 2.9$). The supply-side explanation was: *there are too few women applying for management positions.* Norwegian women ($M = 3.88$), Norwegian men ($M = 3.74$), Icelandic men ($M = 3.59$), and Icelandic women ($M = 3.4$).
10. The demand-side instrument *active recruitment policies for executive level* ($M = 4.28$) received the greatest support, then *active recruitment policies for middle management* ($M = 4.26$), and *more equal distribution of responsibility for children between mothers and fathers* ($M = 4.23$).
11. An exception to this pattern is that female managers in Iceland strongly support the explanation: *too much recruitment through informal networks.* Together with the finding that more men than women are being internally recruited in Iceland (table 2), this may indicate that informal networks are experienced as a relevant explanation.

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