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# HOW DECISION MAKERS' CAREER HISTORIES IMPACT THE GENDER DIVERSITY OF THE CEO SUCCESSOR CANDIDATE POOL

by

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For the Degree of Doctor of Philosophy in

**Business Administration** 

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#### ABSTRACT

Scholars have explored when/why women are chosen as CEOs, and what factors explain the presence of women in the TMT, but little is known about when/why firms have women executives in their internal CEO successor candidate pool. This omission is consequential, since there are firm performance benefits to having a woman CEO who is an internal hire, and because being a CEO successor candidate helps ensure a woman executive has had skill-building opportunities that will help her thrive when she becomes CEO. To address this, my dissertation explores two research questions. First, when and why do women directors positively impact gender diversity of the CEO successor candidate pool. Second, when and why do men directors positively impact gender diversity of the CEO successor candidate pool. I build an according theoretical model predicting gender diversity of the CEO successor candidate pool, and test this model using data from the Center for Executive Succession (CES), and publicly available information on professional backgrounds of individual board directors. Findings from this dissertation contribute to the trickle-down effect literature, offer insights on which men executives are likely to be allies of gender diversity initiatives, and help scholars build better theory to explain how board directors handle the responsibility of regularly planning for CEO succession in advance.

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#### CHAPTER 1

#### INTRODUCTION

In 2021, the number of Fortune 500 CEOs who were women reached an all-time high; however, they still comprised only 8% of such CEOs (Hinchliffe, 2021). Scholars have explored when and why boards of directors are likely to select a woman CEO (Cook & Glass, 2014; Ryan & Haslam 2007; Ryan, Haslam, Morgenroth, Rink, Stoker, & Peters, 2016; Wang & Kelan, 2013; You, 2021). Scholars have also explored what factors explain the number of women c-suite level executives in the firm (Ali, Grabarski, & Konrad, 2020; Corwin, Loncarich, & Ridge, 2021; Furst & Reeves, 2008): roles which are common precursors to becoming CEO. One consideration which may help explain the underrepresentation of women as CEOs, but which is unexplored, is when/why firms have women in their internal pool of CEO successor candidates.

This omission is consequential for multiple reasons. First, firms which appoint women CEOs benefit more if the women are internal hires: including benefitting with respect to post-succession ROA for the firm (Dwivedi, Joshi, & Misangyi, 2018; Zhang & Qu, 2016), as well as with respect to investor reactions (Lee & James, 2007). Second, while there is research on why some firms have more women in the c-suite (e.g. Ali et al., 2020; Corwin et al., 2021), CEO successor candidates and c-suite executives are distinct from one another. Although the former will typically be comprised of the latter, not all csuite executives are necessarily considered/developed as potential next CEOs (cf. Berns & Klarner, 2017; Friedman, & Olk, 1995). Put differently, having women c-suite executives is a necessary, but not sufficient condition to ensure women are developed as potential next CEOs of firms. Women are over-represented in those types of c-suite roles which are less common pathways to becoming a CEO, and under-represented in the csuite roles that are more conventional routes to becoming a CEO (cf. Desilver, 2018; Green, 2020; Mohan, 2019; Brecheisen, 2019; Weinswig, 2016). There is also evidence some women are promoted to upper echelons positions largely for impression management reasons (Chang, Milkman, Chugh, & Akinola, 2019; Solal & Snellman, 2019). It is therefore not guaranteed that having women c-suite executives within the firm will lead to those women being CEO successor candidates.

Third, gender diversity of the CEO successor candidate pool is advantageous because it gives boards a wider range of options for the next CEO. Successful CEO succession means hiring the individual with the particular skills befitting the needs of the moment when the succession event actually occurs (Berns & Klarner, 2017; Biggs, 2004; Chen, O'Malley, & Park, 2019b). The needs of the moment can change, so having diversity amongst successor candidates means boards have options for an array of possible futures. Women executives have different cognitive frames than men executives, and this may have firm performance benefits (Adams & Funk, 2012; Byron & Post, 2016; Gupta, Mortal, Chakrabarty, Guo, & Turban, 2020a; Post & Byron, 2015; Post, Lokshin, & Boone, 2022). This is consistent with evidence women CEOs may be more risk-averse, more ethically sensitive, less overconfident, and less narcissistic than men CEOs (Ho, Li, Tam, & Zhang 2015; Luo, Huang, Li, & Lin, 2018; Ingersoll, Glass, Cook, & Olsen, 2019; Palvia, Vähämaa, & Vähämaa, 2015; Zalata, Ntim, Aboud, & Gyapong, 2019). A gender diverse successor candidate pool thus means a better array of options for the next CEO.

Finally, being a CEO successor candidate (or not) has consequences for which developmental opportunities executives receive. Those executives in the pool are more likely to be assigned valuable skills-building challenges designed to help prepare an individual for the responsibilities of being CEO (Berns & Klarner, 2017; Charan, 2005; Joshi, Hambrick, & Kang, 2021; Nyberg, Cragun, & Schepker, 2021; Schepker, Nyberg, Ulrich, & Wright, 2018). Thus, a richer understanding of what aids and/or inhibits the inclusion of women in the CEO successor candidate pool helps ensure the women who become CEO have had that preparation that will most enable them to thrive in the role.

