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Board gender diversity, quotas and critical mass theory

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Received 23 January 2023
Revised 3 March 2023
Accepted 26 March 2023

Abstract

Purpose – The corporate communications literature recently focused on corporate board gender diversity, specifically looking at two central aspects: gender quotas and equitable target percentages for women on corporate boards. This paper extends the debate by focusing on board gender diversity and critical mass theory.

Design/methodology/approach – The paper gives a conceptual viewpoint on the issues raised in the literature on board gender diversity through a critical mass theory lens.

Findings – Following the 2022 European Union (EU) directive, all EU member states will have to attain a 40% women representation on large corporate boards to achieve board gender diversity and what has been termed a "critical mass". However, the literature indicates that gender diversity benefits may not be achieved if a critical mass is not composed of independent women directors who create a voice that produces a collective action. The authors highlight why a critical mass may not be achieved. The inconsistency in prior research linking corporate board gender diversity to economic performance may result from the critical mass of women directors not reflecting an independent collective action. However, as gender-diverse boards evolve, the authors argue that women will not just be seen as female directors but will be accepted on equal terms with their male counterparts and have an equal voice; gender will no longer be an issue and critical mass theory may then become irrelevant.

Practical implications – From a corporate communications perspective, this study will focus the minds of human resources (HR) professionals on the importance of the composition of women on corporate boards if the HR professionals wish to obtain the full potential benefits of board gender diversity. Theoretically, this study highlights the importance of critical mass and collective action when researching the economic benefits of corporate board gender diversity. Investment analysts may wish to look more closely at the structure of corporate boards and not just the numbers.

Originality/value – This paper gives a conceptual viewpoint on the critical mass theory and corporate board gender diversity, identifying that it is not just the numbers that are important but also the issue of minority independence and collective action, and this is, therefore, unique in this respect. Future research should identify if a critical mass (not just numbers) of women on corporate boards has been achieved. Only then that the linkage, based on critical mass theory, between board gender diversity and corporate performance/profitability can be made. Knowing whether board sizes are being increased to accommodate the added female directors would be also interesting, or will the new female directors replace existing male directors? However, the most important research question, once gender diversity has been achieved, could be: Is critical mass theory relevant with respect to board gender diversity?

Keywords Critical mass, Women, Corporate boards, Collective action, Gender diversity, Quotas

Paper type Viewpoint

Introduction

The corporate communications literature recently focussed on corporate board gender diversity, specifically looking at two central aspects: gender quotas and equitable target percentages for women on corporate boards (Hamplová *et al.*, 2022; Lefley and Janeček, 2022). Hamplová *et al.* (2022) investigate if quotas will solve the issue of the lack of women

The authors would like to thank the Editor of CCIJ and the reviewers for their constructive comments and guidance in preparing the revision of this paper.

Conflict of interest: The authors have no conflicts of interest to declare that are relevant to the content of this article.

Author contributions: Conceptualisation: Frank Lefley. Methodology: Frank Lefley and Vaclav Janeček. Writing - original draft preparation: Frank Lefley. Writing - review and editing: Vaclav Janeček, Frank Lefley.

Corporate Communications: An International Journal
Vol. 29 No. 2, 2024
pp. 139-151

1356-3289
DOI 10.1108/CCIJ-01-2023-0010

on corporate boards and conclude (p. 752), "the evidence from this research shows that while quotas may not be a panacea and may not eliminate gender discrimination, they could tip the equilibrium towards greater equality". In contrast, Lefley and Janeček (2022) focus on an equitable target percentage for women on corporate boards. Both these papers focus on the numbers and not on the effectiveness of women on corporate boards. This paper extends the research by pointing to the fact that the composition (and not just the number) of women on corporate boards who create a critical mass is important for the critical mass to be effective.

