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Empowering Women: The Role of Emancipative Forces in Board Gender Diversity

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Abstract This study investigates the effect of countrylevel emancipative forces on corporate gender diversity around the world. Based on Welzel's (Freedom rising: human empowerment and the quest for emancipation. Cambridge University Press, New York, 2013) theory of emancipation, we develop an emancipatory framework of board gender diversity that explains how action resources, emancipative values and civic entitlements enable, motivate and encourage women to take leadership roles on corporate boards. Using a sample of 6390 firms operating in 30 countries around the world, our results show positive single and combined effects of the framework components

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on board gender diversity. Our research adds to the existing literature in a twofold manner. First, our integrated framework offers a more encompassing, complete and theoretically richer picture of the key drivers of board gender diversity. Second, by testing the framework empirically, we extend the evidence on national drivers of board gender diversity.

Keywords Board gender diversity · Corporate board diversity · Emancipative values · Board of directors · Gender development index (GDI)

Introduction

Beyond reasonable doubt, women are taking a steeply increasing share of leadership roles in the corporate world. Apparently, the progressing feminization of leadership roles evokes a number of benefits to the respective companies, including enhanced corporate governance practices (Adams and Ferreira 2009; Kakabadse et al. 2015; Nielsen and Huse 2010), better firm performance (Francoeur et al. 2008; Ben-Amar et al. 2013; Chapple and Humphrey 2014; Ali et al. 2014; Dezső and Ross 2012), innovation (Miller and Triana 2009), stronger stakeholder and CSR orientation (Hafsi and Turgut 2013; Zhang et al. 2013; Larrieta-Rubín de Celis et al. 2015; Ben-Amar et al. 2015; Bear et al. 2010; Boulouta 2013; Harjoto et al. 2015) and better reputation (Brammer et al. 2009; Bernardi et al. 2006). Despite all these advantages for firms, women are still under-represented to various degrees on corporate boards (Chen et al. 2014; Terjesen et al. 2015a; Grosvold et al. 2007, 2015; Labelle et al. 2015; Dezső et al. 2016), begging the question of what is driving this variation.

Several studies have focused on individual, firm and industry characteristics (Campbell and Mínguez-Vera 2008; Terjesen et al. 2009; Grosvold et al. 2015), but few have linked female board representation to country-level institutions. In addition to the scarce knowledge of board gender diversity contextual drivers, several authors state the lack of theory in the debate (e.g., Terjesen et al. 2009; Seierstad et al. 2015). What we miss in the current discussion is a coherent theoretical framework that helps us explain, first, the determinants of board gender diversity in its width and different strength, and second, the relationships and interactions between the drivers that impact board gender diversity. The purpose of this paper is to address these theoretical and empirical gaps by first portraying and then testing an integrated theoretical framework, based on Welzel's (2013) theory of emancipation. We apply this framework to the issue of board gender diversity and its drivers. Relying on our emancipatory framework, we argue that three components of emancipative forces, namely action resources (existential empowerment), emancipative values (psychological empowerment) and civic entitlements (institutional empowerment), are needed to foster women's emancipation in the business context. As the three components of emancipative forces grow in a country, the female board representation is expected to increase.

To test our framework, we examine female participation on corporate boards among 6390 publicly traded companies from 30 countries. Our research contributes to the extant corporate governance literature in a twofold manner. First, we present an integrated framework that offers a more encompassing picture of board gender diversity drivers. Following an evolutionary logic, we show and discuss why and how the emancipatory framework components are linked to each other and how they affect board gender diversity. Second, by testing the framework empirically we improve the evidence base concerning country-level drivers of board gender diversity.

The remainder of the paper is structured as follows. First, we review the literature on board gender diversity drivers. Next, we develop an emancipatory framework of board gender diversity to explain the drivers that favor women's access to corporate boards and the interrelationship among them. That is followed by a description of our research methodology and a presentation of the main findings. The concluding section discusses the broader implications of our results.

Literature Review

The growing involvement of women in business has strengthened the interest in a more balanced representation of women on corporate boards. While boards of directors have been traditionally dominated by men, companies have started opening their boardrooms to women during the 1990s (Nekhili and Gatfaoui 2013; Farrell and Hersch 2005). However, although female board participation is increasingly recognized across the world, women are still under-represented on corporate boards. The gender gap in board representation illustrates several burdens in the business world that hinder women's access to leadership positions. Prior research has investigated the individual, firm, industry and country-level characteristics that explain the gender gap in board participation (Grosvold et al. 2015).

Individual Characteristics

Corporate governance research at the individual level has shown that a strong educational background is essential for women to attain board positions. Sheridan (2001) and Singh and Vinnicombe (2004) present evidence from Australia and the UK showing that university degrees are prevalent among female directors. In addition, business experience in leadership positions has been highlighted as another requirement for board appointments (Singh and Vinnicombe 2004; Ragins et al. 1998). Scholars have also shown that the required qualifications for women are higher than for men. To be perceived as being qualified for corporate board positions, women's educational achievements must be stronger than men's. Several authors have discussed the issue of such and other structural barriers to the presence of women on boards (e.g., Grosvold and Brammer 2011; Terjesen et al. 2009).

Further, gender differences in values and attitudes were identified as potential reasons for the gender gap on corporate boards (Gabaldon et al. 2016). It has been emphasized that women's weaker focus on power, achievement and autonomy, compared to men's, discourages them to aspire to occupy corporate board positions (Adams and Funk 2012; Terjesen et al. 2009). Accordingly, women often feel discouraged to consider a top management career due to their self-image and to the gender stereotypes that they experience, such as women's alleged affinity toward deference, nurturance, submission, helpfulness, gentleness and low dominance (Eagly and Wood 2013; Gabaldon et al. 2016; Weyer 2007). Consequently, women tend to spend more time at home managing household and family responsibilities. The fact that women shoulder most of the household burdens diminishes the time they can spend on long working hours and networking among colleagues and business partners, both of which are usually a requirement to rise through the corporate ranks (Ragins et al. 1998; Gabaldon et al. 2016).

Finally, existing stereotypes among board selection committees concerning women's inferior leadership skills hinder their access to leadership positions (Gabaldon et al. 2016). Empirical evidence shows that women's capabilities, experience, resources and networks are assumed to be lower than they actually are (Ragins et al. 1998; Gabaldon et al. 2016). This assumption that women lack the qualifications and expertise necessary to succeed as corporate directors constitutes an additional barrier for board gender diversity.