The lack of research specifically assessing the gender diversity of internal CEO successor candidate pools is understandable from a practical standpoint. Information on c-suite level executives and appointments of women CEOs can be obtained from publicly available sources; but studying the internal successor candidate pool requires insider access to the firms being studied. In this dissertation, I utilize the unique opportunity to assess this specific issue empirically, leveraging information from the Center for Executive Succession's (CES) annual survey of CHROs of large, private sector firms. I use these survey results together with data I collected on characteristics of individual board directors, to explore two specific research questions. First, I explore when women directors positively impact the gender diversity of the CEO successor candidate pool (and why). Second, I explore when men directors positively impact the number of gender diversity of the CEO successor candidate pool (and why). Focusing on the impact of board directors is appropriate, given the benefits of having the board play an active role

in planning for CEO succession, including to identify/ help develop successor candidates (Berns & Klarner 2017; Biggs, 2004; Citrin & Ogden, 2010; Harrell, 2016; Joshi et al., 2021; Schepker et al., 2018). I focus on these two types of directors (women vs. men) separately, because distinct theories speak to what enables or inhibits each type to make gender diversity of the CEO successor candidate pool a priority.

Women directors likely have a personal preference for ensuring women are being considered as the potential next CEO (Byrne, 1971; Corwin et al., 2021; McPherson, Smith-Lovin, & Cook, 2001). However, women directors also may have difficulty influencing their director colleagues due to gender bias (Chang et al., 2019; Farrell & Hersch, 2005; Field, Souther, & Yore, 2020; Pesonen, Tienari, & Vanahala, 2009; Peterson & Philpot, 2007), and/or may suffer social penalties when they personally work to ensure the CEO successor candidate pool is gender diverse (Branscombe, Ellemers, Spears, & Doosje, 1999; Derks, Van Laar, & Ellemers, 2016; Hekman, Johnson, Foo, & Yang, 2017). In contrast, men directors do not experience social penalties for advocating for gender diversity in the upper echelons (Hekman et al., 2017), but there is evidence of gender bias by men executives against women, in at least some cases (Bilimoria & Piderit, 1994; Chang et al., 2019; Eagly & Karau, 2002; Field et al., 2020; Koenig, Eagly, Mitchell, & Ristikari, 2011; Powell & Butterfield, 1979, 1984, 1989; Schein 1973, 1975, 2001). While this does not imply all men executives are gender biased, more insight is needed on which men are/are not gender biased. The variance of men directors' individual career histories may provide insight on when/why certain men directors are comparatively more likely to be active allies of gender diversity and inclusion. Leveraging relevant extant theory and empirical findings, I develop an ultimate

theoretical model on the relationship between who is on the board, and the gender diversity of the internal CEO successor candidate pool. I empirically test this model, utilizing a sample of private sector firms from 2016-2018.

My dissertation specifically consists of five chapters. After introducing the research subject in Chapter 1, I provide a topic overview of relevant extant literature in Chapter 2. In Chapter 3, I develop the four-hypothesis theoretical model that is ultimately empirically tested. Chapter 4 details both the data collection process and results of analyses that comprise the aforementioned empirical testing. Chapter 4 also provides results with respect to both primary analyses, as well as relevant supplemental analyses. Finally, in Chapter 5, I discuss the important theory-building and practical implications that stem from the totality of results in Chapter 4, and detail how these point to meaningful opportunities for future research. By doing as much, I make three theory-building contributions in this dissertation.

First, I contribute to the literature on the trickle down effect, (Ali et al., 2020; Bilimoria, 2006; Corwin et al., 2021; Delgado-Piña, Rodríguez-Ruiz, Rodríguez-Duarte, & Sastre-Castillo, 2020; Gould, Kulik, & Sardeshmukh, 2018; Matsa & Miller, 2011). This literature indicates women directors will actively work to ensure there are other women in management positions. However, there is evidence this may be a contingent relationship (cf. Corwin et al., 2021; Gould et al., 2018). In this dissertation, I explore how the variance between the individual women directors serving on boards in terms of their professional backgrounds/ career histories, may help predict gender diversity of the internal CEO successor candidate pool. Thus, I assess if/how the trickle down effect may

not only require considerations of how many women are on the board, but also who those individual women directors are in terms of their occupational histories.

Second, scholars know little about when/ why some men executives act as allies of gender diversity and inclusion initiatives (Joshi, Neely, Emrich, Griffiths, & George, 2015; Sawyer & Valerio, 2018; Sherf, Tangirala, & Weber, 2017; Smith & Johnson, 2017). Such an omission is problematic, given the onus to create an inclusive environment rests not with members of minority groups, but with members of the majority group (Hideg, DeCelles, & Tihanyi, 2020; Joshi et al., 2015; Krause & Miller, 2020; Martins, 2020; Melaku, Beeman, Smith, & Johnson, 2020). I leverage both contact theory (Allport, 1954; Dovidio, Love, Schellhaas, & Hewstone, 2017; Pettigrew & Tropp, 2006) and critical mass theory (Joecks, Pull, & Vetter, 2013; Kanter, 1977; Konrad, Kramer, & Erkut, 2008) to explain why men directors who have in past worked with a critical mass of women director colleagues (i.e., 3+) likely prioritize gender diversity of the CEO successor candidate pool. I thus help build theory on how firms might create more men allies of gender diversity, by exploring how working with a critical mass of women director colleagues may have enduring effects on the behavior of a man director.

Finally, I contribute to the literature on CEO succession. While scholars have explored considerations of who becomes CEO and the ensuing consequences, less is known about when, how, and why organizations prepare for the incumbent CEO's eventual departure (Berns & Klarner, 2017; Cragun, Nyberg, & Wright, 2016; Nyberg et al., 2021). CEO succession planning is the board's most important responsibility (Berns & Klarner, 2017; Citrin & Ogden, 2010; Mace, 1971; Schepker et al., 2018). By

exploring how the traits and experiences of the board's directors explain the gender diversity of the CEO successor candidate pool, I help build theory on what is necessary to ensure the board will actually address its most critical responsibility and properly prepare for CEO succession.