In 2022, the EU (European Council, 2022) issued a directive on gender diversity, requiring specific corporate boards to adopt a gender diversity quota system; increasing the number of women on their boards. However, the literature indicates that just increasing the number of women on boards may not be the solution. While from an ethical/equality point of view, "numbers" may be the answer, from a corporate performance point of view, "numbers" may not. The authors investigate this issue through a critical mass theory lens.

Indications, especially from a critical mass theory perspective, show that gender diversity benefits may not be achieved if the critical mass is not composed of independent female directors who create a voice that produces a collective action, where the minority (women) become more assertive in their shared interests and perspectives (Fitzsimmons, 2012; Post *et al.*, 2011). Collective action occurs when a number of people work together to achieve some common objective (Dowding, 2013). The authors highlight why a critical mass may not be achieved. For example, some companies are adding to the board women who are "connected" to either major shareholders or existing male directors (Chevrot-Bianco, 2021). These women are not independent and may therefore be in conflict with other female directors. It is only when independent female directors achieve a critical mass that gender diversity benefits can be achieved. While EU quotas will produce a "mass" in the number of female directors, they may not create a "critical mass". Joecks *et al.* (2013, p. 71) present an interesting observation in their statement, "we are not in a position to judge whether the established link between board diversity and performance would also exist in a system where women were appointed only because of the quota and not because of the knowledge and expertise they bring into the board".

From a corporate communications perspective, this paper will focus the minds of human resources (HR) professionals on the importance of the composition of women on corporate boards if they wish to obtain the full potential benefits of board gender diversity. From a theoretical point of view, it highlights the importance of critical mass and collective action when researching the economic benefits derived from corporate board gender diversity. Investment analysts may wish to look more closely at the structure of corporate boards and not just the numbers. This paper gives a conceptual viewpoint on the critical mass theory and corporate board gender diversity, identifying that it is not just the numbers that are important but also the issue of minority independence and collective action, and it is, therefore, unique in this respect. Future research should identify if a critical mass (not just numbers) of women on corporate boards has been achieved. It is only then that the linkage, based on critical mass theory, between board gender diversity and corporate performance/profitability can be made. However, the most important research question, once gender diversity has been achieved, could be: Is critical mass theory relevant with respect to board gender diversity?

Earlier research on critical mass theory has mainly focused on the political sector (Krook, 2015; Kurebwa and Ndlovu, 2017), while this paper focuses on the corporate sector.

The paper goes on to focus on the current situation regarding EU gender diversity quotas, followed by previous quota experience. The critical mass theory is then discussed, leading to conclusions and suggestions for future research.

EU gender diversity quotas – current situation and critical comment on quotas

The European Union's current position regarding board gender diversity is that on June 7th 2022, the EU agreed to impose gender quotas on all twenty-seven EU member states. This was endorsed by the European Council on October 17th 2022 (European Union, 2022). The member states have to transpose this directive into their national legislation over the next two years. However, a country that has become close to achieving the diverse gender objectives or has in place equally effective legislation before the directive comes into force may suspend the requirements relating to the appointment or selection process.

The directive stipulates that at least 40% of non-executive directors in listed companies with 250 or more employees should be held by members of the under-represented sex by June 30th 2026. However, if member states wish to apply the new rule to both executive and non-executive directors, the target would be 33% overall. The aim is also to introduce transparent recruitment procedures in companies. Finally, the European Parliament will assess the directive's scope later on and whether it should include non-listed companies.

In order to give peer pressure and encourage compliance, member states will have to publish information on companies reaching the target. Companies could also be fined for failing to hire enough women on their boards and see director appointments cancelled for non-compliance with the law. In addition, companies will be required to inform the competent authorities annually about the gender representation on their boards and, if the objectives have not been met, how they plan to attain them.

Board selection procedures should be based on clear, predetermined criteria, with the best candidate being selected. However, in cases where candidates are equally qualified, priority should go to the candidate of the under-represented sex - women. This should result in overall board improvement.

The EU directive can be viewed as a positive discrimination measure, but this process is not unique and has been studied extensively, especially in the political literature (Hughes and Paxton, 2008; Krook, 2015; Piscopo and Muntean, 2018).

