



Title: **The gender composition of corporate boards: A review and research agenda**



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The gender composition of corporate boards:

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ABSTRACT

In recent years, the composition of boards and, particularly, the inclusion of women on boards has attracted significant scholarly interest and public debate. In this article, I comprehensively review the academic literature on board gender composition. Using the systematic review method, I ask whether women directors really are different from men on boards, what factors shape board gender composition, how board gender composition affects organizational outcomes, and finally, why board gender quotas and other forms of regulation are introduced and what outcomes can be expected. Based on my findings, I develop a conceptual framework that clarifies the causal processes underlying both women's access to boards and the effects of women's presence on boards. Finally, I offer a research agenda designed to enrich our understanding of board gender composition.

KEYWORDS

corporate governance; boards of directors; diversity in organizations; gender quotas; women leaders

INTRODUCTION

The composition of corporate boards has long been an important issue in corporate governance research. Since the mid-2000s, the gender of directors has garnered significant interest and scholars have inquired into how gender affects both board appointments and board effectiveness. Although there is now a large body of research on the gender composition of boards, the literature does not provide clear answers to the fundamental questions of how women's access to boards can be improved and what effects can be expected from a more gender-balanced board composition. This comprehensive review of the literature on the gender composition of boards tackles these questions by building on and extending earlier reviews of research on corporate boards. Specifically, these reviews have shown that numerous demographic, human capital, and social capital attributes of directors have been subject to research on board composition (Johnson et al. 2013) and that board composition is the outcome of director selection processes. These, in turn, are determined by the monitoring and resource needs of a firm as well as by social processes arising from human interaction (Withers et al. 2012). Appointing women directors tends to make the composition of boards more diverse, which is thought to affect the nature of board processes and outcomes, and by extension, firm outcomes (Terjesen et al. 2009). However, the determinants and effects of board composition are intertwined (Adams et al. 2010), making it very difficult to convincingly link the characteristics of directors, including their gender, to firm outcomes (Johnson et al. 1996, Withers et al. 2012).

In this review, I systematically analyse 310 articles published in 135 journals during the period 1981 to 2016. In doing so, I discover four distinct streams of research (see the timeline shown in Figure 3) and trace their development since the first journal articles on the gender composition of boards were published in the 1980s:

- *Stream 1*: Scholars have sought to establish *whether women directors really are different* from men on boards. They have shown that there are some sex differences in the demographic, human capital and social capital characteristics and in values and traits of directors.
- *Stream 2*: Scholars have sought to understand *what factors shape board gender composition*. They have shown that women's access to boards is influenced by institutional factors and that women directors are not equally present across different types of boards, firms and industries. They have highlighted that both rational-economic and social factors play a role in director appointment processes, which can disadvantage women.
- *Stream 3*: Looking at *how board gender composition affects organizational outcomes*, scholars have uncovered a negligible effect on firm financial performance and a positive effect on social and ethical aspects of firm behaviour and on gender diversity below board level. However, there are problems with measurement and causality.
- *Stream 4*: Investigations of *regulation on board gender composition* show that the introduction of regulation at national level is influenced by a country's unique institutional and cultural context, developments at international level and the interests of key actors. Outcomes can be expected regarding firm behaviour, firm financial outcomes and outcomes for women.

I argue that existing research has three main limitations: it does little to uncover the causal mechanisms linking board gender composition to firm outcomes, often relies on assumptions about women directors' behaviour on boards, and largely ignores the effects of board gender composition on gender equality within firms. Based on these insights, I develop an analytic framework for understanding board gender composition (Figure 4) and a five-point research agenda to overcome these limitations. In my view, future research should (1) take an

institutional and strategic perspective on board composition, (2) uncover male and female directors' similarities and differences, (3) consider boards as decision-making groups, (4) understand how stakeholders evaluate board gender composition, and (5) illuminate the relevance of board gender composition for women.

The second section of this paper outlines developments in women's representation on boards as well as the introduction of regulation for gender diversity on boards internationally. The third section describes the selection and analysis of the studies included in this review and provides an overview of their publication details, research focus, methodology, and geographical scope. The fourth section reviews the literature, considering both theoretical approaches and empirical results. Beginning with an analysis of women directors as individuals, it progresses to the influencing factors and the effects of board gender composition, and closes with research on regulation. The fifth section distils the findings of extant research and points to research gaps and issues of debate before developing an analytic framework for understanding board gender composition and outlining an agenda for future research.

WOMEN ON CORPORATE BOARDS: REPRESENTATION AND REGULATION

Data published by various public and private sources unequivocally show that around the world, men hold the vast majority of corporate directorships and women are starkly underrepresented. It must be noted, however, when comparing women's representation on boards across countries, that national differences in corporate governance influence the extent to which women are able to access board directorships. Key distinctions are whether board structures are monistic or dualistic, whether boards are composed largely of insiders or outsiders, and whether employees are represented. On the boards of large listed companies in 2015, about 21% of directors were

women in the European Union, about 20% in the United States, and about 3% in Japan (Bloomberg 2016, Catalyst 2016, European Commission 2017).

The desirability and efficacy of state regulation as a measure to increase women's representation on boards is discussed controversially. Nevertheless, many countries have followed the well-known example of Norway, where a quota mandating that about 40% of board seats in listed firms are held by the under-represented sex was first introduced in 2003 and took full effect in 2008. France, Belgium, Italy and Germany have introduced quota legislation which, like in Norway, includes sanctions for non-compliance. Such sanctions vary from warnings, fines, the suspension of benefits for directors, the nullification of board elections and the forfeiture of offices to the dissolution of companies by court order (European Commission 2012). The Netherlands, Spain, Iceland, India, Malaysia and Israel have introduced quotas without sanctions, while Denmark, Finland, Greece, Austria, Poland, Ireland, Slovenia and Kenya have regulations for state-owned companies. Some countries have introduced disclosure requirements for listed firms and obligations for firms to set their own targets. Pledges have also been made by firms voluntarily. In addition, there are soft-law measures in some countries, in particular the inclusion of provisions encouraging gender diversity on boards in corporate governance codes (Terjesen et al. 2015). At the supranational level, the European Commission proposed a Directive on women on company boards in November 2012, setting a 40% objective of the under-represented sex in non-executive board-member positions in publicly listed companies (European Commission 2015). However, as the Council of Ministers has been unable to reach an agreement on the Directive, European regulation on women on company boards has been halted for the time being (Council of the European Union 2015). Internationally, women's representation on boards has increased most in countries that have either introduced regulation or intensely debated the issue of women's underrepresentation (European Commission 2015, Sojo et al. 2016).

SCOPE OF THE REVIEW

Using the systematic review method (Tranfield et al. 2003), I searched the electronic databases Social Sciences Citation Index, Business Source Premier and Scopus with combinations of the keywords “women”, “gender”, “female”, “corporate board*”, “board* of directors”, “supervisory board*”, “women directors”, “female director*”, “board composition”, “board diversity”, “regulation” and “quota*” in order to identify empirical studies published in academic journals before January 1, 2017 in the English language. I also located studies through cross-referencing, recommendations from experts, and hand-searching individual journals. I excluded studies if their methodology was clearly of poor quality or if they were about boards of non-profit or state-owned enterprises. Articles about women in management and leadership more generally or about women CEOs, articles without empirical data (such as editorials or conceptual pieces), and chapters in edited books (see Burke and Mattis 2000, De Vos and Culliford 2014, Engelstad and Teigen 2012, Fagan et al. 2012, Gröschl and Takagi 2012, Machold et al. 2013, Vinnicombe et al. 2008) were not included when mapping the research field, but supplemented the analysis reported in the findings section.¹ Applying these inclusion and exclusion criteria, I analysed 310 articles, coding them using NVivo software according to publication details (authors, journal subject field, year), main research interest (focus), the theoretical approaches used, methodology, geographical scope, and the empirical results.

MAPPING THE FIELD OF RESEARCH

The number of journal articles published annually on the gender composition of corporate boards has increased considerably in recent years, signifying growing academic interest in the

¹ Some book chapters were similar to articles that were included in the analysis, others had no empirical data and others again were opaque about the methodology used.

topic (see Figure 1).² Around 60 percent of the articles were published in journals in the fields of corporate governance, gender and diversity in organizations, business ethics, and finance and accounting. Around 25 percent appeared in general management and other business journals, and 15 percent in law, economics, and other social science journals. Very few studies have been published in employment relations, human resource management, international business, leadership, strategy, organizational behaviour and organization studies journals, indicating that research on women on boards is scarce in these fields. Figure 2 shows the distribution of the articles by journal subject field, and a breakdown by journals is provided in the Appendix. 550 different scholars, 50% of whom are women, authored the papers. Those who have co-authored three or more of the articles included in the review are listed in Table 1.

INSERT FIGURE 1 ABOUT HERE

INSERT FIGURE 2 ABOUT HERE

INSERT TABLE 1 ABOUT HERE

More than a third of the studies (192) are concerned with the effects of board gender composition, and within this group, the effects on firm financial performance and on social and ethical aspects of firm behaviour are most commonly examined (see Table 2). Fewer studies deal with effects on business strategy, diversity in the firm, firm reputation, or board processes. 86 studies investigate the factors shaping board gender composition, and among these, most focus on the meso-level, discussing the characteristics of boards, firms and industries where there are many women on boards in comparison to those where there are few or none. Fewer

² It should be noted that the increase shown in Figure 1 is partially due to a general increase over time in the volume of academic research published in a journal format and indexed in electronic databases.

studies take a macro- or micro-level perspective to examine how either the national context or local appointment processes influence women’s access to boards. 40 studies focus on women directors as individuals and either map their prevalence or illustrate various (mainly demographic) characteristics. A final set of studies (30) is concerned with regulation regarding board gender composition, especially gender quotas for boards. These studies examine both the antecedents of regulation and its effects on firm outcomes.

INSERT TABLE 2 ABOUT HERE

The vast majority of the studies focus on a single country (261), most frequently the USA, UK, Norway, Australia and Spain (see Table 3). The studies overwhelmingly use quantitative methods (269), and are based either on data collected by researchers in surveys of directors, CEOs, or senior executives, or on secondary data collated from databases on board members’ characteristics (such as demographic variables) and firm attributes (such as accounting and stock market data, industry affiliations, CSR ratings, board size and composition, and ownership structure). The qualitative studies (37) are based on interviews with women directors, board chairs, women senior executives, HR managers, and expert informants, or they analyse documents such as media texts, or discuss policies, especially quota regulations. Three studies use mixed methods and one uses qualitative comparative analysis.