Firm Characteristics

At the firm level, several characteristics have been identified as potential drivers or barriers of board gender diversity. For instance, firm size has been found to be positively related to the likelihood of female representation on corporate boards (Grosvold et al. 2007, 2015; Hillman et al. 2007). This finding can be explained by the greater visibility and, hence, public image demands among larger firms. Hillman et al. (2007, p. 947) state that "larger organizations are expected to face greater liabilities with regard to legitimacy and to respond to societal pressures for greater gender diversity in their corporate boardrooms." Besides firm size, the size of the board of directors and its balance between executive and non-executive positions has been associated with board gender diversity. Terjesen et al. (2009) report a consistently positive relationship between board size and the number of women on corporate boards.

The diversity of corporate boards also depends on firmlevel strategy. Masculinity-biased corporate cultures constitute powerful informal barriers preventing women from moving up the corporate ladder (Arfken et al. 2004; Singh and Vinnicombe 2004). According to Hillman et al. (2007), certain corporate strategies are better fitted for female directors. For instance, a positive relationship between the firm's CSR strategies and female board participation has been documented (Rao and Tilt 2015; Bear et al. 2010). Since board gender diversity is a relevant issue in CSR strategies, firms that are committed to CSR might be more willing to appoint female directors.

Previous studies show mixed evidence concerning the link between female representation on corporate boards and financial performance (Post and Byron 2015). But these findings have triggered a discussion about the endogeneity of this relationship. For instance, in the case of a positive relationship, does female representation on corporate boards lead to greater financial performance or is it rather the stronger financial performance that leads firms to appoint more women on their boards (Du Plessis et al. 2014; Campbell and Mínguez-Vera 2008; Adams and Ferreira 2009)?

In stark contrast to this debate, a different strand of research suggests that women are more likely to acquire board positions in firms that are in bad shape—a phenomenon described as the "glass cliff." The "glass cliff" hypothesis posits that women are better represented on boards of financially troubled firms and are therefore more at risk to fail than men (Ryan and Haslam 2005; Mulcahy and Linehan 2014).

Industry Characteristics

Research at the industry level shows that board gender diversity is higher in the public and the non-profit sector than in the for-profit sector (Du Plessis et al. 2014; Terjesen et al. 2009). Since both public and non-profit sectors' purpose is to contribute to the common good, ethical considerations—such as ecological sustainability, family friendliness, non-discrimination and, of course, gender equality—have greater weight relative to financial profitability. Hence, the cultural context in public and nonprofit organizations is more favorable to women, which makes it more likely to appoint them on boards. Moreover, a higher number of female directors in these sectors provides legitimacy and credibility and serves as a role model for private sector organizations.

Yet another stream of research has shown that female board participation is higher in particular industries, such as arts, service, media, health care, finance, banking, transportation and retail (Azmat and Rentschler 2015; Terjesen et al. 2009; Brammer et al. 2007; McCormick Hyland and Marcellino 2002). Brammer et al. (2007) provide empirical evidence of higher board gender diversity in consumer-oriented industries.

Female labor force participation is another predictor of the representation of women on boards in a given industry. Hillman et al. (2007, p. 948) point out that firms nested in industries with larger female employment show higher female board participation. Some industries, such as construction, manufacturing, energy or information technology, are traditionally more male-dominated, while women are more likely to be employed in trade and service industries (McCormick Hyland and Marcellino 2002).

Country Characteristics

Several studies have examined national institutional environments as a determinant of female board participation across countries. Terjesen and Singh (2008) report higher female board participation in countries with lower wage gaps between men and women and a larger proportion of women who hold top managerial positions. In a study of 38 countries, Grosvold and Brammer (2011) conclude that as much as half of the cross-national variation in the female board share can be explained by the cultural, regulatory, economic and corporate governance institutions. Recently, Seierstad et al. (2015) discussed various public policies as potential drivers of an increase in the percentage of female directors. The authors provide insights into the spread of national public policies to increase the percentage of women on boards by focusing on the role of civil society actors (e.g., trade unions, politicians, journalists), business actors (e.g., women on boards associations, business networks), state actors (e.g., political leaders, political parties, civil servants) and international actors (e.g., international women's network, international research). Carrasco et al. (2015) stress the role of national cultures by showing that countries with a higher tolerance to the distribution of power and stronger masculinity traits exhibit lower female participation on corporate boards. Likewise, Grosvold et al. (2015) find that several institutional characteristics are positively associated with female representation on corporate boards, namely divorce rates, female labor force participation, female managerial participation, government spending on day care and legal protection of a mother's right to return to her original work position after giving birth. Chizema et al. (2015) find that the traditional gender stereotypes associated with religiosity are negatively related to board gender diversity. The authors also find a positive association between female representation in parliament and on corporate boards. This result suggests that higher female participation in politics tends to decrease traditional gender stereotypes that exclude women from leadership positions in the business world. On the other hand, Terjesen and Singh (2008) find that only countries with a recent increase in women's political representation are more likely to have higher levels of board gender diversity. Additionally, Terjesen et al. (2015a) contend that countries offering support to women's participation in the labor market and left-leaning governments are most likely to establish gender quota legislation for boards.

No question, the extant research on the role of country institutions in shaping board gender diversity presents various interesting insights. Nevertheless, the contextual drivers of board gender diversity is still an under-researched area (Terjesen and Singh 2008; Grosvold and Brammer 2011; Seierstad et al. 2015; Grosvold et al. 2015). This study aims to have a better understanding of the contextual drivers (e.g., women's resources, values and rights) of female board representation by using an integrated approach. In the following section, we present a theoretical framework that includes the contextual drivers explaining how women become capable and feel motivated and entitled to take leadership roles on corporate boards worldwide.

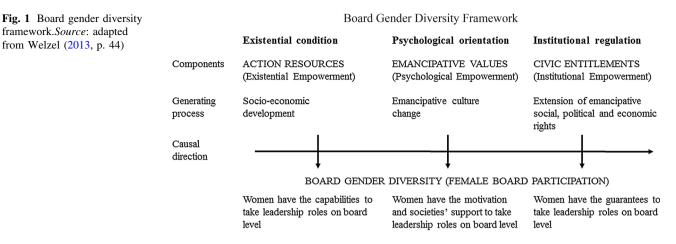
An Emancipatory Framework of Board Gender Diversity

Our framework builds on Welzel's (2013) theory of emancipation. This theory focuses on the rise of universal freedoms and a domination-free existence in human's life.