#### **CHAPTER 2**

#### TOPIC OVERVIEWS OF RELEVANT EXTANT LITERATURE

The outcome construct of interest in this dissertation is gender diversity of the internal CEO successor candidate pool for a given firm. Exploring such a consideration involves management scholarship on topics of CEO succession, the characteristics/ experiences of women executives, and the process of how firms develop CEO successor candidates. As such, I first give an overview of these relevant streams of research. 2.1. WHAT IS CEO SUCCESSION VS. CEO SUCCESSION PLANNING?

Management scholarship on CEO succession broadly explores questions of why an incumbent CEO steps down from their position, who replaces them, and what consequences follow (Berns & Klarner, 2017; Cragun et al., 2016; Nyberg et al., 2021). Scholarship on CEO succession planning, meanwhile, explores questions of how/why actors within firms prepare for the eventual departure of an incumbent CEO. There is comparatively less literature on CEO succession planning than there is on the CEO succession events and outcomes (Cragun et al., 2016; Nyberg et al., 2021). Revisiting both sets of literature is nevertheless appropriate for this dissertation. Knowing how/why CEO succession occurs, as well as the consequences of it, broadly establishes the practical importance of having an internal CEO succession, offers clues to what might hinder or impede the inclusion of women in the CEO successor candidate pool.

#### 2.1.1. CEO Succession Events and Outcomes

A CEO succession event refers to the act of an incumbent CEO stepping down and being replaced. The decision of who becomes CEO ultimately rests with the board of directors (Berns & Klarner, 2017; Fama, 1980; Fama & Jensen, 1983). Several factors predict the likelihood a CEO succession event will occur. The firm's stock market performance, as well as industry performance, affect the likelihood of a CEO succession event (Jenter & Kanaan, 2015). Poor performance (Parrino, 1997) and scandals (Cao, Maruping, & Takeuchi, 2006; Ertugrul & Krishnan, 2011) increase the likelihood of a CEO succession event. Environmental dynamism is also positively associated with CEO succession events (Friedman & Singh, 1989). Additionally, the structure of the firm itself may be relevant. Public firms, which are most visibly scrutinized, have higher CEO turnover rates than do private firms (Gao, Harford, & Li, 2017).

These various considerations have led scholars to classify CEO succession events into different types. This includes poor performance (Osborn, Jauch, Martin, & Glueck, 1981), scapegoating (Boeker, 1992), strategic shift (Kesner & Dalton, 1985), planned succession [e.g., retirement] (Smith & White, 1987), and unexpected CEO succession events [e.g., untimely death of a CEO] (Worrell & Davidson, 1987). The aforementioned classifications illustrate there are both a) situations where a CEO succession event occurs as originally intended (e.g., planned succession), and b) situations where the CEO's departure constitutes an unexpected development (e.g., poor performance; untimely death). Practically speaking, any firm intending to operate indefinitely will invariably go through CEO succession events, if only because individual CEOs are mortal.

Research on whether a CEO succession event positively impacts firm performance is inconsistent. Some studies have found CEO succession is positively related to firm performance (Giambatista, Rowe, & Riaz, 2005; Tushman & Rosenkopf, 1996). However, there is also evidence of negative investor reactions to unexpected CEO departures (Worrell, Davidson, Chandy, & Garrison, 1986). Other research indicates the relationship between CEO succession events and firm performance may differ for short vs. long-term performance considerations (Schepker, Kim, Patel, Thatcher, & Campion, 2017). Such inconsistent results indicate a likely contingent relationship, helping explain why scholars have also explored the comparative consequences of having specific types of successors take over.

One consistent conclusion in prior literature is that permanent CEO successors will generally be preferable. Firms will often be forced to appoint temporary or interim CEOs, particularly during periods of uncertainty, such as when the previous CEO was forced out unexpectedly (Mooney, Semadeni, & Kesner, 2017). Interim successors are negatively associated with firm performance (Ballinger & Marcel, 2010) and investor reactions (Gangloff, Connelly, & Shook, 2016). While a permanent successor is preferable, there is more debate over the ideal origin of such a successor. CEO successors may come from inside or outside the firm itself. Each type of successor comes with specific pros and cons. Broadly, insiders may know the firm's industry and perhaps the specific firm culture (which is an advantage), but they may also be so embedded in the firm they are unable to bring needed fresh perspectives (Cragun et al., 2016). Outside successors might bring new perspectives, but they are limited in their understanding of the organizational culture (Brady & Helmich, 1984; Friedman & Saul, 1991). An

additional drawback is that outside succession is related to higher senior executive turnover relative to inside succession (Friedman & Saul, 1991; Kesner & Sebora, 1994), which in turn has a negative impact on performance (Shen & Cannella, 2002). A possible interpretation of these findings is that when outside successor CEOs are appointed, it is harder to retain other (needed) talent throughout the organization.

Some scholars have pushed back on whether the insider vs. outsider successor distinction is meaningful. This is because whether or not an individual comes from inside the firm does not necessarily capture the likelihood they bring new perspectives (cf. Cragun et al, 2016; Karaevli, 2007; Pitcher, Chreim, & Kisfalvi, 2000; Shen & Cannella, 2002). While there remains debate over whether having an internal CEO successor is ideal, there are more consistent arguments that having at least some internal CEO successor candidates, is beneficial. CEO successor candidates are those individuals who are not currently the CEO, but are being seriously considered to be appointed the next CEO in the future. The CEO successor, in contrast, is the individual who ultimately does come to replace the incumbent CEO. The difference between a CEO successor candidate and CEO successor is that the latter almost always was the former at some point, but not everyone who is the former ultimately becomes the latter.