From a critical aspect, the literature highlights arguments for and against mandatory quotas. From a positive point of view, quotas; (1) are seen as a faster way to increase the number of women on corporate boards (Chandler, 2016,2018); (2) would give women the opportunity to prove themselves (Leszczyńska, 2018); (3) allow women to break through the "glass-ceiling", by breaking down the barriers to access (Arfken *et al.*, 2004; Dang *et al.*, 2014); (4) help tip the balance of social inequality by creating a critical mass of women on corporate boards (Kogut *et al.*, 2014); (5) would correct a moral, social and ethical injustice (Chandler, 2016).

Arguments against quotas include; (1) women's skills would always be in question (Friedenvall and Hallonsten, 2013); (2) a possible adverse reaction by current directors towards women who are selected based on quotas (Leszczyńska, 2018); (3) there is a limited pool of qualified (experienced) female directors from which to recruit (Hwang *et al.*, 2021); (4) They are undemocratic (Chandler, 2016; Friedenvall and Hallonsten, 2013); (5) they would discriminate against men (Hwang *et al.*, 2021; Velkova, 2015); (6) they focus on appointing women just because they are women (Fitzsimmons, 2012) – thus encouraging tokenism (7) the views of new women directors may be ignored due to the perceived lack of credibility (Westphal and Milton, 2000); (8) they would undermine the propriety rights of companies to appoint their own board of directors (Freidenvall and Hallonsten, 2013; Velkova, 2015); (9) quotas may signal proof of women's "inability to manage on their own" (De Vita and Magliocco, 2018, p. 675).

Previous quota experience

Prior to the EU's recent directive, European countries, such as Belgium, France, Germany, Italy and Norway, had introduced mandatory quotas for female Public Limited Company (PLC) board members. The authors briefly look at three countries: Norway and Germany, which have adopted quotas and Denmark, which recently supported the initiative for 40% of female directors on corporate boards.

The landmark case was possibly Norway, which in 2003 "stipulated that the boards of directors of all public and state-owned firms consist of at least 40% women directors by 2008" (Kogut *et al.*, 2014, p. 892). To be more precise, boards with three directors must have at least one female director, boards with four to five directors must have at least two female directors, boards with six to eight members; the figure is three female directors, four females on boards with nine members and boards with ten or more members the figure for female directors is at least 40%. In Norway, the mandatory quota target of 40% was reached by April 2008 (Dale-Olsen *et al.*, 2013; Machold *et al.*, 2013; Torchia *et al.*, 2011) due mainly to the penalties for non-compliance (Seierstad *et al.*, 2020). While Ahern and Dittmar (2012), Bøhren and Stanbo (2014) and Seierstad *et al.* (2020) argue that some Norwegian organisations changed their legal status to avoid quotas, this was later disputed by Eckbo *et al.* (2022).

Initially, it was just a case of filling in the numbers with younger and less experienced women joining the boards with a decrease in profitability (Ahern and Dittmar, 2012) and firm value, also with such firms undertaking fewer employee layoffs resulting in an increase in total labour costs and a reduction in short-term profits (Matsa and Miller, 2013). Matsa and Miller also observed that younger female directors replaced younger men and did not, therefore, decrease the board's average age structure. However, it was soon realised that some more qualified women had qualities that may enhance board decision-making (Lefley and Janeček, 2022). Seierstad *et al.* (2020) observed that although women were initially invited to join corporate boards just to build up the numbers, this eventually changed with companies becoming more selective. Also, evidence from Norway shows that following the introduction of mandatory quotas, there was an increase in the supply of female directors and that these new directors were at least as qualified as the incumbent and new male directors (Hwang *et al.*, 2021). Eckbo *et al.* (2022, p. 1) state "that, at the time of the introduction of the Norwegian quota, the availability of qualified female director candidates was high enough to avoid the negative consequences of the quota highlighted previously in the literature". Bertrand *et al.* (2019) observed that the new female directors were *more* qualified in qualifications and professional experience than their predecessors.