Following an evolutionary logic, Welzel argues that human empowerment advances on a three-lane trajectory consisting of (1) action resources (which generate capabilities to exercise universal freedoms), (2) emancipative values (which embody motivations to exercise universal freedoms) and (3) civic entitlements (which establish guarantees to exercise universal freedoms). Two sequential mechanisms connect these three elements of human empowerment: First, there is a link from existential to psychological empowerment such that emancipative values begin to rise once abundant action resources have spread into wide population segments (Welzel 2012, 2013). Second, there is a link from psychological to institutional empowerment to the effect that spreading emancipative values motivate collective pressures to introduce, defend and extend civic entitlements (Welzel 2014).

Following this line of reasoning, we argue that action resources, emancipative values and civic entitlements work together in empowering women, which translates into growing female representation on corporate boards (see Fig. 1). Accordingly, the onset of a general emancipatory dynamic is of fundamental importance for women on their way to leadership positions which would remain reserved for men if emancipative forces do not rise. We expect that as the three components of emancipative forces grow in a country, the female share of director positions on corporate boards will increase.

People need health, intellectual and material resources to have control over their life and to exercise universal freedoms. We summarize these assets under the term "action resources" because possessing them expands the scope of actions that one can pursue at will (Welzel 2013, 2014). Given this principle, women's role in society varies massively depending on the amount of action resources they have under their control. In traditional societies, women's role is restricted to care-giving responsibilities in the home and family; they have only limited access to secondary education, health care and employment. In these societies, the gender gap in the possession of action resources between men and women is high. By contrast, in modern societies, action resources are not only more abundant, but also more equally distributed across gender. Women marry later and have fewer children. They attain literacy more often and more easily and have access to health care, educational opportunities, and enter the paid labor force in larger proportions (Inglehart and Norris 2003). In other words, women are able to exercise universal freedoms. Similar to men, women invest more time in their professional careers and become an increasingly specialized and competent workforce, embracing professional careers as lawyers, scientists, architects and teachers. In connection with an increasing level of action resources, the professional expectations, wishes and goals rise. Higher levels of means give women



the ability to perceive business opportunities, resulting in greater aspirations for prestigious positions in companies. Women with more action resources are more willing and eager to take leadership roles in companies.

Needless to say, action resources are also a key requirement to adopt leadership roles. A large body of research on board gender diversity has identified the importance of health, intellectual and material resources for women. Education and business experience help women to get director positions (Singh et al. 2008; Singh and Vinnicombe 2004; Burke 1997). Grosvold et al. (2015) show how tertiary education increases female participation on corporate boards. College attendance and participation in alumni networks also allow women to build ties, especially to segments of the upper class, including gatekeepers, who concentrate social capital. Access to these circles is a privilege that may open the door to corporate boardrooms.

But even though the absolute level of women's action resources matters, the level of action resources that women possess relative to men is just as important. Women might control relatively large stocks of action resources, but if men control more, their advantage in board representation might continue. Therefore, women need a stock of action resources equal to men to gain as many director positions. Furthermore, an equal stock of action resources across gender increases the acceptability of women in leadership roles. For instance, Grosvold et al. (2015) emphasize that higher education attainment of women is important for men's general acceptance of women's ambition to pursue executive careers. Against this background, we posit that an even level of action resources across gender is crucial for the appointment of female directors. Thus, our first hypothesis is as follows:

Hypothesis 1 Female board participation is higher in countries where the distribution of action resources is more balanced between men and women.

Humans are evolutionary programmed to explore the opportunities that their life circumstances offer. Thus, when expanding action resources multiply people's life opportunities, the explorative human mind recognizes this. As people recognize the multiplicity of their life options, they begin to see value in freedoms, because freedoms are needed to protect the pursuit of one's opportunities as one wishes to choose (Welzel et al. 2003; Welzel 2013). Since what is true for people in general is true for women as well, an expansion in women's action resources will awaken their desire to enjoy free choices and gain control over their lives. This psychological awakening is apparent in rising emancipative values, the second component of our framework. Emancipative values give priority to gender equality over patriarchy, autonomy over authority, tolerance over conformity and participation over security, thereby encouraging women to be masters of their own lives and to engage in professional matters (cf. Welzel and Inglehart 2010; Welzel 2013).

Rising emancipative values change traditional gender stereotypes in the sense that women are no longer confined to be dependent homemakers with low-status positions, while men are seen as breadwinners who naturally occupy high-status positions (Eagly and Wood 2013). Emancipative values change socially shared expectations, which are normative in the sense "that they describe qualities or behavioral tendencies believed to be desirable for each sex" (Eagly 1987, p. 13). Specifically, gender equality and women's self-expression will become a novel element of socially shared expectations.

As in the case of action resources, here again the question of a gender gap in emancipative values arises. If only women internalize these values, they might be motivated to take on leadership roles but men will remain resistant. Men have had traditionally more decision-making power over who will move up the corporate ladder. It is therefore crucial that the expectation of the role of women in society does change not only in women's, but also in men's mindsets. Men's acceptance and expectation of women as leaders in the business world is key for female board participation.

However, research shows that emancipative values, or lack thereof, are deeply encultured, which makes gender gaps in emancipative values negligible in the overwhelming majority of societies. Gender role expectations are mutual and, hence, so deeply encoded in national cultures that both sexes hold largely similar values when they are part of the same culture. Accordingly, Welzel (2013, p. 97) writes that "societies in which men place the strongest emphasis on emancipative values are also those in which women do so. In fact, the between-societal variation in emancipative values is 98% identical between women and men." Men shift their attitudes toward gender equality along with women (Inglehart and Norris 2003). We argue therefore that widespread emancipative values have not only an influence on women's own motivation to take leadership positions in business, but also on men's acceptance of women's ambition to become business leaders. We therefore posit the second hypothesis as follows:

Hypothesis 2 Female board participation is higher in countries with higher levels of emancipative values.

Plausibly, if women are able and willing to practice freedoms, they are also interested in the institutionalization of these freedoms. Therefore, women themselves, but also men, have participated in civic and political activism aiming to implement, protect and expand laws and regulations in the interest of women. This leads us to the second mechanism of Welzel's theory of emancipation, the link between psychological empowerment in terms of rising emancipative values and institutional empowerment through the expansion of civic entitlements.