INSERT TABLE 3 ABOUT HERE

Research on board gender composition has appeared in academic journals since the early 1980s. In that decade, researchers started to map the prevalence of women on boards and to examine

the characteristics of boards, firms and industries that had women directors, seeking to find out whether they were different from those without women. During this time, the first studies looking into the nature of recruitment and selection processes for directorships were published. In the 1990s, researchers began to document women directors' characteristics and explore national institutional factors, viewing them as the context that facilitates or hinders women's board access. The 1990s also saw the first research concerned with the effects of women on boards. Interestingly, these studies examined the effects of women's presence for boards themselves (often termed board processes or dynamics), for diversity within the firm and for social and ethical aspects of firm behaviour. These questions were temporarily disregarded in the late 1990s and early 2000s, when attention turned to effects for firm financial performance (which became an extremely popular research topic) and for firm strategy. In the second half of the 2000s, research interests became more varied, and scholars began to examine novel aspects of the institutional context, including the role of key actors (such as headhunters, shareholders, or the media) in facilitating or hindering women's access to boards, and to study the effects of women directors for firm reputation. From the late 2000s, scholars examined the antecedents and effects of regulation. The evolution of the four streams of research is shown in Figure 3.

INSERT FIGURE 3 ABOUT HERE

FINDINGS

When coding the articles I found that the research interests pursued fall into four distinct groups. In this section, I review and integrate the main theoretical approaches and empirical results of

research on board gender composition, focusing on these four bodies of work. First, I interrogate a comparatively small stream of research on women directors as individuals. Knowledge of individual directors forms the basis for arguments made in the second and third, more substantial research streams on the factors shaping board gender composition as well as its effects. The final stream is concerned with regulation on board gender composition.

Women board directors

Studies of women directors as individuals are important because they allow us to develop an accurate portrayal of this group of women. Not only can this help us establish what kinds of women succeed in accessing board positions, it is also a prerequisite for refining arguments about the effects of women on boards. Research on the antecedents and effects of board gender composition frequently assumes that besides their gender as a readily observable aspect of diversity (Jackson et al. 1995) women directors bring other, not readily observable aspects of diversity to boards – that they systematically differ from men concerning their knowledge, skills, abilities, experiences, attitudes, values, personality traits, behavioural styles and so on. In other words, gender is used as a proxy for other heterogeneity constructs. Using demographic proxies when investigating the composition and effectiveness of boards and top management teams is highly problematic and leads to inconclusive findings, as earlier studies have shown (Johnson et al. 2013, Priem et al. 1999). Yet, most research on women directors as individuals has concentrated on gathering additional demographic, human capital and social capital variables that are also proxies for unmeasured constructs such as values and traits, rather than focusing on the constructs that are really of interest.

Demographic, human and social capital characteristics: Besides studies that simply document women's representation on boards and board committees (for example, Conyon and

Mallin 1997), there has been ongoing interest in mapping women directors' demographics, human capital and social capital. The variables measured range from age, marital status, children, education and social background, to career paths, ownership ties to the firm, and aspects of women directors' board roles (e.g. tenure, executive / non-executive status, committee memberships, number of directorships, functional backgrounds, esteem and compensation). The only common finding across a sizeable number of studies of directors is that the women tend to be younger than the men and that they have lower tenure and less board experience, measured as prior directorships, multiple directorships, executive directorships, or directorships in major blue chip companies (e.g. Burke 1995, Dang et al. 2014, Gamba and Goldstein 2009, Pajo et al. 1997, Ruigrok et al. 2007, Singh et al. 2008, Singh and Vinnicombe 2004, Virtanen 2012, Zelechowski and Bilimoria 2004). Unfortunately, many such studies are descriptive and do not explain how the characteristics they examine are relevant to women's access to boards or effect on boards. There are some exceptions: For example, regarding women's access to boards, Singh et al. (2015b) examine women directors' characteristics (e.g. owner-family ties, educational credentials) as legitimacy assets that justify their inclusion on boards in the face of resistance. Regarding the effect of women on boards, studies showing that occupational backgrounds and skills of directors differ by sex argue that women directors add functional expertise to boards and thereby improve board effectiveness (Hillman et al. 2002, Kim and Starks 2016).

Values and traits: Studies that examine whether women directors have distinct values and personality traits are extremely rare, even though research on the effect of women on boards frequently implies that women directors bring such distinct – stereotypically female – values and traits to boards. Such research generally draws on studies of gender differences in risk-taking, competitiveness, ethical decision-making and confidence (e.g. Ambrose and Schminke 1999, Barber and Odean 2001, Croson and Gneezy 2009, Niederle and Vesterlund 2007,

Schwartz and Rubel 2005) as a basis for arguments that women's conduct on boards differs from men's and that this affects organizational outcomes. Further, by positing that organizational outcomes are reflections of the values and cognitive bases of powerful actors in those organizations, upper echelons theory (Hambrick and Mason 1984) provides a theoretical underpinning for arguments that gender differences are the mechanism by which the presence of women directors influences organizational outcomes. However, while it may be well established that certain gender differences exist in the general population, it is unclear whether these differences also pertain to corporate directors. Women who have made it to top positions in the corporate world may well have a lot in common with men in comparable positions, and less in common with women in general. Therefore, notions that women directors are risk averse, ethical, diligent, compassionate, inclusive and stakeholder-oriented, take a long-term perspective, and shy away from conflict draw on gender stereotypes that may simply not apply to this particular set of women. A survey of directors in Sweden by Adams and Funk (2012) is notable here because it shows that while there are gender differences in values among directors, these differences are not always the same as gender differences in values in the population. They find female directors to be less security- and tradition-oriented, and more self-direction- and stimulation-oriented than male directors, while the opposite is the case in the population. When discussing directors' monitoring role, reference is frequently made to women's greater risk aversion in comparison to men, but here also, Adams and Funk (2012) find that female directors are more risk-loving than male directors. Sila et al. (2016) examine firm risk in detail and conclude that there is no evidence that board gender composition affects firm risk taking. Given that assumptions about women directors' values and traits often form the basis for expectations about the effect of women on boards, further research that provides sound evidence of gender differences in values and traits among directors would be very useful.

Summary: Taken together, these studies show that there are some sex differences in the demographic, human capital and social capital characteristics and in values and traits of directors. We are especially interested in these differences because we expect them to lead to differences in the behaviour of directors, which in turn affect board decisions and firm outcomes. It is important to recognize here, though, that demographic, human capital and social capital differences found in the past may not continue indefinitely (e.g. in the future, female directors may not be younger and have less board experience than male directors). Therefore, it is important to clarify what cognitive differences we assume lie behind such proxies (do we think that younger directors contribute novel ideas to boards or that less experienced directors take their monitoring tasks more seriously?) and, where possible, to measure the constructs of interest rather than attaching assumptions to the gender variable, as this may be misguided. For example, regarding the widespread assumption that women on boards are more risk-averse than men are, studies have shown this not to be the case and that firm risk is not affected by board gender composition. Nevertheless, studies working with this assumption continue to be published. We know little about sex differences among directors concerning other values that researchers use in arguments about the effect of women on boards, such as ethical orientation. Turning to the issue of women's access to boards, knowledge about sex differences in directors' characteristics can reveal which paths to boards have opened up and which remain closed to women. The findings of extant studies differ across countries, and show that some kinds of women are more likely to be directors than others. In some national settings, women with certain sets of expertise (e.g. human resources), or those with ownership ties to the firms concerned, or those with titles of nobility, or foreign nationality, or female politicians or employee representatives are particularly successful in accessing board directorships. Scholars can use such country-specific findings to investigate where women's access to boards can be improved.

Factors shaping the gender composition of boards

A range of macro-, meso- and micro-level factors facilitate or prevent women's access to boards. Most of the studies seeking to uncover what differentiates boards, firms, industries and countries that have many women on boards from those that have few or none concentrate on the meso-level; they examine organizational and sectoral characteristics. Fewer studies take a macro-level view, looking at institutions and actors at national level or even across countries. Studies of micro-level factors focus on director recruitment and selection processes and consider directors as members of a corporate elite. Very few studies seek to find a comprehensive, multi-level explanation of women's access to boards.

Macro-level – institutions and actors: Research investigating macro-level, cross-national differences in board composition draws on institutional arguments (Aguilera and Jackson 2003), and recognizes that not just gender relations in the world of work, but also wider institutional structures and cross-national differences in gender systems influence women's access to boards. Countries in which there are more women on boards than in others tend to have higher female labour force participation rates, a greater presence of women in senior management, a lower gender pay gap, greater representation of women in parliament, and greater participation of women in tertiary education (Grosvold et al. 2015, Terjesen and Singh 2008). This indicates that countries with a generally high level of gender equality in employment are the ones in which more women succeed in accessing board positions. Further, these countries tend to prioritize legislation enabling women to balance work and family commitments and have welfare policies that are less gendered in nature: they provide higher levels of paternity leave and childcare services, but lower levels of maternity leave than countries with fewer women on boards (Iannotta et al. 2016). Besides such formal institutions, informal institutional factors influence women's access to boards: there are more women directors in countries with more feminine cultures, less religiosity and less emphasis on nuclear

family structures (Chizema et al. 2015, Grosvold and Brammer 2011). Finally, women's access to boards is influenced by key actors. Shareholders and executive search firms may emerge as change agents. The former can influence board gender composition by filing shareholder proposals (Marquardt and Wiedman 2016), and the latter, as gatekeepers in the labour market for directors, can make selection processes more inclusive (Doldor et al. 2016). Together with other actors such as stock exchanges, professional associations of company directors, lobbying groups and the media, they can change prevailing norms surrounding women's board representation (Sheridan et al. 2014). These norms, whether or not they become formally institutionalized, influence the extent to which companies seek to fill board positions with women.

Meso-level – boards, firms and industries: Many articles examining meso-level factors explore the link between board, firm and industry characteristics and board gender composition using functionalist reasoning. According to these explanations, women will only be appointed to boards if the effect of doing so is beneficial for firms. An argument based on resource dependence theory is, for example, that firms in the retail industry appoint women to their boards because doing so makes their boards representative of salient stakeholder constituencies, namely female employees and consumers. An argument based on agency theory is that firm owners wanting to enhance the monitoring capabilities of a board will appoint women, because women are more likely than men to closely monitor management. It is assumed that women will do this because they are more likely to be outsiders (not part of “old boys’ networks”) and because, due to innate sex differences, they are more diligent than men are. Although such research is based on many untested assumptions – not only about sex differences but also about whether stakeholders care about the gender of directors – empirical results do show that women's representation on boards is not uniformly spread across different types of boards, firms and industries, indicating that such meso-level factors influence women's access. An

example of research on meso-level factors influencing board access is a study by Hillman et al. (2007), who use a resource dependence theory lens when asking in what kinds of firms director diversity is beneficial. They find that firm size, female employment in an industry, and network effects (linkages to other boards with women directors) are positively related to the number of women directors in a firm. Others find that women directors are more prevalent in firms with large boards, in established firms, in either large firms or small family firms, and in firms with foreign institutional investors. Many of these studies also consider sectoral variation and find more women directors in the retail industry, and fewer in the STEM and finance industries (see for example: Adams & Kirchmaier 2016, Burke 1999, de Jonge 2014, Geiger and Marlin 2012, Harrigan 1981, Martín-Ugedo and Mínguez-Vera 2014, Mateos de Cabo et al. 2011, Mínguez-Vera and Martin 2011, Nekhili and Gatfaoui 2013, Oehmichen et al. 2012, Singh et al. 2001).