If an executive is inside the firm and is identified as a CEO successor candidate, decision makers likely have more detailed information about them. In this respect, considering internal CEO successor candidates has the advantage of reduced information asymmetry (compared to outside successor candidates) (Harris & Helfat, 1997; Tian, Haleblian, & Rajagopalan, 2011). This is consistent with evidence that when a firm appoints an internal CEO successor, there are less likely to be adverse selection problems

(Zhang, 2008). This shows that even if a firm ultimately does decide an external hire is the best choice for CEO at the time of the actual event, it is nevertheless beneficial to at least consider internal CEO successor candidates. The process of identifying CEO successor candidates inside the firm speaks to the topic of CEO succession planning, as opposed to CEO succession broadly.

Although there is broad consensus that firms should have at least some internal CEO successor candidates (Berns & Klarner, 2017; Biggs, 2004; Charan, 2005; Cragun et al., 2016; Joshi et al., 2021; Schepker et al., 2018), how many and which individuals will be candidate(s) (a.k.a. be in the CEO successor candidate pool), is more complex. There is variance in terms of how many individual employees firms identify/develop as potential next CEOs. In some cases, one executive within the firm is heavily favored to take over (i.e. designated at the 'heir apparent') (Vancil, 1987; Zhang & Rajagopalan, 2003). In other cases, multiple internal candidates are set up to compete with one another, which is referred to as the horse-race approach (Friedman & Olk, 1995; Vancil, 1987). Horse races may specifically be used to evaluate candidates' suitability for the role of CEO in advance. However, a drawback is that those internal executives in the horse-race who don't ultimately become CEO, may afterwards be more likely to leave the firm altogether (Biggs, 2004). Heir apparent and horse-race approaches are not mutually exclusive. Moreover, while all horse-race set-ups imply the firm has multiple successor candidates, having multiple successor candidates does not necessarily imply a horse-race.

Independent of whether the multiple candidates are forced to directly compete, there is evidence that considering multiple candidates increases firm performance (Boudreau & Berger, 1985). This is because having multiple candidates helps decision-

makers avoid myopia in strategic choices (Dean & Sharfman, 1996) and allows for direct comparisons of candidates over time (Schepker et al., 2018). However, a necessary assumption here is that there is a continual process of identifying and tracking those multiple CEO successor candidates. This underscores a consistent point of emphasis among succession planning scholars: finding and developing the right next CEO is a continual (and lengthy) process.

#### 2.1.2. The Importance of Planning for CEO Succession Events

It is advisable for firms to regularly plan for the next CEO succession event, and well in advance. This is supported by evidence that firms with comparatively longer heir apparent successions demonstrate better post-succession performance (Tao & Zhao 2019). Firms which fired their CEO without a planned succession forwent an average of \$1.8 billion in shareholder value; however, those firms which developed and implemented careful planning processes did not experience such losses (Berns & Klarner, 2017; Favaro, Karlsson, & Neilson, 2015). Another benefit of regular succession planning relates to emergency succession (De Kluyver, 2009). In instances of CEO turnover following financial wrongdoing, performance effects are more negative the longer it takes the incumbent CEO to resign (Pukthuanthong, Ullah, Walker, & Wu, 2017). Only firms which have done advance succession planning are in a position to replace a CEO who needs to be removed quickly; those that have not planned for succession either have to delay such removal, or employ the suboptimal option of an interim CEO.

The final reason continuous CEO succession planning is important speaks to combined considerations of a) the skills of the candidates themselves, and b)

environmental impermanence. Extant literature demonstrates that effective succession planning is grounded in two basic practices: 1) giving consistent skills-building and developmental assignments to successor candidates (Biggs, 2004; Chen et al., 2019b; Schepker et al., 2017) and 2) maintaining an up-to-date understanding of the role of CEO (Berns & Klarner, 2017; Chen et al., 2019b; Zajac, 1990). These dual considerations speak to a broader principle that an effective CEO succession requires picking the best candidate to be CEO of that firm at that point in time (as well as into the future) (Biggs, 2004; Charan, 2005; Chen et al., 2019b; Zhang & Rajagopalan, 2005).

The requirements of the role of CEO itself evolve over time, as industry changes mean certain leadership skills become more or less important (Berns & Klarner, 2017; Mace, 1971; Zajac, 1990). Regular succession planning therefore serves two purposes. First, board decision makers continually assess the environment to determine what skills are truly required for the role of CEO of that firm, going forward. Only by knowing what the role of CEO currently involves can a board possibly determine if an individual does (already) have all the necessary skills. Second, regular and advance CEO succession planning is necessary for firms to potentially develop promising candidates. Although firms could devote their efforts exclusively to finding the individual who possesses every skill the job of CEO at that firm currently requires, an alternative approach is to find one or more candidates who show a notable amount of promise in some respects, and work to assign them developmental opportunities to improve their present deficiencies. An illustrative example is where the chief marketing officer of a biotech company has impressive abilities in terms of interpersonal, public relations, and leadership skills, but does not currently have an extensive knowledge of pharmacology. This CMO could

accordingly be assigned to a talent rotation program to spend designated amounts of time shadowing personnel who work in the firm's research & development laboratories.

Intentionally chosen developmental activities can help executives cultivate skills relevant to the CEO position (Dragoni, Oh, Vankatwyk, & Tesluk, 2011). However, the benefit of such an approach can only be realized if candidates have the opportunity to grow and improve themselves by actually doing the developmental challenges, which takes time. In this way, continuous and advance CEO succession planning makes it possible to move a c-suite executive from being mostly, to fully prepared to serve as CEO. This explains why scholars have proposed that effectively preparing for CEO succession involves developing a pipeline of viable successor candidates (Cheng, Groysberg, & Healy, 2020; Connelly, Tihanyi, Crook, & Gangloff, 2014; Conyon, Peck, & Sadler, 2001; Harrell, 2016; Joshi et al., 2021; Schepker et al., 2018), and assigning them all individually tailored developmental challenges (Santora, 2004; Dalton & Dalton, 2007; Schepker et al., 2018).