Women's civic entitlements, the third component of our framework, transform emancipative values into laws and regulations by attributing social, economic and political rights specifically to women, so as to enforce their full equality to men before the law. Research on women's rights shows that political rights for women have been extended in nearly all societies today. In contrast, women's social and economic rights have not followed at the same pace. For instance, in many African countries, patriarchal land ownership systems discriminate against women, making them dependent on men for access to land (Kameri-Mbote 2013; Doss et al. 2015). In these countries, it is not rare that women lose their land when widowed or divorced. In large parts of South Asian, African and Middle Eastern societies, pre-arranged marriages are still common and it is very difficult for women to initiate a divorce (Ghimire et al. 2006; Batabyal 2001; Human Rights Watch 2015). Recently, the World Bank (2015) identified 46 countries with no specific laws to protect women from domestic violence and 100 countries where women are restricted from pursuing several business activities that are reserved to men. Alexander and Welzel (2015) stress the lower acceptance of women's social and economic rights in comparison with political rights. They attribute this observation to the fact that women's social and economic rights shatter grassroots structures-namely households and families-in which male dominance has been more persistent. Introducing female suffrage and other political rights has been distracting attention from women's continuing discrimination in households and families, which are hidden from public scrutiny and exempted from state intervention. Initiatives to improve women's social and economic rights status are therefore often confronted with deep-seated cultural resistance. But rising emancipative values are a sign of cultural resistance being eroded. This further underlines the relevance of rising emancipative values as a necessary condition to improve women's entitlements.

These entitlements enable women to use their talents to pursue their own goals in business. As described above, the institutional environment has been shown to be a determinant of board gender diversity (Grosvold and Brammer 2011, 2015). Research points out that countries with more "progressive" social and family laws are associated with higher female participation in the labor market (e.g., Esping-Andersen 1999; Terjesen et al. 2015b; Grosvold et al. 2015). Gender quota systems and comply-or-explain approaches are further examples of gendered entitlements that have positive effects on the number of female directors (Du Plessis et al. 2014; Abdullah et al. 2016). To address the relevance of women's rights on board gender diversity, we formulate the third hypothesis as follows:

Hypothesis 3 Female board participation is higher in countries with more economic, social and political rights specifically for women.

Women may be enabled and allowed through action resources and legal guarantees to take leadership roles in companies, but this does not automatically mean that women are eager to engage in leadership careers. Then, women in leadership roles remain an unrealized potential. Only emancipative values motivate women to make free choices and to gain control over their lives. This leads them to self-express themselves in the business context by using their capabilities and legal guarantees. Nevertheless, even if emancipative values should be the dominant factor, women also need compatible resources and entitlements that support their efforts. The interplay of action resources, emancipative values and civic entitlements is crucial to understand how women get into directorship positions. Our emancipatory framework of board gender diversity is developed in a linear upward direction, from greater capabilities over stronger emancipative values to effective civic entitlements. However, setbacks can reverse the emancipating process. Economic, social and political crises can impact the spheres of means (e.g., lower health, intellectual and material resources compared to men), values (e.g., lower focus on gender equality in the workplace) and regulations (e.g., less legal support for women) in ways that reinforce women's disadvantage, including not having as much access to director positions.

In addition, higher levels of action resources do not always guarantee appropriate changes in the cultural and institutional environment. For instance, in several rich oilproducing Arab gulf countries, women still face discrimination based on values and laws (World Bank 2015) even though they have access to education and health systems. Further, women are not allowed to work without the permission of their male "guardian" (Human Rights Watch 2015).

Inglehart and Welzel (2005) also observe that gender equality values in several countries may remain at the same level despite an increase of action resources among large population segments. They explain this phenomenon by the glacial pace of value change. The insight that a change of values takes place slowly helps to understand why women are still under-represented on corporate boards. It seems that the rise of emancipative values cannot keep up with the rise in women's action resources, leading to frustration among women and, in consequence, to governmental intervention and pressure from non-governmental groups to increase women's participation on corporate boards. The latter have recently led to several interventions by governments and regulators around the world to impose gender quotas and voluntary "comply-or-explain" legislations.

Governmental interventions to push women into leadership roles are a noteworthy proof of the backlash effects produced by the evolutionary sequence. Even if several studies (Inglehart and Welzel 2005; Inglehart and Norris 2003; Welzel 2013, 2014) have confirmed the existence of an evolutionary sequence—from existential empowerment over psychological empowerment to institutional empowerment—the linear upward direction can change its course occasionally. For instance, women's economic rights may drive societies' emphasis on emancipative values (e.g., higher acceptance of women on corporate boards) or the level of women's action resources (e.g., higher incomes).

For this reason, we argue that the emancipative forces develop their impact in combination and work together in promoting board gender diversity. We posit that the three components of emancipative forces are jointly linked with female board participation. Thus, our fourth hypothesis addresses the "combined emancipatory forces": **Hypothesis 4** Female board participation is higher in countries where the combined emancipative forces are stronger.

Methodology

Sample

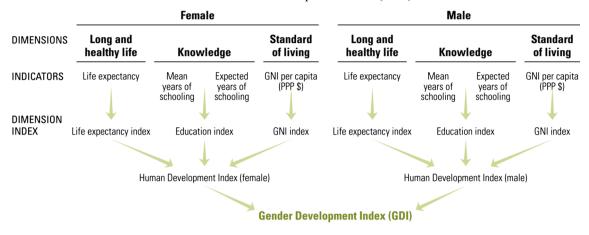
Our sample is taken from the BoardEx database. It is composed of 6390 firms located in 30 countries that did not implement gender quota legislations as of 2010. Female board participation on corporate boards is the dependent variable. It is measured as the ratio of female directors among all board members. The indicators of our threefold emancipatory framework are all measured at the country level. Hence, the empowering characteristics of action resources, emancipative values and civic entitlements are deemed to operate as contextual drivers of female board participation.

Action Resources

The first framework component is measured using the human development index (HDI) for women, the so-called genderrelated development index (GDI) provided by the United Nations Development Programme (see Fig. 2). We use the female to male ratio of the human development index to consider the gap between these two groups. This index is designed to provide a gender-sensitive measure of human development in three domains (Klasen and Schüler 2011): (1) a long and healthy life, measured by life expectancy at birth, (2) knowledge, measured by the expected years of schooling for children and the mean years of schooling for adults ages 25 and older, and (3) a decent standard of living, measured by the estimated gross national income per capita. The measure is based on objective health, income and education data gathered from the United Nations Development Programme database. The GDI is the ratio of the HDIs calculated separately for females and males (United Nations Development Programme 2015a). We use the earliest GDI data that are available from year 1995 to consider the living circumstances and starting requirements of the director's generation.