Micro-level – appointment processes: In contrast to the “rational economic” perspective on board gender composition taken in meso-level studies, micro-level studies examining the processes through which candidates for board positions are recruited and selected provide a “socially embedded” point of view (Withers et al. 2012). They use concepts of homosocial reproduction (Kanter 1977), homosociality (Lipman-Blumen 1976), homophily (Ibarra 1993) and similarity–attraction (Byrne 1971) to argue that incumbent board members have a tendency to recommend candidates who resemble themselves regarding demographic characteristics, and for this reason women are excluded from boards. For example, studies find that the existence and gender composition of nomination committees influence women’s access to boards (Hutchinson et al. 2015, Kaczmarek et al. 2012, Ruigrok et al. 2006), suggesting that greater formalization of director appointment processes can lessen the influence of social factors. Other studies have highlighted the importance of social networks, including playing golf as a social network tool, for women’s board access (Agarwal et al. 2016, Hodigere and Bilimoria 2015). Survey research confirms this socially embedded view of director selection, showing that

women directors rate not just an appropriate career track record but also visibility, personal contacts and recommendations as highly important for attaining directorships (Burke 1997a, Burke 1997b, Sheridan and Milgate 2003, Sheridan and Milgate 2005). Interview research also confirms this view, uncovering that women directors' discourse about merit and competence as determinants of board access contains a contradictory emphasis on the requirement to comply with the rules of the male game (Pesonen et al. 2009).

Another concept used to understand appointment processes is that of the corporate elite (Useem 1984). Employing the idea that incumbent directors, as members of a corporate elite, prevent outsiders from accessing boards, researchers argue that board appointments are influenced by the demand for diversity on the part of selectors (current directors, CEOs, chairmen, nomination committees, owners). In line with this reasoning, studies have shown that it is less likely that a woman will be selected if there already is a woman on a board, and more likely if a woman director has recently departed (Farrell and Hersch 2005, Gregory-Smith et al. 2014, Smith and Parrotta 2015). The elite concept has also been used to show where women were first able to make inroads – Heemskerk and Fennema (2014) call this a process of “elite democratization” in their study of how women first accessed boards as politicians on the boards of state-controlled firms in the Netherlands in the 1970s. Seeing elite membership as conditional upon multiple directorships, McDonald and Westphal (2013) have found that women first-time directors are less likely than men to receive additional board appointments because they receive less mentoring from incumbent directors. Gregorič et al.'s (2017) study on women's access to boards in Nordic countries is singular in that it integrates macro-, meso- and micro-level factors. According to this study, pressures stemming from national regulation as well as from a firm's peers increase women's representation on boards, and further, there is a relationship between women's board access and the degree of age and nationality diversity among incumbent male directors. The authors argue that there is resistance to too much diversity among the established

elite on boards where traditional directors dominate, and that this resistance weakens as diversity among male directors increases.

Summary: As a group, studies of the factors shaping the gender composition of boards point to an interrelated set of macro-, meso- and micro-level influences that prevent women from advancing to board directorships. Reviewing macro-level studies, we can see that women's access to boards is not simply an aggregate of individual actions, but is influenced by higher-order institutional factors. Regulative, normative and cultural-cognitive elements of institutions (Scott 1995) combine to form a *national context* more or less conducive to the appointment of women to boards, and key actors work to shape this context in line with their interests. Meso-level studies shift our focus to the *organizational context*, arguing that different types of firms may or may not derive benefits from including women on boards and showing that indeed, women's representation on boards is not uniformly spread across different types of boards, firms and industries. Micro-level studies draw our attention towards how *appointments to boards* are made. Boards of directors are groups that have a tendency to exclude outsiders and director appointment processes are influenced by social factors, including gender. If policy-makers and practitioners seek to augment women's access to boards, the levers for change range from the national to the organizational and individual appointment levels.

Effects of board gender composition

Two causal paths can explain why board gender composition affects organizational outcomes. Either, board gender composition affects the board as a group, or it affects stakeholders within and outside the firm, or both. Most studies implicitly assume the existence of these causal paths, and I seek to illuminate them here.

Studies based on the idea that board gender composition affects the board as a group frequently draw on agency theory (Jensen and Meckling 1976) and resource dependence theory (Pfeffer and Salancik 1978). Agency theory is used to investigate whether women directors help boards in monitoring the managers of the firm. Oftentimes it is argued that women directors improve monitoring because they are more independent than their male counterparts, seeing they are more commonly outside directors and not part of “old boys’ networks”. Resource dependence theory is used to argue that women directors provide boards with resources that male directors are not able to provide, so that diverse boards have superior resources. Better monitoring and superior resources improve board effectiveness and organizational outcomes. Another argument looking at what women directors bring to boards is that gender differences in values and traits affect board processes and organizational outcomes – with women adopting more ethical, risk-averse and long-term oriented points of view. As discussed earlier, gender is an imperfect proxy for the values and traits of directors that underlie this argument. Other studies use diversity approaches to view boards as strategic decision-making groups (Forbes and Milliken 1999, Milliken and Martins 1996). The effects of board diversity can be seen positively (“value-in-diversity”) or negatively (“diversity-as-process-loss”): From an information processing perspective, diverse groups make better decisions because they consider many points of view, which generates more ideas, improves creativity, innovation and adaptability, and results in better decisions. From a social categorization perspective, on the other hand, diverse groups are more conflictual, have trouble communicating, become split into factions and are slower in reaching decisions. This can be particularly damaging in situations where fast decisions are necessary. Here the cooperation and trust associated with homogenous groups is desirable (DiTomaso et al. 2007, van Knippenberg and Schippers 2007, Williams and O’Reilly 1998). In sum, the diversity perspective suggests a contingent effect of board gender diversity on organizational outcomes.

The alternative, and less frequently discussed, causal path is based on signalling theory (Spence 1973), which states that decision-makers rely on observable signals from other parties when faced with information asymmetry. It is used to argue that appointing women to boards signals legitimacy and adherence to social values by the firm. In this argument, there is no assumption that gender differences lead to different behaviour on the part of directors. Instead, observers (investors, customers, managers, employees and so on) perceive gender differences among directors and draw inferences from this based on their own stereotypical views. Based on these perceptions, the observers make decisions (such as to buy the firm's stock or its products, to promote female managers, to initiate an acquisition or to work for the firm), which in turn affect organizational outcomes. Broome and Krawiec (2008) examine signalling as the mechanism through which board diversity leads to firm outcomes in depth: firms may use board diversity to convey otherwise unobservable information to employees, consumers, the public and regulators, such as that the firm provides equal opportunity in employment, considers the needs of women and minorities in the development and provision of its products and services, and that the firm is generally progressive and socially responsible. This list can be extended – board diversity can also signal that the firm adheres to best practices in its corporate governance and that it will not engage in risky ventures, fraudulent activities or short-sighted strategies.

Establishing causality between the presence of women directors and organizational outcomes of any sort is fraught with difficulties. Adams et al. (2010, p. 97) remark generally on the problem of joint endogeneity between board composition and organizational outcomes: “the makeup of boards is interesting because it affects what the board does; and, consequently, their makeup is influenced by a desire to affect what they do. This problem of joint endogeneity is vexing for both theoretical and empirical research on boards.” Adams (2016) and Ferreira (2010) address several methodological issues with regard to financial outcomes, particularly omitted variable bias and reverse causality: omitted variables such as corporate culture may

influence the relationship between women directors and financial performance, and well-performing firms may appoint more women to their boards. Conversely, Ryan and Haslam (2005) argue that badly performing firms are more likely to appoint women to their boards (the “glass cliff” hypothesis). These issues also pertain to other types of outcomes: for example, rather than women directors driving greater corporate social responsibility, it may be that particularly socially responsible firms are more likely to appoint women directors.

Another reason why studies on the effect of women directors on organizational outcomes fail to show clear results is that effects may not be linear: According to tokenism theory (Kanter 1977), if the number of women on a board is very small, problems of tokenism arise (hypervisibility, stereotyping, exclusion), resulting in a negative effect on organizational outcomes. Konrad et al. (2008) suggest that if women make up a critical mass of three directors (or around 30%), their presence is normalized; they then have greater impact on board processes and positively affect organizational outcomes. In addition, it has been shown that directors who are demographic minorities are more influential on boards if they have prior experience or social network ties to majority directors or if they are similar to incumbent directors on other demographic characteristics (Westphal and Milton 2000, Zhu et al. 2014), but such multiple aspects of diversity are rarely considered in studies seeking to measure the effects of women’s board representation. Another factor complicating research on the effect of women on boards is time: it is unclear when the effects of the appointment of women to boards become apparent.

Reviewing the studies on the effects of board gender composition, I found that the two largest groups by far are concerned with the effect of women directors on firm financial performance, and on social and ethical aspects of firm behaviour. Other studies address effects on business strategy, firm reputation, and diversity below board level. Looking at more proximate effects, a final set of studies focuses the effect of women directors on board processes.

Financial performance: The evidence produced by a plethora of studies examining the effect of board gender composition on firm financial performance is inconclusive overall, with different studies finding positive, negative or no effects (see for example Amore et al. 2014, Ararat et al. 2015, Bøhren and Strøm 2010, Campbell and Mínguez-Vera 2008, Carter et al. 2010, Carter et al. 2003, Chapple and Humphrey 2014, Dobbin and Jung 2011, Erhardt et al. 2003, Farrell and Hersch 2005, Francoeur et al. 2008, García-Meca et al. 2015, Gregory-Smith et al. 2014, Isidro and Sobral 2015, Joecks et al. 2013, Liu et al. 2014, Low et al. 2015, Lückerath-Rovers 2013, Mahadeo et al. 2012, Miller and Triana 2009, Ntim 2015, Rose 2007, Smith et al. 2006, Tuan et al. 2015). Haslam et al. (2010) point to an important distinction between stock-based and accountancy-based measures of firm performance: as the former are based on investor perceptions, they are influenced by prejudice, sexism and stereotypic beliefs about women's suitability for leadership on the part of investors. Post and Byron (2015) examine the mixed evidence on the effect of board gender composition on both types of measures in a meta-analysis. They establish that the relationship of women's board representation to market performance (measures such as Tobin's Q and market-to-book-ratio) is near zero – however, it is positive in countries with greater gender parity and negative in countries with low gender parity. They conjecture that this is because the presence of women directors confers more legitimacy to firms in more gender-equal societies than in societies with greater gender differences. They also find that women's board representation is positively related to accounting returns (measures such as ROA and ROE), particularly in countries with strong shareholder protections. In their view, this is because such protections motivate boards to actually make use of the different knowledge, experience, and values of women directors, thereby enhancing board decision-making and firm outcomes. Be that as it may, their study shows that the financial effect of board gender diversity is context-dependent.