In Norway, a corporate board of directors comprises directors elected by shareholders through a nominated independent committee and up to one-third of directors elected by the employees. Following the introduction of quotas, the average size of shareholder-elected directors remained unchanged at five members, indicating that new female directors replaced existing male directors (Eckbo *et al.*, 2022). This would suggest a total of two female directors elected by shareholders. In addition, employees selecting one female director would give a total of three female directors, which, according to the literature, would achieve a critical mass.

On March 6th 2015, Germany became a significant European country to commit to improving the representation of women on corporate boards by passing a law requiring some of Europe's largest companies to give 30% of supervisory board seats to women beginning in 2016. "On August 8, 2021, a second law to increase the number of women in leadership positions in private and public sector companies in Germany (FüPoG II) entered into force. Starting August 1, 2022, private companies that are both publicly traded and codetermined will be required to appoint at least one woman and one man to an executive board with more than three members. (FüPoG II, art. 7, no. 1.) Furthermore, other private companies must set a target figure for women and must ensure that the target figure (in percentage) equals a full person (Art. 7, nos. 1, 6; art. 10, nos. 2, 4; art. 11, no. 2.)" (Gesley, 2021). The new law affected around 70 companies and forced larger listed firms whose management boards had more than three members to include at least one woman. Firms were also required to report whether and how they aimed to meet the quota requirements and risk a fine for failing to give a good reason for not setting a target to include any women on their management boards. Although Joecks *et al.* (2013) found a positive relationship when a critical mass is reached between female directors and firm performance in German firms, this was based on the *number* of women on supervisory boards and did not take into account other factors that the authors discuss later.

Recently, but prior to the EU (2022) directive, Denmark supported the initiative for 40% of female directors on corporate boards. Following this proposal, there was an increase in the number of female board members, but this was, to some extent, the result of the appointment of female family members of existing male directors (Chevrot-Bianco, 2021). However, the new appointees were less qualified than some other female applicants who were not promoted to board positions. There was a belief in Denmark that quotas would lead to the selection of unqualified women, with selection being based purely on gender (Wiersema and Mors, 2016). This supports the view of both female and male directors that quotas or other board gender influences may lead to the appointment of less qualified directors (Lefley and Janeček, 2022).

Following the introduction of mandatory quotas, selection processes may favour women with less relevant experience (Hamplová *et al.*, 2022). In addition, quotas may focus on women just because they are women (Fitzsimmons, 2012). "Gender quotas stand for sex being a more important criterion than competence, skills, interest, experience and professionalism (Meier, 2013). The authors argue that quotas may, therefore, just be about the numbers, and while a female mass may be reached, a critical mass may not. The benefits of corporate board gender diversity may not be achieved.

Critical mass

The term critical mass emanates from nuclear physics, which refers to a "quantity" needed to start a chain reaction, resulting in an irreversible "turning point". The critical mass theory was possibly first introduced into the social science literature by Granovetter (1978). Granovetter postulated through his seminal work, published in the social science literature, on threshold models of collective behaviour that a number (now referred to as a critical mass) of players is required to make a difference. From the social science literature, it is argued that a shift will take place when women exceed a proportion of 30% of decision-making positions in organisations (Torchia *et al.*, 2010; Wiley and Monllor-Tormos, 2018). The figure represents a move from a small to a large minority, which has significant implications according to critical mass theory (Kurebwa and Ndlovu, 2017). It appears that, with respect to corporate board gender diversity, what is important is the number or percentage of women that constitute the critical mass. Torchia *et al.* (2010, p. 43) argue that "critical mass theory may improve our understanding of the contribution of women to corporate boards".

Critical mass theory "posits that once a certain level of minority representation (i.e. a critical mass) has been reached, group interactions will change and substantive differences in the behavior of the involved group will begin to emerge" . . . "once minority groups reach critical mass, their members will become more assertive in their shared interests and perspectives" (Collins *et al.*, 2010, p. 264). This view is widely supported by literature (Torchia *et al.*, 2010).