Emancipative Values

The second framework component is measured using the emancipative values index developed by Welzel (2012, 2013). This index is known to hold cross-cultural validity at the country level (Welzel 2013, chapter 2). It is derived from nationally representative data, which strengthens its credibility as a measure of national culture. The index presented in



Gender development index (GDI)

Fig. 2 Gender development index (GDI). Source: United Nations Development Programme (2015b)

Table 1 Emancipative values index (EVI). Source: adapted from Welzel (2013, p. 71)

Single items	Subindex	Overall index		
Toleration of abortion	Choice priority on individual freedoms over	Emancipative values		
Toleration of divorce	restrictions			
Toleration of homosexuality				
Women's equality education	Equality priority on gender equality over			
Women's equality jobs	patriarchy			
Women's equality politics				
Priority more say local	Voice priority on political participation over			
Priority more say national	heteronomy			
Freedom of speech				
Independence a desired quality	Autonomy priority on self-determination over			
Obedience NOT a desired quality	obedience			
Imagination a desired quality				
<i>Coding</i> for each item 0 for the least emancipative position and 1.0 for the most emancipative position	Scaling item scores added and divided by 3 for each subindex (multi-point 0–1.0 scale)	Scaling subindex scores added and divided by 4 (multi-point 0–1.0 scale)		

Table 1 consists of four orientations: (1) equality, based on agreement with women's equality in education, the job market and in politics; (2) autonomy, based on independence, imagination, but not obedience as desired child qualities; (3) choice, based on abortion, divorce and homosexuality as acceptable practices; and (4) voice, based on a high priority assigned to people's say in national and local affairs and freedom of speech (Welzel 2012, 2013). The overall index of emancipative values is calculated as follows: First, the 12 emancipative value items are normalized into a scale ranging from 0 for the least emancipative position to 1 for the most emancipative position; second, the subindices for lifestyle tolerance, gender equality, personal autonomy and people's voice are calculated by averaging the four item scores for each. The subindices each yield a multi-point scale with a

minimum of 0 and a maximum of 1. Finally, the four subindices are averaged into an overall index of emancipative values (Welzel 2013, chapter 2). Due to the fact that gender gaps in emancipative values are insignificant in size relative to given overall levels of emancipative values, we use the overall levels of emancipative values and give no separate consideration to women's emancipative values. We use the most recent data available for each country collected either in 2010 (the year of our dependent variable) or earlier in the fourth or fifth round of the World Values Survey.

Civic Entitlements

The third framework component is measured using the women's economic, political and social rights ratings from

The political rights index includes women's right to	The economic rights index includes women's rights for	The social rights index comprises women's right to
 (1) Vote (2) Run for political office (3) Hold elected and appointed government positions (4) Join political parties and (5) Petition government officials 	 (1) Equal pay for equal work (2) Free choice of profession or employment (3) The right to gainful employment (4) Equality in hiring and promotion practice (5) Job security (6) Non-discrimination by employers (7) Workplaces that are free from sexual harassment (8) Working at night (9) Working in occupations classified as dangerous and (10) Working in the military and the police force 	 (1) Equal inheritance (2) Enter into marriage on a basis of equality with men (3) Travel abroad (4) Confer citizenship to children or a husband (5) Initiate a divorce (6) Own, acquire, manage and retain property brought into marriage (7) Participate in social, cultural and community activities (8) Education (9) Choose a residence (10) To have freedom from female genital mutilation and (11) Forced sterilization

Table 2 Civic entitlement items. Source: Cingranelli and Richards (2010)

the Cingranelli and Richards (CIRI) Human Rights Dataset (2008). This rating includes "comprehensive dimensions of women's standing by law and in practice" (Cho 2013, p. 686; Cingranelli and Richards 2010). The three indices include a number of internationally recognized rights, as shown in Table 2.

The ratings are coded as categorical variables on a fourpoint scale, ranging from 0 if "no rights under law and systematic discrimination based on sex may be built into the law" and "if the government tolerates a high level of discrimination against women" to 3 if "all or nearly all women's rights are guaranteed by law." We average these three indices to an overall women civic entitlement index for our analysis. We use for each country the latest data from the year 2010 (the year of our dependent variable) or before.

Combined emancipative forces are measured using the average of the standardized values of the three components of the framework.

In accordance with previous research, we control for a number of variables at the firm level. We control for firm and board size which both have been found to affect the level of board gender diversity (Hillman et al. 2007; Campbell and Mínguez-Vera 2008; Terjesen and Singh 2008; Carrasco et al. 2015). We use the natural logarithm of total assets to measure firm size. We also control for women chairing the board as a possible determinant of female board participation (Bilimoria 2006). We control for profitability as several studies show that female directors might be selected more often by financially successful firms (Farrell and Hersch 2005; Carter et al. 2010; Carrasco et al. 2015). Profitability is defined as net profit divided by total equity. To avoid outliers, we

remove the extreme values of the "profitability" variable by using the interquartile range method with a multiplier of 3. Finally, we control for the industrial sector, taking into account that different types of industries attract women differently (Brammer et al. 2007; Fryxell and Lerner 1989; Arena et al. 2015). Several sectors, such as materials, energy, industrial, financial, information technology and utilities, are known to be male-dominated (Gardiner and Tiggemann 1999; Godwin et al. 2006; Frome et al. 2007; Raghuram 2008). We use a dummy variable to identify these sectors.

Analysis

Our data are hierarchically structured, with firms (level 1) nested within countries (level 2). To take account of this particular data structure, we apply multi-level regression with random intercepts. Accordingly, we model the firmlevel dependent variable as a function of both firm-level and country-level characteristics. Multi-level modeling is superior to traditional multiple regression techniques because the latter provide inefficient estimates and small standard errors in the presence of nested data (Snijders and Bosker 2012). To avoid inefficient estimation and biased standard errors, multi-level modeling recognizes the hierarchical data structure and simultaneously estimates the variability in the dependent variable within and between countries (Mikucka 2014; Snijders and Bosker 2012). Our multi-level model assumes fixed effects, while the intercept is allowed to vary across countries to address variability in female board participation across countries. The equations for our multi-level random intercept models can be formally represented as:

Table 3 Firm-level and country-level statistics

Country	FBP	Board size	Chairwoman	Firm size	Profitability	Male sector	AR	EV	CE
Australia	6.56	6.76	0.02	6.67	0.04	0.70	0.90	0.59	3.00
Austria	4.75	12.83	0.00	7.11	0.02	0.80	0.88	0.55	2.67
Belgium	9.10	8.88	0.00	6.72	0.05	0.56	0.85	0.49	2.33
Brazil	6.58	11.27	0.09	10.34	0.07	0.73	0.71	0.44	2.00
Canada	8.86	9.30	0.01	7.33	0.03	0.78	0.89	0.59	2.67
China	3.68	9.53	0.00	10.02	0.09	0.88	0.58	0.37	1.00
Cyprus	16.67	6.00	0.00	4.53	0.29	0.00	0.65	0.44	2.33
Denmark	8.99	10.57	0.00	8.96	0.07	0.52	0.90	0.62	3.00
Finland	20.39	10.45	0.07	7.56	0.00	0.86	0.92	0.62	3.00
France	10.37	10.76	0.04	7.32	0.03	0.54	0.90	0.58	2.67
Germany	5.97	14.05	0.01	7.31	0.02	0.67	0.77	0.61	3.00
Greece	7.31	9.46	0.00	7.36	0.06	0.54	0.83	0.53	1.67
India	5.52	10.53	0.03	11.12	0.11	0.64	0.40	0.36	1.33
Ireland	6.78	9.05	0.00	5.78	-0.05	0.49	0.81	0.44	2.67
Italy	6.20	11.69	0.04	7.94	0.03	0.53	0.86	0.50	2.67
Japan	1.43	12.97	0.00	14.38	0.03	0.63	0.90	0.51	1.67
Luxembourg	6.56	8.55	0.09	8.00	0.06	0.64	0.79	0.52	2.67
Malaysia	6.29	8.22	0.00	8.14	0.08	0.65	0.77	0.39	1.33
Mexico	7.44	16.72	0.06	10.27	0.08	0.44	0.74	0.47	2.00
Netherlands	6.57	9.05	0.02	7.23	0.03	0.62	0.85	0.60	3.00
New Zealand	4.21	7.22	0.00	6.95	0.10	0.33	0.87	0.58	3.00
Poland	7.61	12.58	0.00	8.85	0.09	0.67	0.84	0.43	1.67
Portugal	5.97	11.09	0.00	7.66	0.06	0.64	0.83	0.41	2.67
Russia	4.73	13.33	0.00	11.14	0.13	0.72	0.82	0.37	1.33
Singapore	5.81	10.00	0.00	7.98	0.10	0.67	0.82	0.39	1.67
Spain	9.21	11.97	0.02	7.89	0.03	0.69	0.80	0.55	2.67
Sweden	23.59	10.14	0.01	8.66	0.02	0.71	0.92	0.73	3.00
Switzerland	5.20	9.36	0.00	7.74	0.04	0.61	0.85	0.64	2.33
UK	6.65	6.80	0.01	4.69	0.01	0.60	0.86	0.58	2.67
USA	8.41	10.41	0.02	6.47	0.00	0.68	0.90	0.52	2.33
Mean	8.14	9.86	0.02	6.64	0.02	0.66	0.87	0.53	2.43
SD	9.93	4.49	0.13	2.45	0.14	0.47	0.08	0.05	0.32
Min. (board)	0.00	1.00	0.00	0.00	-0.53	0.00	0.40	0.36	1.00
Max. (board)	75.00	41.00	1.00	17.18	0.54	1.00	0.92	0.73	3.00

N = 63,032 board positions in 6390 firms; countries = 30

FBP = female board participation (in %), AR = action resources, EV = emancipative values, CE = civic entitlements

Firm-level (Level 1) model: $Y_{ij} = \beta_{0j} + \beta_{ij}X_{ij} + e_{ij}$ Country-level (Level 2) model: $\beta_{0j} = \gamma_{00} + \gamma_{01}Z_j + u_{0j}$ Full model: $Y_{ij} = \gamma_{00} + \gamma_{01}Z_j + \gamma_{10}X_{ij} + u_{0j} + e_{ij}$

where Y_{ij} is the level of female board participation for firm *i* in country *j*, X_{ij} the firm-level predictor, e_{ij} the firmlevel error term. The intercept β_{0j} contains subscript *j* which indicates that the intercept is allowed to vary across countries. At the country level, the respective emancipative force as country-level predictor (Z_i) is used to explain the intercept β_{0j} which is allowed to vary across countries. γ_{00} is the average intercept, while u_{0j} is the normally distributed random (or error) term which corresponds to the varying intercept. The full model contains the fixed part $\gamma_{00} + \gamma_{01}Z_j + \gamma_{10}X_{ij}$ and the random part $u_{0j} + e_{ij}$. Given the continuous nature of the dependent variable, our model is specified as linear multilevel regressions using the "mixed" command in Stata 14. The results of the full model estimation are presented and discussed in the following section of this paper.

Variable	1	2	3	4	5	6	7	8	9
1. FBP	1								
2. Board size	0.211*	1							
3. Chairwoman	0.239*	-0.003	1						
4. Firm size	0.166*	0.616*	0.003	1					
5. Profitability	0.046*	0.134*	0.012	0.221*	1				
6. Male sector	-0.129*	-0.031*	-0.056*	0.058*	0.006	1			
7. Action resources	0.076*	-0.024	-0.013	-0.286*	-0.123*	0.019	1		
8. Emancipative values	0.092*	-0.112*	-0.006	-0.184*	-0.048*	-0.001	0.468*	1	
9. Civic entitlements	0.057*	-0.117*	0.003	-0.257*	-0.061*	-0.010	0.490*	0.859*	1
10. CEF	0.087*	-0.098*	-0.006	-0.282*	-0.090*	0.003	0.760*	0.904*	0.912*

 Table 4 Pearson's correlation matrix

N = 63,032 board positions in 6390 firms; countries = 30

FBP = female board participation, CEF = combined emancipative forces = (action resources + emancipative values + civic entitlements)/3 * Correlation coefficient is statistically significant at the 1% level

Results

Table 3 shows a descriptive overview of the average representation of women on boards in the 30 countries of our sample. Our dataset contains board information for 6390 firms and 63,032 board members. Female board participation ranges from 0 to 75%. Women have no representation in 48.3% of the investigated companies. In 28.7% of the sample firms, women hold one board position, while 14.3% of the firms have two female directors on board. Thus, 91.3% of the firms studied have either none, one or two female directors. The distribution of the board positions among men and women confirms the low level of female board representation. Of the 63,032 board positions considered, women constitute merely 8.1% of the directorships. The lowest women participation rates are found in Japan (1.4%), China (3.7%), New Zealand (4.2%), Russia (4.7%) and Austria (4.8%). By contrast, France (10.4%), Cyprus (16.7%), Finland (20.4%) and Sweden (23.6%) show the highest female board participation. These figures are consistent with findings reported in previous studies which show a significant variation in board gender diversity levels across countries (e.g., Singh and Vinnicombe 2004; Terjesen and Singh 2008; Grosvold and Brammer 2011). As reported in previous studies, female board representation is higher in the Nordic countries (Norway, Sweden and Finland) and lower in Japan (Grosvold et al. 2015; Carrasco et al. 2015; Terjesen and Singh 2008; Terjesen et al. 2009; Grosvold and Brammer 2011).