Social and ethical aspects of firm behaviour: Scholars have also examined how women on boards impact social and ethical aspects of firm behaviour. One group of studies in this area explores whether women directors are associated with less corporate fraud, more comprehensive disclosure activities, greater transparency, fewer accounting errors, less tax avoidance, less earnings management, greater earnings quality and fewer financial restatements, and overwhelmingly find this to be the case (Abbott et al. 2012, Clatworthy and Peel 2013, Cumming et al. 2015, Gavious et al. 2012, Gul et al. 2013, Larkin et al. 2013, Richardson et al. 2016, Srinidhi et al. 2011, Upadhyay and Zeng 2014). Such studies are often based on the premise that there are gender differences in the ethical orientation of directors, and that women directors are more ethical. Relatedly, others establish a positive link between women directors and corporate philanthropy or the existence and scope of ethics codes (García-Sánchez et al. 2015, Kabongo et al. 2013, Wang and Coffey 1992, Williams 2003). Numerous studies have examined the effect of women directors on corporate social responsibility ratings. While they differ in the dimensions of CSR that they analyse (e.g. community, corporate governance, diversity, employee relations, environment, human rights, product quality and safety dimensions), they generally uncover a positive effect of women directors on CSR (Bear et al. 2010, Boulouta 2013, Glass et al. 2015, Hafsi and Turgut 2013, Harjoto et al. 2015, Mallin and Michelon 2011, Post et al. 2015, Webb 2004). Reasoning for this association again draws on gender differences – women’s ethical orientation, communal characteristics, empathy and care – as well as on the information processing perspectives on diversity discussed above. Byron and Post (2016) confirm this generally positive effect of women directors on corporate social performance in a meta-analysis, and highlight that its magnitude differs across countries. Although the evidence that the presence of women directors improves social and ethical aspects of firm behaviour is less equivocal than that regarding financial performance effects, it remains unclear how exactly one leads to the other. Are women directors tabling CSR issues or

reproaching fraudulent activities in board meetings? Do diverse boards consider a greater range of stakeholders in their decisions? Qualitative research can help us find an answer to such questions.

Business strategy: The effect of board gender composition on business strategy may relate to innovation, mergers and acquisitions, employment policies, and more generally, influence over management decisions. Several studies find a positive effect of women directors on innovation, but in some instances, this effect is limited to certain types of innovation or to firms with a critical mass of women directors (Galia and Zenou 2012, Miller and Triana 2009, Torchia et al. 2011). Comparing firms with women directors to those without, studies show that firms with women on their boards are less likely to make acquisitions and that when they do, they pay lower bid premia (Chen et al. 2016, Dowling and Aribi 2013, Levi et al. 2014); that they undertake fewer workforce reductions (Matsa and Miller 2013); link top management compensation more closely to firm performance (Lucas-Pérez et al. 2015); and are more likely to have LGBT-friendly HR policies (Cook and Glass 2016, Everly and Schwarz 2015). Surveying boards in the USA, Fondas and Salsalos (2000) find that mixed gender boards claim to have more influence over management decisions concerning issues such as selection and compensation of managers, management succession, long range planning, capital expenditures, mergers and acquisitions, and corporate structure than male-only boards. Overall, due to the limited number of studies on the effect of women directors on firm strategy, further research is needed to corroborate these findings.

Reputation: A handful of studies investigate the effect of board gender diversity on firm reputation (Bear et al. 2010, Brammer et al. 2009, Miller and Triana 2009, de Anca and Gabaldon 2014), but their evidence is ambiguous. Further research would need to clarify how the reputation concept is used (Lange et al. 2011) and in what circumstances having few or no women on a board is seen as socially irresponsible behaviour by a firm's observers (Lange and

Washburn 2012). The recent introduction of regulation on board gender composition in many countries has meant that having a male-dominated board may now even constitute organizational misconduct (Greve et al. 2010). The attribution of irresponsibility or misconduct and the dissemination of information about this are prerequisites for effects on reputation to come about.

Gender diversity below board level: Surprisingly few studies have enquired into the effect of board gender composition on gender diversity in management below board level, even though such a cascade or spillover effect is a commonly evoked justification for greater board diversity. Noteworthy are several studies of US firms, which demonstrate that greater gender equality at the top level of organizations contributes to equality at lower managerial levels (Bilimoria 2006, Matsa and Miller 2011, Skaggs et al. 2012), and that gender diversity on boards is positively associated with the appointment and success of women CEOs (Cook and Glass 2014, 2015). In addition, it has been found that the gender gap in executive compensation is smaller when there are more women on boards and on compensation committees (Elkinawy and Stater 2011, Shin 2012). Looking at the effect of women directors for gender equality in organizations more broadly, Stainback et al. (2016) find that a greater proportion of women directors is associated with a lower level of gender segregation of non-managerial workers into different occupational categories. A number of early studies surveyed women directors on whether they perceive themselves as having a role to advance gender equality issues in the organizations concerned, finding that while many see this as their responsibility, far fewer have ever initiated board discussions on matters such as equal opportunities for women, work-life-balance policies, and women's board representation (Burke 1994, Mattis 1993, McGregor et al. 1997). Further research is needed to establish by which processes board gender composition influences managerial and non-managerial gender diversity and to disentangle this effect from the reverse

effect, whereby greater gender diversity in management is a driver of greater diversity on boards.

Board processes: As the preceding sections have shown, there is enormous interest in the effect of board gender composition on organizational outcomes. However, the causal paths underlying this relationship are often left unexplored. In other words, many scholars make inferences about how directors' gender affects organizational outcomes, and the underlying processes remain a "black box". Several researchers have sought to shed light on the first causal path, whereby board gender composition affects interactions on the board as a group and, as a consequence, board decisions and, ultimately, organizational outcomes. From this perspective, the presence of women on boards can affect the nature of interaction and discussion among directors on the board, and it can affect the content of decisions made by the board.

Such studies of how women directors contribute to board processes often draw on social identity and self-categorization theories (Ashforth and Mael 1989, Turner et al. 1987). From this perspective, board diversity may lead to the formation of subgroupings that differentiate ingroup (i.e. male) and outgroup (i.e. female) members. According to faultline theory, several aspects of diversity in conjunction (e.g. gender, ethnicity, age, tenure and functional background of board members) may cause groups to become further divided (Lau and Murnighan 1998). Where women directors are excluded from a powerful ingroup or where men and women form two distinct subgroupings, this could undermine the functioning of the board, or simply marginalize the women directors and exclude them from decision-making. Two Norwegian studies find no evidence for this, uncovering little difference between men and women's perceptions of their contribution and influence on boards (Elstad and Ladegard 2012, Mathisen et al. 2013). A US study, however, finds that the degree of minority directors' influence on board decision making is dependent on whether they have prior board experience or network ties to majority directors (Westphal and Milton 2000). Not only are time served and

social relations among individuals significant for how women directors contribute to boards, but also how directors' construct their professional role identities. An interesting study of directors in Iceland shows that gender differences in their role identities as monitors or resource providers are more pronounced in mature male-dominated boards than in newly composed gender-balanced boards (Jonsdottir et al. 2015). The idea that gendered social relations among directors on a board affects the nature of women's contributions is corroborated in a survey of directors in Israel: women directors were more concerned than men about whether they were adequately skilled and felt the need to constantly prove themselves (Talmud and Izraeli 1999).

In a series of studies set in Norway, Huse and colleagues examine women's contribution to board tasks (Huse et al. 2009, Huse and Solberg 2006, Nielsen and Huse 2010a, Nielsen and Huse 2010b). They find that the presence of women on boards is associated with increased board development activities and decreased levels of conflict, and that the contribution of women directors depends on their ability and willingness to make alliances with influential actors, to spend time on preparations, to be present in important decision-making arenas, and to take on leadership roles. They also find that women are less likely to contribute to board decision-making if they are not perceived as equal board members by the male majority. In a study of board behaviour and governance in US firms, Adams and Ferreira (2009) find that women directors are less likely to exhibit poor attendance at meetings and more likely to serve on monitoring committees than men. These studies show that the nature of interaction and discussion among directors is different when women are present than in all-male boards. However, they do not demonstrate that the content of board decisions changes if women are present – and this is a key element in the causal chain linking the presence of women on boards to organizational outcomes. If board decisions remain the same (despite discussion input by women directors), then the presence or absence of women cannot influence organizational outcomes through this path. But how can researchers find out what decisions would have been

made if board composition were different? One idea is to ask directors about how they have experienced women's influence on board decisions and whether, in their view, a decision was made differently as a consequence of women directors' input. Krawiec et al. (2013) have undertaken such a study, interviewing both male and female directors in the US. However, they find that while most directors think diverse boards are good, they are largely unable to articulate their reasons for this belief or provide concrete examples of an instance where a benefit was derived from diversity. So we still do not know whether board gender composition influences the content of board decisions.

Summary: Scholars have developed many ideas about what types of organizational outcomes board gender composition may affect and provided theoretical reasoning for their intuitions. While individual studies have produced disparate results, overall they have uncovered a negligible effect of board gender composition on firm financial performance and a positive effect on social and ethical aspects of firm behaviour and on gender diversity below board level. Further research is needed before we can assess the general direction of an effect on business strategy or organizational reputation. As most studies are quantitative analyses of the effect of women's board representation (e.g. percentage of women on a board) on a set of indicators (financial indicators, CSR ratings, acquisition spending and so on) they are unable to delve into the causal mechanisms linking these factors. Studies of board processes are important in this regard: by showing that women's presence on boards alters board decision-making processes, they help us uncover *how* board gender diversity affects organizational outcomes. It remains unknown whether changes to decision-making processes lead to changes to the actual content of decisions made by a board, and this is an important link in the causal chain from board gender composition to organizational outcomes. More behavioural corporate governance research on board processes is needed to reveal the extent to which decisions change when boards become more gender-balanced. An alternative causal path is that the presence of women on boards

affects stakeholder decisions that in turn affect organizational outcomes. Initial ideas indicating that the observers of board gender composition influence its effects on organizational outcomes need further development.