Within this continuous process of CEO succession planning, it is important for firms to ensure it is not just men, but also women internal executives who are being developed as CEO successor candidates. To illustrate why this is so, I revisit broader literature on both the uniquely valuable assets women executives bring to firms, as well as the unique challenges that such women are likely to experience.

#### 2.2. THE UNIQUE VALUE OF WOMEN EXECUTIVES

Given the requirements of the role of CEO change over time (Berns & Klarner, 2017; Mace, 1971; Zajac, 1990), a necessary practical implication is that firms may want to have as diverse a pool of successor candidates as feasible. This is because boards will

be in a better position to pick the right CEO for the moment if a balance of two considerations is struck. On one hand, all the CEO successor candidates should be similar in that they are all comparably qualified and competent. Beyond these aforementioned considerations, having the executives who are in the successor candidate pool be distinct from one another could be an asset. The exact moment when the CEO succession event will occur, and thus the environmental context in which it will occur, cannot be determined with absolute precision in advance. With uncertainty of what the role of CEO will require at the precise moment of the succession event, it may be advantageous to have comparably capable successor candidates nevertheless possess an array of unique skills/traits compared to one another. This ensures the board will always have a viable choice for CEO for an array of possible futures. To this end, it will be helpful to have a gender diverse CEO successor candidate pool.

Extant literature demonstrates gender differences amongst executives. Building on upper echelons theory (Hambrick & Mason, 1984), scholars have argued that women executives will likely have uniquely different cognitive frames from men executive colleagues (Byron & Post, 2016; Gupta et al., 2020a; Post & Byron, 2015; Post et al., 2022) which can benefit the firm. Consistent with this, there is evidence women directors are likely more concerned with broader societal issues than are men directors (Adams & Funk, 2012). Prior research has also shown that having women directors, and/or a woman CFO, are each negatively associated with instances of fraud and SEC violations (Cumming, Leung, & Rui, 2015; Gupta et al., 2020a; Kim, Roden, & Cox, 2013). Women directors are also positively associated with both CSR activities and performance (Boulouta 2013; Bear, Rahman, & Post, 2010; Byron & Post, 2016; Harjoto, Laksmana,

& Lee, 2015; Guerrero-Villegas, Pérez-Calero, Hurtado-González, & Giráldez-Puig, 2018; Post, Rahman, & Rubow, 2011). Women executives may also be more concerned with environmental/sustainability concerns, as women directors are positively associated with both environmental reporting (Rao, Tilt, & Lester, 2012) and greenhouse gas emission related disclosures (Hollindale, Kent, Routledge, & Chapple, 2017).

Women executives may also be more risk-averse in ways that benefit the firm. Having women directors may reduce the firms' stock return volatility (Jizi & Nehme, 2017). Women directors are also negatively associated with tax avoidance, indicating that gender-diverse boards may be more cautious about the reputation risks that come from having aggressive tax strategies (Chen, Gramlich, & Houser, 2019a). There is also metaanalytic evidence that TMT gender-diversity is positively associated with firm performance, and this is mediated by reduced risk-taking (Jeong & Harrison, 2017).

Women directors and women in the TMT are also positively associated with innovation (Dezsö & Ross, 2012; Miller & del Carmen Triana, 2009; Torchia, Calabrò, & Huse, 2011). Women executives may also transform the upper echelons culture to be more collaborative. The presence of women directors on boards may improve the ability of directors to resolve disagreements between director colleagues (Nielsen & Huse, 2010). There is broader evidence that women may be better positioned than men to effectively handle intercultural conflict that occurs in work groups (Chua & Jin, 2020). Women directors are also positively associated with better overall attendance by all directors, men and women alike (Adams & Ferreira, 2009).

The aforementioned findings are also consistent with research on the specific advantages of having a woman CEO. Women CEOs may be more risk-averse than men

CEOs, in ways that ultimately benefit firm performance (Palvia et al., 2015). Women CEOs may be more ethically sensitive (Ho et al., 2015). Moreover, having a woman CEO may help firms access bank loans, because banks view women CEOs as less likely to make unnecessarily risky investment decisions (Luo et al., 2018). This prior finding is also consistent with evidence that having a woman CEO may help a firm avoid the negative consequences of having an excessively narcissistic CEO (Ingersoll et al., 2019).

Collectively, such research shows that women executives may indeed think differently from men executives, and that this could be advantageous. Boards ideally want to ensure the CEO successor candidate pool includes individual executives who think differently from one another, so a viable choice for CEO is available for an array of possible contexts. In this sense, having a gender diverse CEO successor candidate pool can be advantageous for the firm. However, ensuring gender diversity of the CEO successor candidate pool matters for another reason. The likelihood an individual will thrive in the role of CEO is likely informed by if (and for how long) they were included in the CEO successor candidate pool (Chen et al., 2019b; Dragoni et al., 2011).