We display in Table 4 a correlation matrix between the variables used in our models. Action resources, emancipative values and women's civic entitlements are significantly and positively correlated with female board participation. Furthermore, we find evidence of a positive bivariate relationship between female board participation and the combined emancipatory forces. We also find significant correlations among the components of our framework, which show evidence of their interrelationship. Consequently, we do not use them simultaneously in any of our models. Moreover, female board participation is significantly and positively correlated with board size, firm size and chairwoman, and negatively correlated with maledominated sectors. Firm size is also highly correlated with board size, which is expected. Larger firms tend to have larger boards (Coles et al. 2008; Guest 2008).

Table 5 reports the findings of the empirical test of our hypotheses. All explanatory variable coefficients are standardized to allow for a direct comparison of each variable's relative impact on female board participation. Variance inflation factors (VIFs) are below 1.50 for those regressions that estimate the single and combined effects of the three framework components. Hence, we can conclude that there is no indication of multi-collinearity in our analysis.

Before analyzing our model with predictors, we investigated whether multi-level modeling is required to avoid the problems of group clustering by estimating a null model (or intercept only model) for female board participation. We computed the intraclass correlation coefficients (ICC) to estimate the percentage of the total variance in female board participation that exists between countries. The resulting ICC of 15.7% shows that a significant part of the variance in the variability of board gender diversity lies between countries, which indicates that multi-level specification is necessary (Hox 2010). The ICC values of the four models presented in Table 5 range from 0.15 to 0.18, providing evidence that country-level characteristics are relevant to understanding differences in female board participation. In international business research, levels of ICCs of 0.05, 0.10 and 0.15 are considered as small,

	Dependent variable: female board participation in %							
	[1]	[2]	[3]	[4]				
Intercept	7.637***	7.145***	7.069***	7.440***				
	(8.18)	(9.38)	(8.79)	(9.47)				
Firm-level effects								
Board size	1.476***	1.476***	1.466***	1.468***				
	(9.34)	(9.34)	(9.27)	(9.29)				
Chairwoman	2.299***	2.298***	2.297***	2.298***				
	(20.29)	(20.28)	(20.27)	(20.28)				
Firm size	1.207***	1.206***	1.226***	1.222***				
	(6.90)	(6.92)	(7.01)	(6.99)				
Profitability	0.144	0.146	0.144	0.146				
	(1.23)	(1.25)	(1.24)	(1.25)				
Male sector	-1.237***	-1.236***	-1.236***	-1.236***				
	(-10.79)	(-10.78)	(-10.78)	(-10.79)				
Country-level effects								
Action resources	1.373**							
	(2.15)							
Emancipative values		1.566***						
		(3.65)						
Civic entitlements			1.280***					
			(3.05)					
Combined				1.824***				
emancipative forces				(3.52)				
Observations	6390	6390	6390	6390				
Countries	30	30	30	30				
VIF	1.30	1.24	1.26	1.27				
Firm-level variance	81.41	81.41	81.40	81.40				
Country-level variance	17.96	13.87	15.79	14.26				
ICC	0.18	0.15	0.16	0.15				
Pseudo- R^2	0.11	0.31	0.19	0.26				
Log likelihood	-23,160.48	-23,157.22	-23,158.58	-23,157.51				
LR test versus linear model	256.52***	239.87***	286.70***	229.81***				
Model Wald χ^2	939.24***	946.45***	943.26***	945.72***				

Entries are z-standardized regression coefficients with t values in parentheses. Combined emancipative forces = (action resources + emancipative values + civic entitlements)/3. The likelihood ratio (LR) test indicates whether a multi-level model performs better than a one-level linear regression model. Wald χ^2 test is against the null hypothesis that all the coefficients on the independent variables in the mean equation are 0. Regression analyses were performed using Stata 14

*, **, *** Statistical significance at the 10, 5 and 1% level, respectively

medium and large, respectively (e.g., Peterson et al. 2012 and Hox 2010). The results of the likelihood ratio (LR) test comparing the multi-level model with one-level linear regression model indicate that there is enough variability between countries to favor a multi-level approach. Furthermore, we calculated the pseudo-R-squared for the country level to show the explanatory power of the respective country-level regressors by comparing the difference between the country-level variance in a basic model without predictors (null model) and the countrylevel variance in a model with the respective country-level predictor in relation to the null model country-level variance. The pseudo-R-squared values range from 0.11 to 0.31, indicating that the predictive power is higher when a respective country-level predictor is included in the model.

We find that action resources are positively associated with female board participation ($\beta = 1.373$; p < 0.05), indicating that women's health, knowledge and standard of living positively influence female board participation. More precisely, the lower the gap in the distribution of these action resources between women and men is, the higher is the gender diversity on corporate boards. Thus, our hypothesis 1 is supported.

We also find a positive relationship between emancipative values and female board participation ($\beta = 1.566$; p < 0.01). Female board participation is higher in those societies, in which women's equality (in education, in the job market and in politics), autonomy (autonomy based on independence, imagination, but not obedience as desired child qualities), free choices (concerning abortion, divorce and homosexuality) and voice (based on say in national and local affairs and freedom of speech) are more valued and appreciated. Accordingly, hypothesis 2 is confirmed too.

Furthermore, we find a positive relation between women's civic entitlements and female board participation $(\beta = 1.280; p < 0.01)$. Women have more leadership positions if they enjoy better economic, social and political rights that guarantee participation opportunities in businesses. This finding indicates the importance of equality, freedom and non-discrimination rights in the labor market as well as female representation and participation in political processes to women's access to corporate boards. Further, legal guarantees and protection in the areas of marriage, inheritance, property, education and residence also contribute to promote female board participation. Hence, hypothesis 3 is also supported.

The results of model 4 show the combined effect of the three emancipative forces on female board participation ($\beta = 1.824$; p < 0.01). We conclude that this combined effect is stronger than the single emancipative force effects, indicating support for hypothesis 4.