Regulation on board gender composition

Studies of regulation on board gender composition investigate both its antecedents and effects. They explore why regulation is introduced in certain countries, why it diffuses internationally, what the discourse surrounding the introduction of regulation is, and what effect regulation has on organizational outcomes.

Antecedents of regulation: The introduction of regulation on board gender composition has caught the attention of legal scholars. They have compared quota and disclosure regimes as alternative regulatory models to increase diversity on company boards (Dhir 2015), and they have contrasted the evolution and nature of regulation in Europe with its absence in the United States, arguing that cross-national differences in regulation are founded in different ideologies and prevailing ideas about the legitimacy of economic power (Dammann 2012, Magnier and Rosenblum 2014, Rubio-Marín 2012, Suk 2012). In seeking to explain why regulation is introduced in some countries and not others, researchers have pointed to the relevance of national institutional factors and key actors – this is similar to the arguments explaining the cross-national differences in the prevalence of women on boards discussed earlier. Female labour market and gendered welfare state provisions, left-leaning political government coalitions, path-dependent policy initiatives for gender equality, international pressure emanating from the proposed EU Directive and increased public concern with how directors are appointed to boards in the wake of the global financial crisis have been identified as antecedents of the introduction of gender quotas for corporate boards (Chandler 2016, Terjesen

et al. 2015). Whether policy initiatives are successfully turned into regulation depends on political support from key groups (civil society, business, state and international actors) and their dominant motivations (Seierstad et al. 2017). Explanations for why gender quotas for boards have been introduced in several European countries within a short time frame use constructivist theories of policy diffusion, which highlight the importance of changes in ideas for changes in policy (Dobbin et al. 2007): internationally, quota policies are increasingly socially accepted through Norway's successful example, but also due to normative isomorphic processes, as expert groups provide a rationale for policy adoption by theorizing its effects both for gender equality and for business outcomes (Teigen 2012). Furthermore, the spread of quotas across different types of decision making bodies in politics and business within a political system has been explained using the logic of contagion effects (Meier 2013). Finally, scholars exploring resistance to quotas in the UK and USA have pointed to system justification tendencies, fear of backlash effects and meritocratic ideology (Doldor 2012, Scully 2012).

Studies analysing the discourse surrounding the introduction of regulation have revealed three types of arguments for a more balanced gender composition of boards. First, utilitarian arguments (the "business case") posit that women's presence on boards will actually improve companies' bottom line, so that it is in firms' best economic interest to appoint women directors. Second, ethical arguments point out that excluding women from directorships is discriminatory, and that it is just to counteract discrimination of individual women by facilitating their access to and participation in these top corporate jobs. Third, political or social justice arguments highlight that the inclusion of women on boards is a question of democracy, of equal participation in a key domain of citizenship, and of legitimacy for corporations' exercise of power in society. In these arguments, a gender equal society is seen as ideal and just, and the legitimacy of male dominance in corporate decision-making is questioned (for discussion of such arguments, see Choudhury 2014, Rubio-Marín 2012, Szydło 2015, Suk 2012, Teigen

2000). The quota law in Norway, for example, had its origin in social concerns about the lack of gender equality in economic decision-making, but utilitarian and individual justice arguments were also made in the debate surrounding the law's introduction (Huse 2013, Teigen 2012). An analysis of Swedish and Finnish media texts discussing quotas identified the utilitarian market discourse as dominant (Tienari et al. 2009), and an analysis of the introduction of quotas for legislative elections, advisory committees and company boards in Belgium found broad similarities in the rationales put forward across these domains (Meier 2014). Furthermore, chapters in De Vos and Culliford's (2014) edited book illustrate the debates that took place in various European countries surrounding quota legislation. Interview research with women directors has uncovered incongruous opinions about the desirability of regulation: some women directors oppose quotas – fearing a negative effect for women or based on the concern that quotas diminish meritocracy – while others support them, drawing on both utility and individual justice arguments (Casey et al. 2011, Kakabadse et al. 2015, Seierstad 2016).

Effect of regulation: To date, most studies of the effect of regulation are concerned with the Norwegian case, and their results are contested: Looking at financial performance effects, Ahern and Dittmar (2012) find that the announcement of the quota had a negative effect on stock prices of firms that had no woman on their boards at the time, and that the quota had a negative effect on Tobin's Q. However, Nygaard (2011) uses a different date for the quota announcement and finds a positive effect, while Dale-Olsen et al. (2013), who criticize the methodology of both studies, find a negligible effect on firm performance. Others have enquired into whether firms tried to escape the quota regulation by changing their organizational form. Some find evidence for this (Ahern and Dittmar 2012, Bøhren and Staubo 2014), while others point to concurrent legislative changes covering trade with securities as the driver of these firms' behaviour (Heidenreich 2013). Wang and Kelan (2013) uncover a positive association

between the quota and women's access to board chair and CEO positions, but Seierstad and Opsahl (2011), using a different sample, find that women's access to board chairs remained restricted. They also show that the quota led to a small number of women holding multiple directorships (the "golden skirts" phenomenon). In an initial study of the effect of the French quota, Singh et al. (2015a) establish that the "quota threat" led to a significant increase in women's board representation in the lead up to the law's introduction. Terjesen and Sealy (2016) point out that the definition of a successful quota outcome itself is contested, showing that not just the formal fulfilment of quotas and effects on firm utility are relevant. Rather, it is hoped that quotas can generally increase gender equality in economic participation and decision-making.

Summary: Taken together, these studies show that in every country, there is a unique institutional and cultural context that makes it more or less likely that regulation will be introduced. Yet actors in any country can push for the introduction of regulation, and the success of policies in other countries and in other policy domains (such as quotas for legislative elections) can help their cause. In discourses surrounding the desirability of regulation, utilitarian arguments that formulate expectations about the beneficial effects of women directors feature prominently, often more than arguments about justice and equality. Arguments that regulation undermines a hitherto rational-economic, meritocratic director selection process are made by those opposing regulation. To date, little is known about the effects of regulation, not least because it is contested how a successful regulation outcome should be defined. Initial research findings indicate that effects can be expected regarding firm behaviour (e.g. whether firms try to evade regulation), firm outcomes (e.g. how investors react to the news that certain firms will be subject to regulation), and outcomes for women (e.g. whether regulation on board composition leads to more women in unregulated leadership positions).

AN ANALYTIC FRAMEWORK AND AN AGENDA FOR FUTURE RESEARCH

In this review, I have identified four streams of research on the gender composition of corporate boards. First, researchers have sought to understand what is distinctive about women directors. Second, they have explored how women access board directorships and why there are so few women on boards. Third, a particularly large number of researchers have tried to establish what effects increasing board gender diversity has for firms. Fourth, they have studied why regulation on board gender composition is introduced and what effects such regulation has. The main research findings in each of these streams are summarized in Table 4.

INSERT TABLE 4 ABOUT HERE

I have also discovered critical knowledge gaps: We know little about the causal mechanisms linking board gender composition to firm outcomes and we often make assumptions about women directors' behaviour on boards. A focus on outcomes for firms rather than for gender equality further limits our understanding of the phenomenon. I have also shown that within business studies, research largely remains confined to certain disciplines: corporate governance, gender and diversity in organizations, business ethics and CSR, finance and accounting, and general management.

Based on these insights, I have developed a five-point analytic framework for understanding board gender composition (see Figure 4). It outlines the micro-, meso- and macro-level factors influencing board gender composition, shows that board gender composition affects the manifestation of gender differences among directors, and delineates how these differences affect both decision-making on boards as well as stakeholder perceptions and evaluations of board composition. It shows what effects of board gender composition on firm outcomes can

be expected and that any impact occurs via these two routes. Finally, both a board's decisions about its composition as well as stakeholder evaluations of that composition influence women's access to boards.

INSERT FIGURE 4 ABOUT HERE

Next, I elaborate each point in the framework and offer a research agenda that outlines how new empirical insights on board gender composition can be generated by drawing on alternative theoretical foundations and employing new research designs. I show in particular how contributions from organization studies, strategic management, international business, leadership, organizational behaviour, and employment relations can enrich our understanding of board gender composition.

1. Taking an institutional and strategic perspective on board composition: Section I of the framework focuses on the factors influencing women's access to boards. Institutional theory can help explain why firms compose their boards as they do within a social context, thereby integrating the micro-, meso- and macro-level factors identified in current research. Scholars in organization studies can investigate whether board composition is decoupled from organizational activities (Meyer and Rowan 1977) and whether firms increasing the number of women on their boards are engaging in symbolic management (Westphal and Zajac 1994), merely suggesting to their environment an adherence to changing social norms surrounding gender equality that is not reflected in their internal operations. They might adopt a neo-institutional perspective on firm reactions to new regulations, interpreting them as strategic responses to institutional pressures (Oliver 1991) and inquiring into why some firms still have no women on their boards despite increasing normative pressures for gender diversity. They can also combine insights from the neo-institutional and strategy-as-practice perspectives, as

suggested by Suddaby et al. (2013), to argue that while actors in firms compose their boards strategically, they have some degree of reflexivity about the social structures within which they are embedded as well as a limited capacity to change those structures through their own actions. International business scholars are well-suited to make cross-national comparisons using firm-level data and to investigate whether multinational firms are oriented towards home- or host-country institutions and norms when filling board positions in their subsidiaries, thereby assessing the relative salience of organizational factors and social structures. They might also examine whether international normative pressures influence board composition in major corporations. Viewing gender-balanced boards as an emerging social norm, researchers can investigate in what circumstances this is reflected by organizational actors in appointment processes.