Effectively preparing for CEO succession requires developing a pipeline of viable successor candidates, specifically because it is important to give such candidates skillsbuilding challenges that address their current deficiencies (Santora, 2004; Dalton & Dalton, 2007; Dragoni et al., 2011; Joshi et al., 2021; Schepker et al., 2018). A consequential consideration for a c-suite level executive to be given those developmental opportunities that will prepare them to handle/thrive as CEO, is that such an individual is in formally part of the CEO successor candidate pool. While being in the pool does not guarantee a candidate will get any and/or the right developmental opportunities, it more

likely occurs if they are actually in the pool. Thus, ensuring women are in the CEO successor candidate pool is not just relevant for the likelihood there will be a woman CEO; it also helps ensure women executives receive the developmental support that will empower them to thrive once they become CEO. Although being a c-suite executive is a typical precursor to being designated a CEO successor candidate, there is reason to doubt if women who have made it as far as the c-suite will be as likely to be considered for inclusion in the CEO successor candidate pool as will their men c-suite colleagues. 2.3. THE UNIQUE CHALLENGES WOMEN EXECUTIVES EXPERIENCE

It is problematic to assume having more women in the c-suite will always translate to more women in the CEO successor candidate pool. First, there are relevant practical realities of how men vs. women are over/under-represented in specific types of c-suite roles (Desilver, 2018). Specifically, women c-suite executives tend to hold positions such as Chief Marketing Officer and Chief Human Resources Officer (Desilver, 2018; Mohan, 2019; Rogish, Sandler, & Shemluck, 2020), but also tend to be underrepresented as Chief Financial Officers and Chief Operating Officers of firms (Gallagher, 2018; Green, 2020; Mohan, 2019). This is relevant to the gender diversity of the CEO successor candidate pool, because being CMO or CHRO represents a far less common pathway to the role of CEO than being CFO or COO of a firm (Brecheisen, 2019; McGregor, 2015; Stadler, 2015; Weinswig, 2016).

Another reason having women in the c-suite may not translate to having women in the CEO successor candidate pool relates to mentoring and developmental opportunities. Scholars have explored how the concept of career capital explains gender disparities in leadership positions. Specifically, women may not be given certain

leadership developmental activities/opportunities because societal signals broadly reinforce a message that women should not be leaders (Fitzsimmons & Callan, 2016). There is separate evidence indicating women executives receive less mentoring from more established executives than do men in comparable positions (McDonald & Westphal, 2013). Women executives, particularly those in man-dominated industries, are especially likely to experience denial of credit for their accomplishments (Heilman, 2012). In this way, those women c-suite executives who perform well may not necessarily be rewarded with those developmental opportunities that serve as steppingstones to the role of CEO.

Finally, there is evidence that a) men give women the less 'difficult' talent development opportunities, but also that those men b) largely believe that sparing women from these arduous challenges is in some ways doing them a favor (King, Botsford, Hebl, Kazema, Dawson, & Perkins, 2012). This form of 'benevolent sexism' is consequential, as it may very well be precisely those talent development opportunities which are unpleasant/difficult which give c-suite women the training needed to thrive in the role of CEO (cf. King et al., 2012).

Thus, to this point, extant literature shows a) why having women in the CEO successor candidate pool benefits the firm's interests, and b) why developmental opportunities may help the women themselves thrive in the role of CEO, should they be chosen. However, the aforementioned literature on trends in hiring for specific types of c-suite roles, as well as literature on gender bias in mentoring/developmental opportunities, also shows that we cannot assume those women in the c-suite will always be included in the CEO successor candidate pool. To predict the ultimate gender diversity of the CEO

successor candidate pool, it is important to revisit what scholars know about how different types of actors in the upper echelons (particularly the individuals on the board of directors vs. the incumbent CEO) impact CEO succession planning, including the quality and quantity of internal successor candidates.

#### 2.4. THE ROLE OF BOARD DIRECTORS IN CEO SUCCESSION PLANNING

Boards of directors have featured prominently in CEO succession research. This is understandable, given two realities. First, it is the board that ultimately determines who becomes CEO (Berns & Klarner, 2017; Fama, 1980; Fama & Jensen, 1983). Second, (and largely as a direct consequence of the prior reality), CEO succession planning is the board's single most important governance responsibility (Berns & Klarner, 2017; Citrin & Ogden, 2010; Mace, 1971; Schepker et al., 2018). Despite these realities, much remains unclear about when, how, and why boards plan in advance for the incumbent CEO to step down (Cragun et al., 2016; Nyberg et al., 2021; Schepker et al., 2018).

Boards may take an active role in planning for CEO succession, but they may nevertheless do so in conjunction with other actors. In some cases, boards hire external consulting agencies who specialize in handling executive selection challenges. The advantage of such an approach is that such third parties can help augment the candidate pool and/or make the board aware of promising candidates that were unknown prior. However, such third parties may also bias the selection process and encourage the boards to pick the most charismatic (and not necessarily the most qualified) candidates (Steuer, Abell, & Wynn, 2015; Zhang & Rajagopalan, 2010).

The relationship between the incumbent CEO and the board in identifying and grooming CEO successor candidates has also been explored. In principle, the CEO could

help boards make better decisions. Boards experience a shortage of information on executives within the firm, given that directors spend little time at the firm (Monks & Minow, 1995) and have limited access to internal candidates (Carter & Lorsch, 2004; Demb & Neubauer, 1992; Fernández-Aráoz, 2015; Lorsch & MacIver, 1989). CEOs could help address this. However, not all CEOs want boards to plan for succession, and some may even perceive such planning activities as a signal the board intends to remove the incumbent CEO at the first available opportunity. This explains evidence some incumbent CEOs actively sabotage the development of internal CEO successor candidates (cf. Berns & Klarner, 2017; Joshi et al., 2021; Sonnenfeld, 1991; Boeker, 1992; Cannella & Shen, 2001; Zhang, 2006). This is also consistent with evidence that CEO power decreases the likelihood of CEO succession (Boeker, 1992).