Kanter's (1977, 1993) seminal work on the critical mass theory identifies four types of gender diversity groups:

(1) Uniform. Concerning gender-diverse groups, such groups are composed of either all male or female members.

(2) Skewed. Groups that have one dominant type (male) which control the few (female).

(3) Tilted. Groups with a less extreme distribution but where a minority of group members can influence the whole group. Concerning gender-diverse groups, this can be a group that consists of up to 20% of women.

(4) Balanced. Gender-diverse groups consist of 40%–60% of women.

Schwartz-Ziv (2017, p. 778) found that "boards are more active at board meetings when they are gender-balanced, meaning that they include at least 3 directors of each gender. This phenomenon is particularly driven by women directors, who are more active when a critical mass of at least 3 women directors is in attendance". Dynamic changes occur in boardrooms when the number of women directors reaches a critical mass (Jia and Zhang, 2013).

Jia and Zhang (2013) argue that age diversity among women directors may positively influence the effectiveness of the critical mass. Liu (2014) concludes that applicants for the position of director with "linked" connections to the board are more likely to be appointed. This is supported by Chevrot-Bianco (2021), who also observed an increase in family members as directors. The authors would argue that a critical mass that does not compose a cohesive independent group (i.e. it includes family and non-family female members – resulting in multiple identities with differing aims, loyalties and objectives) may adversely affect the effectiveness of the critical mass. This latter aspect of critical mass, regarding family and non-family directors, has not been addressed in the literature. While multiple identities of female directors may positively influence the critical mass (Jia and Zhang, 2013), they may also have a negative effect by creating a conflict of opinions.

Post *et al.* (2011) postulate that such conflict undermines the power of critical mass by the way the majority (male directors) consider the minority (female directors) voice/opinions when such minority views are inconsistent. The majority (men) are more likely to listen and learn from the minority (women) when the women's views are constant. Social pressures influence minorities (women) to conform to or adopt the majority's (men) views (Nemeth, 1986). From an agency perspective, Post *et al.* (2011) argue that the interests of insider directors, those with close ties to agents, may prevail over their responsibility toward shareholders. It is often difficult to know if an actual critical mass has been reached (Foss *et al.*, 2004).

It is shown in the literature that women have a more significant impact on corporate boards when there are three or more females on the board (Konrad *et al.*, 2008), thus creating a critical mass (Kanter, 1977). At this level, there is a notable impact on boardroom dynamics with increased teamwork and inclusiveness. Joecks *et al.* (2013) argue that with three or more women on the board, firm innovativeness is higher than when there are fewer than three. Recent research on board gender diversity (Atif *et al.*, 2020) also supports the critical mass theory. Atif *et al.* (2020) found a positive link between board gender diversity and renewable energy consumption when the number of female directors exceeded one. Gyapong *et al.* (2021) support the importance of three women on corporate boards by showing that women directors significantly impact dividend payments when three or above are on the board. While Amin *et al.* (2022, p. 164) show that "consistent with the critical mass theory, it was found that boards with three or more female directors have a strong impact on reducing the agency cost, as compared to two or fewer female directors on the board".

The literature, therefore, typically shows the critical mass as three female directors. However, Gull *et al.* (2023) show that two or more female directors are needed to influence corporate decisions, with a more pronounced effect made by independent female directors - here, the term "independent" directors refer to none executive directors. Gupta and Raman (2014), from a sample of 112 public companies taken from the S&P 1500 index, conclude that the selection of a female chief executive officer (CEO) increases in line with the proportion of women on the board, indicating a critical mass effect with respect to the numbers. However, this increase is only significant when the appointment is made internally from existing women directors and less significant concerning women CEOs selected from outside the company.