2. Uncovering male and female directors' similarities and differences: Section II of the framework draws our attention to gender differences among directors. A particular concern highlighted in this review is that a significant body of research on the effect of board gender composition rests on untested assumptions about women directors' behaviour. In order to end researchers' reliance on either gender stereotypes or a notion of innate sex differences when searching for reasons why the inclusion of women on boards might make a difference for organizations, new research in social psychology and organizational behaviour is needed. Demonstrating the extent of heterogeneity among male and female directors regarding their expertise and their values allows researchers to develop more accurate expectations about their behaviour. Further, studies that directly examine how, to what extent, and in which circumstances the behaviour of male and female directors actually differs can create a solid basis for research measuring the effects of board gender composition for firms. Hence, scholars need to apply knowledge of the social construction of gender differences and gender identity in organizations (Ely 1995, Ely and Padavic 2007), and of the workplace consequences of gender

stereotypes (Heilman 2012) and of counterstereotypical behaviour (Rudman and Phelan 2008) to the study of directors. In doing so, they should be aware, however, that gender differences in behaviour may diminish in balanced boards. Indeed, identity economics (Akerlof and Kranton 2010), the role congruity theory of leadership (Eagly and Karau 2002), and social identity theory (Tajfel and Turner 1986) indicate that social norms about how women should behave on boards will change as the makeup of boards becomes more gender-balanced. As expectations towards women directors change, so do their professional role identities, and they may be able to make different contributions to boards. Hence, some of the hypothesized causal mechanisms of how women directors affect board processes may no longer apply when women's minority status ends. One logical consequence is, for example, that the argument that women directors improve monitoring due to their outsider status no longer holds. Two methodological implications arise for quantitative studies of the effect of women on boards: First, they need to pay close attention to threshold effects, like the shift from zero to one woman director, to a critical mass of women directors or to a gender-balanced board composition. Second, such studies need to take an organization's context into account: as gender diversity on boards becomes more normal within the wider institutional field (the country context, the sector or other peer firms), the effects of women directors might change.

3. Considering boards as decision-making groups: Section III of the framework conceives of boards as groups of individuals who interact, process information and make decisions. Gender differences emerge in these group processes. In order to convincingly link board gender composition to firm outcomes, researchers need to be explicit about how gender influences both the way in which decisions are reached on a board as well as the content of those decisions. The way in which decisions are reached is likely to vary depending on the diversity of the group, and behavioural corporate governance research, which focuses on board processes and stakeholder interactions within a socially situated context, can shed more light on the

functioning of boards as groups (Westphal and Zajac 2013). A power perspective can be used to examine the power sources, use of power and power differentials among board members and how this affects decision-making (Finkelstein 1992, Pettigrew and McNulty 1995). This is particularly interesting in countries where employees are represented on corporate boards (Conchon et al. 2013). While employee representatives know a firm's management and operations well, power relations on a board may constrain them in carrying out their control and service roles. In Germany, for example, the majority of women directors are employee representatives. This means that inequality regimes based not only on gender but also on class (Acker 2009) may influence the nature of interactions and decision-making on boards. Employment relations researchers would need to study how women directors representing labour and capital interests contribute to board decision-making. What boards decide – the nature and content of their decisions – may also vary with board diversity. Strategic management scholars can provide new insights on directors' involvement in corporate strategy (McNulty and Pettigrew 1999, Pugliese et al. 2009) by observing what decisions boards with different gender compositions make on specific issues such as executive appointments, succession, performance appraisal and remuneration, or strategic changes including diversification, internationalization and restructuring. If such studies link data on whether women directors increase the cognitive heterogeneity of a board (e.g. in terms of expertise and values) with such strategic decision outcomes, they can demonstrate how women directors contribute to a firm's competitive advantage. The methodological implication of shifting from the current focus on firm outcomes to a more intermediate focus on board decision processes and decision outcomes is that new kinds of data are required. While both interviews with incumbent directors about specific decisions and decision-making processes and non-participant observation of board meetings may be problematic, experiments with "board-ready" women and men can show how they propose to approach board tasks. Former directors may

also be prepared to relay past experiences. Data from board evaluations, which are increasingly required tools for assessing how effectively boards fulfil their roles, is limited in its availability but can show how boards with and without women differ in their functioning. Minutes from board meetings, while equally difficult to come by, can also reveal such differences (as done by Schwartz-Ziv, forthcoming).

4. Understanding how stakeholders evaluate board gender composition: Section IV of the framework redirects our empirical focus towards stakeholders. In order to understand how board gender composition affects firm outcomes, it is imperative to investigate whether and how it is perceived and evaluated by those groups upon whom the firm depends for support. This issue also affects research on women's access to boards: Meso-level arguments that firms with many women employees or consumers appoint women to boards assume that these women notice and care about board gender composition. Macro-level arguments that social norms about gender equality influence board appointments also assume that board gender composition is being perceived and evaluated by the state, by interest groups, by investors and by the media. Despite stakeholder evaluations being a key mechanism linking board gender composition to firm outcomes and a key factor affecting women's access to boards, they are largely missing in extant research. Relevant stakeholders include (1) the state, which may introduce regulation on board composition, (2) the media, (3) analysts and (4) interest groups, all of whom can influence public awareness and judgements of a firm's board composition, and potential and current (4) consumers, (5) managers, (6) employees, and (7) investors, who may consider evaluations of a firm's board composition when making purchasing, strategic, employment and investment decisions, respectively. Rather than relying on implicit or explicit assumptions about those evaluations, researchers should examine them, recognizing that they are likely to differ across social groups, time and space. Methodologically, this means that novel insights into how board gender composition affects firm outcomes will be created not only by studying interactions on

boards as outlined above, but also by studying stakeholders. Further, future research can draw on insights into how firms seek to manage perceptions by organizational audiences (Elsbach 2003), and more specifically, how corporate leaders seek to manage stakeholder impressions about the governance of the firm (Westphal and Graebner 2010). By studying those corporate leaders who are entrusted with appointing board members, they can also deliver more clarity about what kinds of impressions (about board effectiveness, diversity in the organizational hierarchy, conformity to social norms, organizational legitimacy and so on) they aim to create through board gender composition.

5. Illuminating the relevance of board gender composition for women: Section V of the framework focuses on the effects of board gender composition for firms. As shown in this review, current research devotes a lot of attention to financial outcomes and hardly any to gender equality outcomes. But recalling the ethical and political arguments for a greater gender balance on boards, we should specifically examine the effects of board gender composition for *women*. Given that increasing the representation of women on boards has immediate relevance for only a very limited number of women, examining its broader impact on gender equality in organizations is important. Research in this vein can uncover causal processes linking board gender diversity to gender equality in firms. It can show whether gender-diverse boards make decisions that facilitate women's managerial careers and whether women managers (as stakeholders) seek careers in firms with gender-diverse boards. It can show whether women directors represent women's interests, change internal labour markets and augment women's promotion opportunities within firms (Cohen and Broschak 2013, Stainback et al. 2016). Demonstrating a link between greater gender equality on boards and in economic participation and decision-making more broadly will underscore the pertinence of improving women's board representation and bring the social justice gains that can be achieved through board gender diversity to the fore (Eagly 2016).

CONCLUSION

In the last decade, research on the gender composition of corporate boards has rapidly expanded (see Figure 1). This comprehensive review of the literature has identified four streams of research and mapped their progress. It has made specific suggestions for addressing the pressing knowledge gaps on the subject by breaking out of old patterns and established perspectives. Broadening the research agenda in these ways will further our understanding of the determinants and consequences of the gender composition of boards, increase knowledge of women directors as actors on boards, and provide new insights on the significance of regulation. For policy makers, managers and firm owners, this review has shown that improving women's access to boards can help to further gender equality in the economic sphere more generally and is often associated with benefits for the organizations. It has also shown that policies aiming to facilitate women's board access can range from rules regarding appointment processes (e.g. how many women there must be on boards) to rules facilitating women's managerial careers (e.g. work family balance policies). This review has also shown that the effects of board gender composition are not a straightforward result of women directors' behaviour on boards, but that organizational stakeholders interpret board gender composition and contribute to the outcomes it has for organizations.

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Figure 1: Publication year of the journal articles included in this review

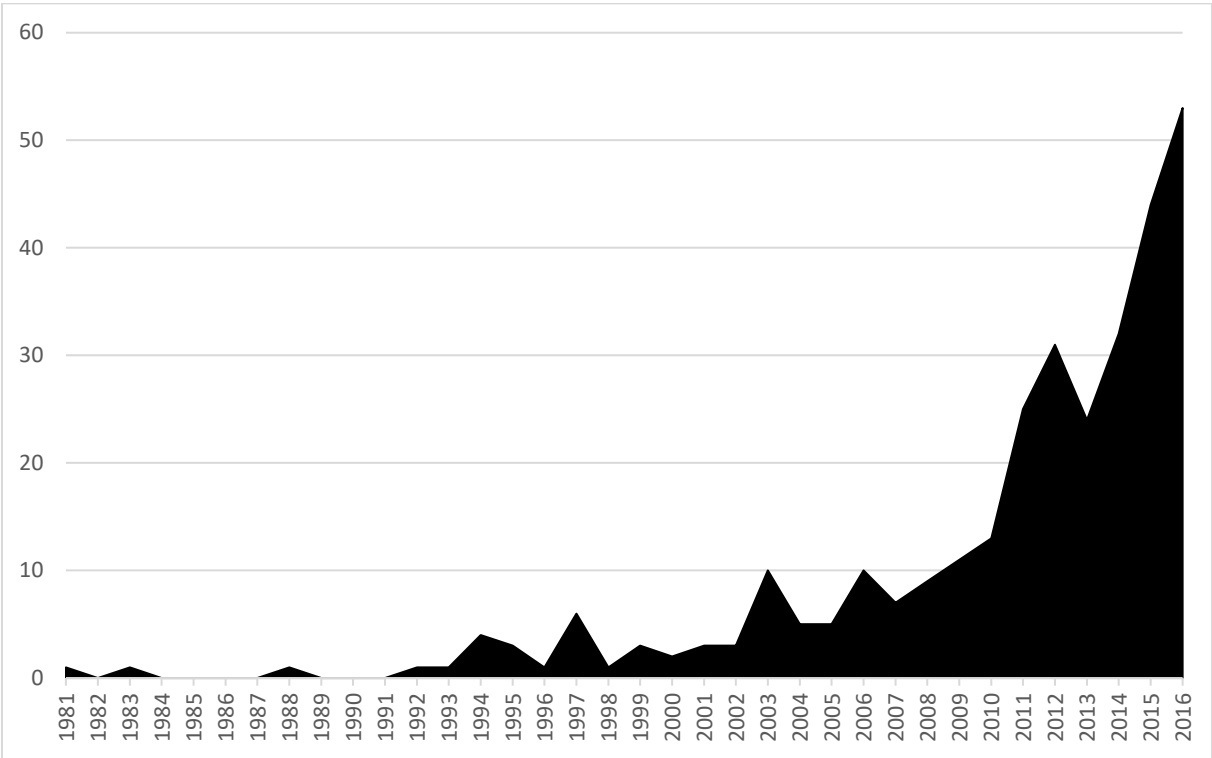


Figure 2: Articles included in this review by journal subject field (see also the Appendix)