There are at least three particular ways incumbent CEOs could sabotage the succession planning process. First, incumbent CEOs may filter candidate information because they often control the board's working and meeting agendas (Finkelstein & D'Aveni, 1994). In this sense, incumbent CEOs could simply steer the board to so many other topics, there is no time left for succession planning. Second, incumbent CEOs can influence which executives the board accesses and where such access occurs (Mace, 1971; Schepker et al., 2018). Third, the incumbent CEO can highlight to the board specific candidate strengths and weaknesses (Schepker et al., 2018). In theory, an incumbent CEO bent on sabotaging succession planning could feed board doubts about a candidate who is actually prepared to take over the role of CEO.

While some CEOs see promising CEO successor candidates as a threat, others see such individuals as the only way for them to preserve their legacy. As such, some

incumbent CEOs will go out of their way to help CEO successor candidates self-actualize and be ready to thrive in the role of CEO (Joshi et al., 2021). Collectively, such literature demonstrates the impact incumbent CEOs will have on how the CEO successor candidates are developed, (and indeed, who is a CEO successor candidate), is a complex consideration. Put differently, incumbent CEOs may help or harm the CEO succession planning process.

Ultimately, while third parties or incumbent CEOs may help boards, it is boards who still have the primary responsibility and power to impact the CEO successor candidate pool (Berns & Klarner, 2017; Fama, 1980; Fama & Jensen, 1983; Mace, 1971; Schepker et al., 2018). Although not all boards devote adequate time and attention to the issue of CEO succession planning (Hooijberg & Lane, 2016; Loop, 2016; Schepker et al., 2018), there is evidence that boards which devote time and attention to such considerations can and do impact both the quantity and quality of CEO successor candidates.

Firms particularly benefit when boards treat succession as a sequential process (Berns & Klarner, 2017). The pre-succession phase is where boards consistently and continuously develop the successor candidates (Berns & Klarner, 2017; Zhang & Rajagopalan, 2003). Here, a pool of qualified candidates should be identified, groomed, and regularly assessed to ensure there is a pipeline of potential next leaders of the firm (Bower, 2009; Harris & Helfat, 1997; Lorsch & Khurana, 1999). It is prudent for boards to meet as many successor candidates as possible, track their progress, and regularly monitor/update succession development activities as needed (Bower, 2009; Charan, 2005; Zhang, 2008). Boards may employ a formalized CEO succession plan to ensure

such actions occur (Ocasio, 1999). A formalized CEO succession plan will often include information about the desired strategic direction of the firm, and also about successor candidate characteristics (Miles & Bennett, 2009). In this respect, succession planning is a proactive search process that includes an analysis of the company's present situation, and the availability/abilities of successor candidates (Berns & Klarner, 2017; Lorsch & Khurana, 1999; Miles & Bennett, 2009; Mobbs & Raheja, 2012). The proposed benefits of such formalized plans are consistent with empirical work on the consequences of boards employing a procedurally rational approach to succession planning.

Procedurally rational succession planning activities involve the board collecting relevant information on succession trends and candidate development, then analyzing that information in a systematic manner (Dean & Sharfman, 1996; Schepker et al., 2018). Examples of these activities are when a board consistently reviews training programs for CEO successor candidates, or when a board utilizes formal tools for talent assessment of CEO successor candidates and their progress (Schepker et al., 2018). Procedurally rational succession planning helps with avoiding the 'planning fallacy'. This is where the board underestimates the amount of time and effort needed to effectively prepare for a succession (Kahneman, 1991). Using procedurally rational planning processes also helps ensure board members do not fall victim to their own confirmation biases in decision-making (Hitt & Tyler, 1991; Nickerson, 1998; Rabin & Schrag, 1999). Finally, procedurally rational planning processes should also lead to more decision-making comprehensiveness (Dean & Sharfman, 1996). This is particularly true because procedurally rational succession planning activities reduce the board's reliance on the

CEO for information, since there are formal systems to ensure relevant information is brought to the attention of the board (and regularly) (Schepker et al., 2018).

Firms whose boards conduct procedurally rational succession planning activities are more likely to experience desirable succession outcomes. These include a greater likelihood of naming an internal and permanent successor, better ability to handle emergency succession, and a greater likelihood of having multiple viable successor candidates (Schepker et al., 2018). This demonstrates that when the right directors serve on the board and employ the right practices, this can impact the quality and quantity of CEO successor candidates. It is for this reason my dissertation focuses upon how the characteristics of the individual directors serving on the board predict the gender diversity of the CEO successor candidate pool.

To this end, I revisit relevant theory to explore two distinct, but related research questions. First, when and why do women directors positively impact gender diversity of the CEO successor candidate pool. Second, when and why do men directors positively impact gender diversity of the CEO successor candidate pool. These research questions inform my overall theoretical model, but are nevertheless explored separately. The reason for exploring these two research questions separately is because different theoretical mechanisms explain why a woman director vs. a man director might impact gender diversity in the firm's upper echelons.

Women directors who work to aid other women may have more difficulty influencing unit level actions of the board than do their men director colleagues (Chang et al., 2019; Field et al., 2020; Pesonen et al., 2009). Women directors may also suffer social penalties for such advocacy (Derks et al., 2011, 2016; Hekman et al., 2017).

However, women directors may also be more inclined than men directors to want the next CEO to be a woman (Byrne, 1971; Corwin et al., 2021; McPherson, Smith-Lovin, & Cook, 2001). Men directors, in contrast, will not likely suffer social penalties for advocating women be promoted to management positions (Hekman et al., 2017). However, there is variance in the degree men directors have had the types of past experiences working with women colleagues, such that they are mindful of the value of gender diversity in the upper echelons (Allport, 1954; Kanter, 1977; Konrad et al., 2008; Pettigrew & Tropp, 2006). This indicates that even though women and/or men directors may impact gender diversity in the CEO successor candidate pool, the reasons the former would (or would not) do so are distinct from the reasons the latter would (or would not) do so.