With regard to the control variables, female board participation is influenced by board size. Similar to Grosvold (2011), the coefficients are positive and highly significant. Moreover, the female board representation is greater in companies whose boards are chaired by a woman, indicating that chairwomen influence female board participation positively. This finding is in line with the results of recent surveys showing that companies have more women on boards when a woman holds key leadership position as a CEO, board chair or chair of the nominating committee (e.g., 2020 Women on Boards 2016). It is also congruent with previous studies which suggest that female leaders serve as role models and mentors to aspiring candidates for directorship and top management positions (Gabaldon et al. 2016). This result also implies that female board chair reduces the potential token status of any other woman appointed as director and any uncertainty that their male colleagues may have about the suitability of their nomination (Kanter 1977; Dezső et al. 2016).

Consistent with prior research (Grosvold et al. 2007; Terjesen and Singh 2008), we find a positive relationship between firm size and female board participation. We did not find significant evidence of a relationship between female board participation and profitability. Finally, in line with previous studies (e.g., Arena et al. 2015), we find a negative effect of male-dominated industrial sectors on female board participation.

Discussion and Conclusion

We have outlined and tested how emancipative forces shape the prevalence of female representation on corporate boards. Our theoretical framework, which includes three components, action resources (existential empowerment), emancipative values (psychological empowerment) and civic entitlements (institutional empowerment), explains how women become capable and feel motivated and entitled to take leadership roles on corporate boards worldwide. In line with Iannotta et al. (2016), our study shows that women's access to corporate boards depends on a set of complementary institutions. We found strong crosscountry empirical evidence that the emancipative forces play a major role in creating more gender-balanced boards. Women's capabilities, emancipative values and civic entitlements are significantly and positively related to female board participation.

This evidence is relevant from both an economic and political point of view. From an economic rationale, there is growing evidence indicating that gender-balanced boardrooms are better governed and economically more successful (Terjesen and Sealy 2016; Post and Byron 2015; Ferreira 2015). Women have a positive influence on the quality of board tasks. They impact cohesion and are effective in monitoring management and in fostering strategy development. Moreover, they spend more time preparing for board meetings and attend them more frequently than their male counterparts (Adams and Ferreira 2009; Choudhury 2014). Favoring greater gender diversity on corporate boards is therefore seen as a means to contribute to creating economic value on top of re-establishing a certain form of gender equality in the business arena.

From a public policy perspective, our results indicate that strengthening women's action resources, emancipative values and civic entitlements can significantly reduce the barriers that frequently prevent them from reaching the upper echelons of the corporate world (Terjesen and Sealy 2016). The abundance of action resources, emancipative values and civic entitlements is key to creating more balanced corporate boards. Post and Byron (2015, p. 15) contend that women's representation on boards is more likely to have a positive effect on firm performance in countries that offer women greater "access to resources and opportunities in terms of education, economic participation, employment, and political empowerment." Therefore, our findings suggest that policy makers should promote women's empowerment to strengthen their desire to exploit business opportunities including better access to top management positions and directorships. Public policies that focus on female empowerment are bound to not only impact firms' economic performance, but also their social and environmental performance. According to the upper echelons perspective by Hambrick and Mason (1984, p. 193), "organizational outcomes-both strategies and effectiveness-are viewed as reflections of the values and cognitive bases of powerful actors in the organization." Previous research shows that women's stronger emphasis on ethical behavior influences firm's CSR strategies. Since mankind is affected by numerous types of social (e.g., material insecurity, diseases) and environmental issues (e.g., biodiversity loss, global warming), the appointment of women on corporate boards can positively influence firms' sustainability goals.

Our analysis sheds new light on what facilitates and impedes board gender diversity. It contributes to the corporate governance literature on women's access to leadership positions, which has called for further theoretical developments (e.g., Terjesen et al. 2009; Seierstad et al. 2015), more empirical analysis with a focus on contextual variables (e.g., Grosvold and Brammer 2011), further international evidence (e.g., Terjesen et al. 2009) and more integration of the combined effects of institutional policies (Amable 2000). Compared with previous literature, which has mainly analyzed bundles of institutions that are not embedded in a coherent approach (Grosvold et al. 2015), this study presents a conceptually comprehensive and coherent framework that allows an integrated understanding of the contextual drivers of board gender diversity. This framework presents new insights on how a modernization process enables board gender diversity in the business world. By embedding our explanatory factors in an evolutionary logic, we provide an explanation for the questions of how informal and formal institutions have been developed, how they interact and how they finally influence the level of female representation on corporate boards. This research does explicitly take gender-related institutional drivers, in the spheres of resources, values and rights into account to investigate the relationship between gender-related institutional (in)equality and board gender diversity.

This study is not without limitations. It takes an "outside the boardroom" perspective by testing the country-level drivers of FBP. However, the three components of our framework of emancipative forces could also be tested at lower levels, such as individual, firm or industry. Future research should investigate whether female directors show a stronger emphasis on emancipative values compared to other female employees. A further limitation is the absence of an extensive time-series database to address a possible reciprocal relationship between gender-related institutions and board gender diversity. However, we believe it is theoretically plausible to assume that country-level emancipative forces drive firm-level behavior rather than the opposite. For instance, emancipative values measure a general aspect of national-level cultures, whereas female board representation measures a specific aspect of firmlevel behavior. Since nations contextualize firms, and not the opposite, it can be assumed that causality operates from national-level culture to firm-level behavior.

Nevertheless, actions of women in top management positions are often the driving force in changing recruitment strategies, promotion systems within firms and salary differentials which affect women's levels of action resources (cf. Terjesen and Sealy 2016; Choudhury 2014). Female directors may increase the acceptability and appreciation of women's work and role in the job market in general and of female leader's activities on corporate boards in particular. We can also assume that women's civic entitlements are impacted by female leaders who use their influence in civil and political activism to promote women's social, political and economic rights in society. Thus, women in leading positions on corporate boards can evoke significant impacts on emancipative forces as women in leading positions of the non-private sector do since many years. Further investigations aiming at an indepth understanding of how board gender diversity impacts emancipative forces would give a better insight into the conditions under which country-level emancipative forces are driven by firm-level behavior.

Future research could also take a closer look at the role of women as board chairs. We have shown that the presence of a chairwoman is positively correlated with female board participation. Further research could explore the relative influence of our framework components in explaining the likelihood that a woman will be appointed to leadership positions. Future studies could also focus on the potential influence of women in key leadership positions on the distribution of action resources and emancipative values within firms.

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Compliance with Ethical Standards

Conflict of interest The authors declared no conflict of interests with respect to the conduct of this research.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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