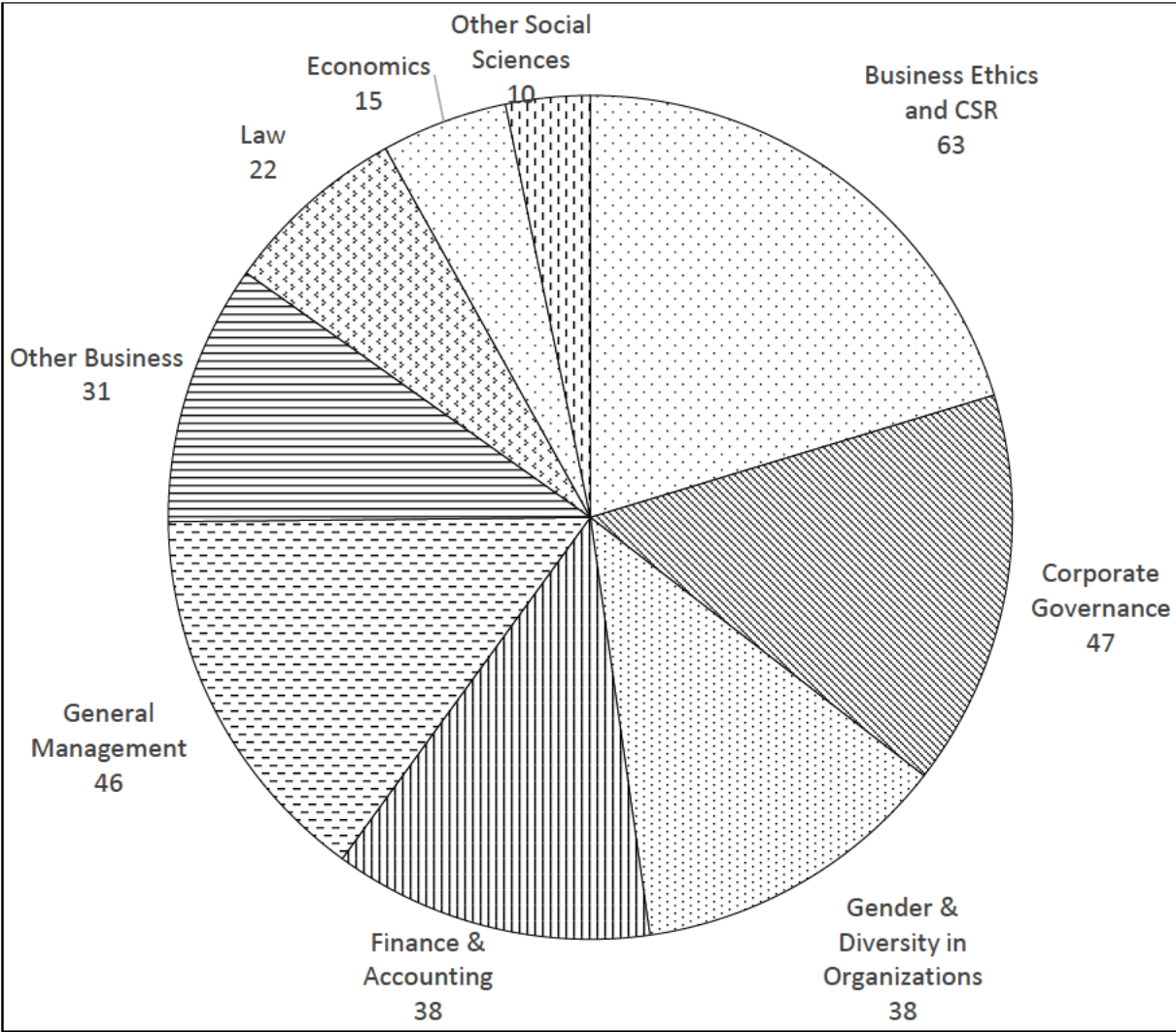


Table 1: Authors of three or more of the articles included in this review

Adams, Renée B.
Bernardi, Richard A.
Bilimoria, Diana
Bøhren, Øyvind
Bosco, Susan M.
Brammer, Stephen
Broome, Lissa L.
Burke, Ronald J.
Carter, David A.
Conley, John M.
Cook, Alison
Francoeur, Claude
García-Sánchez, Isabel-María
Glass, Christy
Grosvold, Johanne
Gul, Ferdinand A.
Huse, Morten
Krawiec, Kimberley D.
Ku Ismail, Ku Nor Izah
Labelle, Réal
Mallin, Christine A.
Martín-Ugedo, Juan Francisco
McGregor, Judy
Mínguez Vera, Antonio
Nielsen, Sabina
Post, Corinne
Rahman, Noushi
Rodríguez-Domínguez, Luis
Seierstad, Cathrine
Sheridan, Alison
Simpson, W. Gary
Singh, Val
Smith, Nina
Terjesen, Siri
Verner, Mette
Vinnicombe, Susan

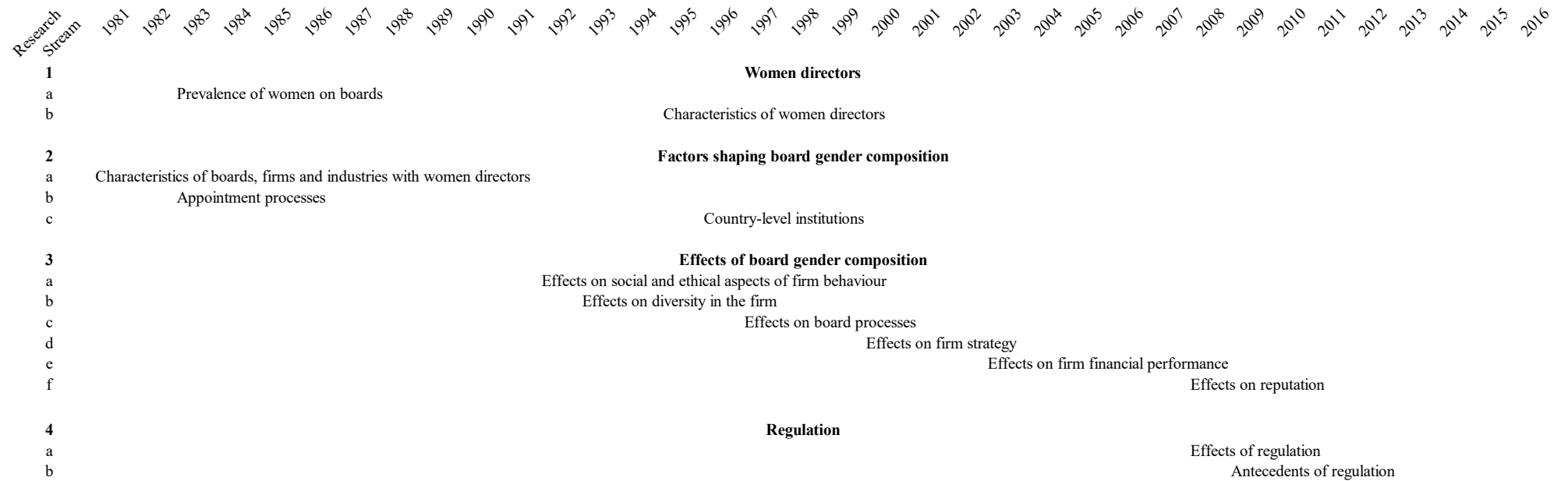
Table 2: Research focus of the articles included in this review (some articles cover multiple aspects)

<i>Women directors:</i>		<i>40</i>
Prevalence of women directors	20	
Characteristics of women directors	30	
<i>Factors shaping board gender composition:</i>		<i>86</i>
Macro-level: institutions and actors	17	
Meso-level: boards, firms and industries	39	
Micro-level: appointment processes	32	
<i>Effects of board gender composition:</i>		<i>192</i>
On financial performance	61	
On social and ethical aspects of firm behaviour	61	
On business strategy	29	
On firm reputation	6	
On diversity in the firm	16	
On board processes	26	
<i>Regulation:</i>		<i>30</i>
Antecedents of regulation	16	
Effects of regulation	15	

Table 3: Geographical scope of the articles included in this review

<i>Single country</i>		<i>261</i>
Australia	19	
Bangladesh	1	
Belgium	2	
Brazil	1	
Canada	11	
China	9	
Denmark	6	
Finland	3	
France	9	
Germany	5	
Iceland	1	
Israel	2	
Italy	3	
Japan	2	
Jordan	1	
Malaysia	5	
Mauritius	1	
Netherlands	3	
New Zealand	4	
Nigeria	1	
Norway	17	
Singapore	2	
South Africa	3	
Spain	16	
Sweden	1	
Switzerland	3	
Tunisia	1	
Turkey	1	
United Kingdom	29	
United States	98	
Vietnam	1	
<i>Multiple countries</i>		<i>49</i>

Figure 3: Development of research streams on board gender composition over time*



* The year in which a research stream started is represented by the placement of the initial words of each stream.

Table 4: Summary of the four research streams

1. Women directors:

- There are some sex differences in demographic, human capital and social capital characteristics and in values and traits of directors, but they are not universal.
- These differences – where they exist – form the basis of differences in behaviour on boards by male and female directors.

2. Factors shaping board gender composition:

- The ease of access to boards for women is not simply an aggregate of individual actions, but is also influenced by higher-order institutional factors (regulation, culture).
- Women's representation on boards is not uniformly spread across different types of boards, firms and industries, indicating that their characteristics influence women's access.
- Both rational-economic and social factors play a role in director appointment processes. In choosing among candidates for board positions, selectors may deliberately choose a woman (due to a demand for diversity) or discriminate against women (due to gender bias or a general exclusion of outsiders).