Farag and Mallin (2017) found that increasing the number of female directors on *supervisory* boards above a critical mass of 21% and 23% decreased financial performance, while with respect to *management* boards, increasing the appointment of female directs above a critical mass of 27% lead to better financial performance. They also show an increase in corporate risk beyond a critical mass of 24%, again showing a critical mass figure as a percentage. Based on critical mass theory, Dobija *et al.* (2022) found that an effective female representation on corporate boards lies between 10% and 40%, while Adriaanse (2016) suggests a 10% to 30% figure. However, Adriaanse (2016) argues that few companies have achieved a critical mass figure of 30%. Dobija *et al.* (2022) argue that the critical mass effect can be replaced by the voice effect, for example, by having a female chair of the board and further state (p. 41), "A ratio of women that is too high is likely to reduce the benefits expected from board gender diversity". Dobija has suggested that an effective female representation lies between 10% and 40%, so it may be inferred that "too high" is above 40%. Farrell and Hersch (2005) failed to find convincing evidence that adding women to the board was a value-enhancing strategy.

The literature on critical mass theory suggests that a non-linear relationship may, in some cases, exist with respect to the number of women on corporate boards and board gender diversity influences. For example, García-Meca *et al.* (2022) and Joecks *et al.* (2013) found this relationship to be "U" or inverted "U" shaped. García-Meca *et al.* (2022) found, from a sample of 131 non-financial Spanish listed firms, an inverted "U" shaped relationship between the number of women directors and payout policy. They state (p. 10), "For low levels of female representation on the board, women directors increase dividends in order to reduce agency conflicts or to improve reputation or legitimacy. However, after an inflection point, characteristics often associated with women, such as risk aversion, or a conservative and financial prudence attitude, as well as lower overconfidence, emerge and reduce dividend payments".

García-Meca *et al.* (2022) also found that female directors with family ties to controlling shareholders showed an inverted-"U" relationship to dividends, while female directors with no family ties show a "U" shape relationship. Thus, resulting in conflict between independent female directors and female family member directors. The authors argue that this indicates that it is not just the number of female directors that will influence "critical mass" but their relationship to controlling shareholders. The authors also argue that female directors may not act independently if they have family or strong social connections to existing male directors. Joecks *et al.* (2013) found that the relationship between the number of female directors and firm performance is also "U" shaped in that with low numbers of female directors, there is an adverse effect on firm performance while this turns into a positive impact after a certain threshold is reached.

The low representation of women on corporate Boards may have resulted in the inconsistency in the results of earlier research on board gender diversity (Gong *et al.*, 2021). Such research is, in many cases, based on boards with less than 10% (on average) of female directors (Schwartz-Ziv, 2017). An interesting judgement is by Joecks *et al.* (2013, p. 71), who state, "we are not in a position to judge whether the established link between board diversity and performance would also exist in a system where women were appointed *only* because of the quota and not because of the knowledge and expertise they bring into the board".

Conclusions and suggestions for future research

The introduction of mandatory quotas in the EU is aimed, from an equality perspective, at increasing the number of women members on corporate boards with the hope of improving the efficiency of boards. Adams and Ferreira (2009) argue that there was no evidence from their research to suggest that such gender-based policy initiatives would enhance firm performance. However, it is generally accepted in the literature that women will bring a positive perspective to strategic decision-making and significantly impact board inputs (Adams and Ferreira, 2009). Women also contribute to corporate innovation (Torchia *et al.*, 2018; Wiley and Monllor-Tormos, 2018). It is also argued in the literature that gender-balanced teams, in the main, outperform nongender-balanced teams (Apesteguia *et al.*, 2011) and that women are more risk-averse than their male counterparts (Croson and Gneezy, 2009). Women also exhibit different communication skills (Tench *et al.*, 2017).