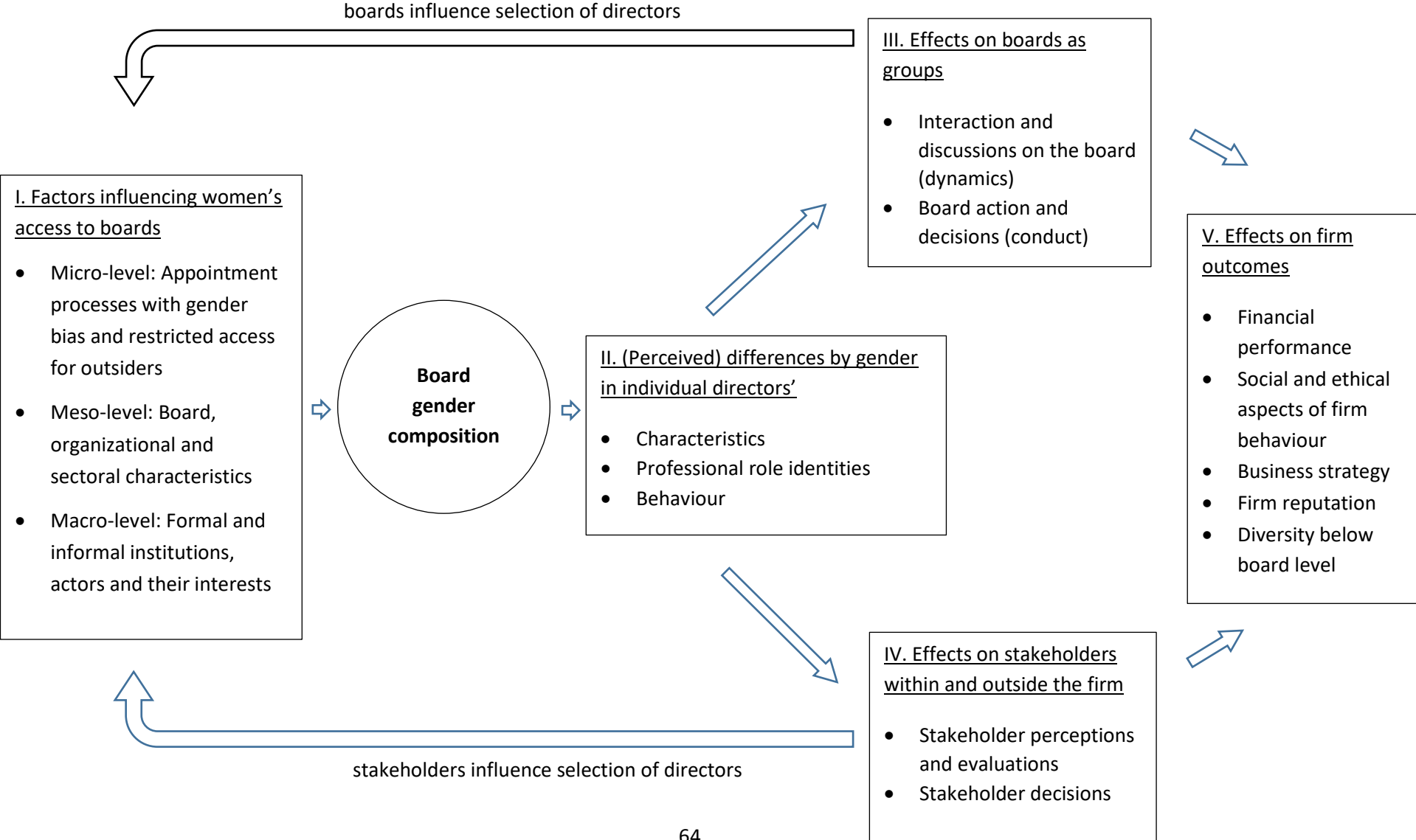
3. Effects of board gender composition:

- Overall, studies have uncovered a negligible effect of board gender composition on firm financial performance and a positive effect on social and ethical aspects of firm behaviour and on gender diversity below board level.
- Problems in establishing causality between board composition and firm outcomes and the incorrect use of gender as a proxy for constructs such as independence or risk preferences mean that caution should be used in interpreting results.
- The presence of women on boards can alter board dynamics and conduct, which can affect firm outcomes.
- The presence of women on boards can signal unobservable information to stakeholders whose ensuing actions affect firm outcomes.

4. Regulation on board gender composition:

- The introduction of regulation on board gender composition at national level is influenced by a country's unique institutional and cultural context, developments in policy and culture at international level and the interests of key actors.
- Discourses about regulation are often dominated by utilitarian arguments that formulate expectations about the effects of women directors for firms.
- It is unclear how a successful regulation outcome should be defined. Outcomes can be expected regarding firm behaviour, firm financial outcomes and outcomes for women.

Figure 4: Framework for understanding board gender composition



Appendix

Number of articles by academic journal subject field and title (see also Figure 2)

Journal subject field	Journal title	Articles
Business Ethics and CSR	<i>Business & Society</i>	3
	<i>Business Ethics Quarterly</i>	2
	<i>Business Ethics: A European Review</i>	2
	<i>Business Strategy and the Environment</i>	1
	<i>Corporate Reputation Review</i>	1
	<i>Corporate Social Responsibility & Environmental Management</i>	5
	<i>Journal of Business Ethics</i>	45
	<i>Journal of Sustainable Development</i>	1
	<i>Sustainability</i>	2
	<i>Sustainability Accounting, Management & Policy Journal</i>	+1
	<hr/>	63
Corporate Governance	<i>Corporate Governance: An International Review</i>	28
	<i>Corporate Governance: The International Journal of Business in Society</i>	7
	<i>International Journal of Disclosure & Governance</i>	1
	<i>Journal of Management & Governance</i>	+11
	<hr/>	47
Gender & Diversity in Organizations	<i>Equal Opportunities International</i>	2
	<i>Equality, Diversity and Inclusion</i>	2
	<i>Gender & Society</i>	1
	<i>Gender in Management (formerly Women in Management Review)</i>	24
	<i>Gender, Work & Organization</i>	5
	<i>International Review of Women and Leadership</i>	1
	<i>Journal of Women Politics & Policy</i>	1
	<i>Politics & Gender</i>	1

	<i>Women's Studies International Forum</i>	+1
		<hr/> 38
Finance & Accounting	<i>Accounting & Finance</i>	1
	<i>Accounting & the Public Interest</i>	1
	<i>Accounting and Business Research</i>	1
	<i>Accounting Horizons</i>	2
	<i>Accounting Research Journal</i>	1
	<i>Asian Review of Accounting</i>	1
	<i>Australian Accounting Review</i>	1
	<i>British Accounting Review</i>	1
	<i>Contemporary Accounting Research</i>	1
	<i>European Financial Management</i>	2
	<i>European Journal of Finance</i>	1
	<i>Financial Review</i>	2
	<i>Global Finance Journal</i>	1
	<i>International Review of Financial Analysis</i>	2
	<i>Investment Management and Financial Innovations</i>	1
	<i>Journal of Accounting & Public Policy</i>	1
	<i>Journal of Accounting and Economics</i>	1
	<i>Journal of Applied Finance</i>	1
	<i>Journal of Banking & Finance</i>	1
	<i>Journal of Business Finance & Accounting</i>	2
	<i>Journal of Corporate Finance</i>	6
	<i>Journal of Financial Economics</i>	1
	<i>Journal of Financial Reporting & Accounting</i>	1
	<i>Journal of Multinational Financial Management</i>	1
	<i>Pacific Accounting Review</i>	3
	<i>Pacific-Basin Finance Journal</i>	+1
		<hr/> 38
General Management	<i>Academy of Management Journal</i>	8
	<i>Administrative Science Quarterly</i>	1
	<i>Australian Journal of Management</i>	1
	<i>British Journal of Management</i>	5

	<i>California Management Review</i>	1
	<i>Chinese Management Studies</i>	1
	<i>European Management Journal</i>	1
	<i>European Management Review</i>	1
	<i>Global Business & Organizational Excellence</i>	1
	<i>Human Relations</i>	1
	<i>International Studies of Management & Organization</i>	1
	<i>Journal of Applied Business Research</i>	4
	<i>Journal of Business & Management</i>	1
	<i>Journal of Business Economics and Management</i>	1
	<i>Journal of Business Research</i>	2
	<i>Journal of Management</i>	1
	<i>Journal of Management & Organization</i>	1
	<i>Journal of Management Development</i>	1
	<i>Journal of Management Studies</i>	1
	<i>Journal of Managerial Issues</i>	2
	<i>Management Decision</i>	2
	<i>Management Science</i>	2
	<i>Nordic Journal of Business</i>	1
	<i>Review of Managerial Science</i>	1
	<i>Scandinavian Journal of Management</i>	2
	<i>Vie et Sciences de l'Entreprise</i>	1
	<i>Zeitschrift für Betriebswirtschaft</i>	+1
		46
Other Business	<i>Business Strategy and the Environment</i>	
	<i>Career Development International</i>	1
	<i>European Journal of International Management</i>	1
	<i>Global Focus (formerly Business & the Contemporary World)</i>	2
	<i>Human Resource Management</i>	2
	<i>Human Resource Management Journal</i>	1
	<i>Industrial & Labor Relations Review</i>	1
	<i>Industrial and Corporate Change</i>	2
	<i>International Business Review</i>	1

	<i>International Journal of Human Resource Management</i>	4
	<i>International Journal of Productivity & Performance Management</i>	1
	<i>International Small Business Journal</i>	1
	<i>Japan and the World Economy</i>	1
	<i>Journal of International Business Studies</i>	1
	<i>Journal of Organizational Culture, Communications & Conflict</i>	1
	<i>Leadership & Organization Development Journal</i>	1
	<i>The Leadership Quarterly</i>	2
	<i>Organization Science</i>	1
	<i>Organizational Dynamics</i>	1
	<i>Service Industries Journal</i>	2
	<i>Strategic Management Journal</i>	+4
		31
Law	<i>American Journal of Comparative Law</i>	1
	<i>Cornell International Law Journal</i>	1
	<i>Employee Relations Law Journal</i>	1
	<i>European Business Organization Law Review</i>	2
	<i>European Journal of Law and Economics</i>	1
	<i>ICON-International Journal of Constitutional Law</i>	1
	<i>Journal of Corporation Law</i>	2
	<i>Journal of Law & Economics</i>	1
	<i>Journal of Law and Society</i>	1
	<i>Legal Studies</i>	1
	<i>Maryland Law Review</i>	1
	<i>North Carolina Law Review</i>	2
	<i>Northwestern Journal of International Law & Business</i>	2
	<i>Pace International Law Review</i>	1
	<i>Seattle University Law Review</i>	1
	<i>St. John's Law Review</i>	1
	<i>University of Cincinnati Law Review</i>	1
	<i>University of Illinois Law Review</i>	+1

		22
Economics	<i>American Economic Journal</i>	1
	<i>American Economic Review</i>	4
	<i>Applied Economics</i>	1
	<i>Applied Economics Letters</i>	1
	<i>Applied Financial Economics</i>	1
	<i>Economic Journal</i>	1
	<i>Feminist Economics</i>	2
	<i>International Review of Economics & Finance</i>	1
	<i>Journal of Economics & Business</i>	1
	<i>Quarterly Journal of Economics</i>	1
	<i>South African Journal of Economic and Management Sciences</i>	+1
		<hr/> 15
Other Social Sciences	<i>Annals of the American Academy of Political and Social Science</i>	1
	<i>Canadian Journal of Administrative Sciences</i>	1
	<i>Enterprise & Society</i>	1
	<i>International Political Science Review</i>	1
	<i>Journal of Modern Italian Studies</i>	1
	<i>Journal of Organizational Behavior</i>	1
	<i>Representation</i>	1
	<i>Review of European Studies</i>	1
	<i>Social Science Research</i>	+2
		<hr/> 10
Total		<hr/> 310