The EU directive aims to improve overall board efficiency by introducing selection procedures based on clear, predetermined criteria, with the best candidate being selected. And in cases where candidates are equally qualified, priority should go to the candidate of the under-represented sex, i.e. women. However, prior experience following the introduction of gender diversity quotas (either mandatory or voluntary) indicates that women are added to the board just to build up the numbers (Joecks *et al.*, 2013); they are less qualified (Chevrot-Bianco, 2021); they are young and less experienced (Ahern and Dittmar, 2012); they are family members of existing male directors (Chevrot-Bianco, 2021); they are appointed just because they are women (Fitzsimmons, 2012; Meier, 2013); selection procedures favoured women with less experience (Hamplová *et al.*, 2022); they have "linked" connections to the board (Liu, 2014). On a more positive note, there is also evidence that new female directors are as equally qualified as their male counterparts (Hwang *et al.*, 2021) or even more qualified in terms of qualifications and professional experience than their predecessors (Bertrand *et al.*, 2019).

With the introduction of mandatory quotas, there is no doubt that the number of women directors will, according to critical mass theory, increase to a critical mass level, i.e. three or thirty per cent of board members. In fact, the literature shows that the case for women on boards is frequently based on "the numbers" (Pastore and Tommaso, 2016; Solimene *et al.*, 2017). However, the authors would argue that although the numbers will grow to a "mass" level, this may not be a "critical mass". For example, conflict between women directors may arise between existing women directors (who may regard themselves as more qualified and experienced) and new, less qualified recruits, who current women directors may perceive are recruited just to build up the numbers. Some companies add women to the board who are "connected" to either major shareholders or existing male directors. These women are not independent and may therefore be in conflict with other female directors. Also, conflict may arise between women family and non-family members through having different loyalties. In such cases, women directors may not have a united voice to create a critical mass that results in collective action needed to influence board performance but remain as tokens.

It is argued in the literature that when a critical mass has been achieved, the minority group (women) will become more assertive in their shared interests and perspectives (Collins *et al.*, 2010), but if this critical mass (i.e. numbers) is composed of women who are in conflict with each other, they may have conflicting and not shared interests. Powell *et al.* (2006, p. 692) argue that it is not the actual number that is important; it is "the nature of the response that the new minority receives from the majority". The literature also points to the fact that the composition of women who create a critical mass is important for the critical mass to be effective (Etzkowitz *et al.*, 2009).

The inconclusiveness of earlier research reported in the literature between the inclusion of women directors and corporate performance (e. g. Adams and Ferreira, 2009; Erhardt *et al.*, 2003; Farag and Mallin, 2017; Farrell and Hersch, 2005; Joecks *et al.*, 2013) may result from the critical mass being measured on the numbers and not on the level of collective action. Some of the earlier research into board gender diversity and firm performance is just based on the presence of women on corporate boards (Huse *et al.*, 2009), while other research is based on either the number or ratio of women directors (Torchia *et al.*, 2011).

However, as gender-diverse boards evolve, the authors argue that women will not just be seen as female directors but will be accepted on equal terms with their male counterparts and have an equal voice; gender will no longer be an issue. As a result, they will become part of a team with diverse views and opinions and critical mass may not be an issue. The most important research question, once gender diversity has been achieved, could be: Is critical mass theory relevant with respect to board gender diversity? The authors argue that if corporate board gender equality is achieved and male and female directors work together for the company's good, then focusing on the critical mass of women will no longer be necessary.

In addition to answering the above-mentioned question, future research should identify if a critical mass (not just numbers) of women on corporate boards has been achieved. It is only then that the linkage, based on critical mass theory, between board gender diversity and corporate performance/profitability can be made. It would also be interesting to know if board sizes are being increased to accommodate the added female directors, or will the new female directors replace existing male directors? Are the new female directors appointed to statutory and/or supervisory boards? Do the new directors have a "close" relationship with existing board members? What is the level of qualifications/experience of these new female directors? Has the introduction of mandatory quotas resulted in conflict within corporate boards? This information could be obtained through a case study approach where new issues may also be uncovered. Finally, once the new board structure has had time to develop, are the companies more efficient/profitable as a result of greater board gender diversity?

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