#### CHAPTER 3

## HOW DO BOARD DIRECTORS IMPACT GENDER DIVERSITY OF THE CEO SUCCESOR CANDIDATE POOL?

In this chapter, I revisit relevant management scholarship to develop a theoretical model (depicted in Figure 3.1) of how characteristics of the individuals on a firm's board predict the gender diversity of that firm's CEO successor candidate pool. The formulation of my four-hypothesis model is detailed below.

#### 3.1. THE TRICKLE DOWN EFFECT

The first research question I explore is when women directors positively impact the gender diversity of the internal CEO successor candidate pool (and why). Exploring this consideration is warranted, given realities of a) empirical support for the trickledown effect as well as b) evidence of possible contingencies to this effect not yet fully explained. The trickle down effect refers to the expectation that having more women serve at top levels of a firm will lead to the promotion of women throughout the same firm. On this basis, having more women directors should positively impact the gender diversity of the CEO successor candidate pool. The trickle down effect draws from the homophily principle (McPherson et al., 2001) and similarity-attraction theory (Byrne, 1971), such that women directors work to promote other women to executive positions, due to a preference for interacting with members of one's own group (Cook & Glass, 2015; Duguid, 2011).
Empirical studies show evidence of the trickle down effect. Women directors are associated with a higher likelihood that a woman will be selected as CEO (Cook & Glass, 2014; You, 2021), and positively associated with women in the TMT (Bilimoria, 2006; Delgado-Piña et al., 2020; Matsa & Miller, 2011). Women in the TMT are positively associated with women in middle management (Kurtulus & Tomaskovic-Devey, 2012). Separate evidence indicates women who attain positions of power may think more than similarly powerful men about their moral obligation to help members of their own group (i.e., help other women) (cf. Keeves & Westphal, 2021). Consistent with this, firms with women CEOs, as well as those with more women directors, are positively associated with more equity practices, including promoting junior women (Glass & Cook, 2018). On this basis, I hypothesize a positive relationship between the gender diversity of the board (i.e., women directors) and the gender diversity of the CEO successor candidate pool.

*Hypothesis 1. Women directors are positively associated with the gender diversity of the CEO successor candidate pool.* 

Given the aforementioned literature, empirical evidence to support Hypothesis 1 is not itself novel. I nevertheless submit it is important to put forward a direct effect hypothesis in line with the trickle down effect literature, as this is an appropriate first step to ultimately exploring potential contingencies of such a relationship. Ultimately, a richer understanding of the specific contingencies of the trickle down effect and/or whether the characteristics of individual women directors also lead to trickle down effects, help to build new and meaningful theory. The need for such theory building is illustrated by findings indicating the trickle down effect may be at least somewhat contingent.

The relationship between having a woman CEO and the number of women in the TMT is contingent upon the managerial discretion afforded the CEO (Corwin et al., 2021). There is also evidence the relationship between women directors and women csuite executives may not be a linear, but rather a curvilinear relationship, requiring multiple women directors for effects to be seen (Gould et al., 2018). This is consistent with literature establishing that when boards have fewer than three women directors, those women serving are treated as 'tokens', where their views are discounted by their director colleagues (Joecks et al., 2013; Kanter, 1977; Konrad et al., 2008, Maass, & Clark, 1984; Torchia et al., 2011). Evidence that the trickle down effect may be contingent is also supported by findings on how women leaders impact gender pay inequities. While women managers do work to reduce gender pay gaps, such reductions may only occur for employees at the lowest levels of the organization (Abraham, 2017).

Collectively, such evidence demonstrates a need for improved theoretical explanations for what enhances and/or impedes the trickle down effect. I propose it is valuable to explore not only how many women directors are on a focal board, but also considerations of the specific career histories of those individual women directors on that board. The importance of exploring such considerations is consistent with calls in the broader literature on homophily for researchers to directly consider the interplay between an individual's ascribed characteristics (e.g., their gender) and their achieved characteristics (e.g., career accomplishments) (cf. Ertug, Brennecke, Kovacs, & Zou, 2021).

#### 3.2. THE RELEVANCE OF WOMEN DIRECTORS' CAREER HISTORIES

Extant research demonstrates gender bias in the business world, where people largely associate the qualities of an ideal leader with qualities associated with men (a.k.a. 'think manager, think male') (Heilman, Block, Martell, & Simon, 1989; Koenig et al., 2011; Powell & Butterfield, 1979, 1984, 1989; Rosenwasser & Dean, 1989; Schein 1973, 1975, 2001). The continued presence of this phenomenon, and the ways it inhibits women seeking promotions to leadership roles, have been explored in detail (Eagly & Karau, 2002; Gupta, Mortal, Silveri, Sun, & Turban, 2020b; Kossek, Su, & Wu, 2016; Roth, Purvis, & Bobko, 2012; Treviño, Gomez-Mejia, Balkin, & Mixon, 2015).

However, individual women directors vary in the degree they have prior experience serving as directors. Such individual-level variance may be consequential for predicting gender diversity of the CEO successor candidate pool. There are at least two distinct mechanisms explaining why this could be so, and these mechanisms are not mutually exclusive. First, there is broader evidence that directors who possess both breadth and depth of expertise that stems from serving in top management positions have more influence on board activities than do other types of directors (Lungeanu & Zajac, 2019). There is also evidence the interpersonal dynamics between women directors and men colleagues is different for those women who are established directors than for those women who are new directors (cf. Hillman, Cannella, & Harris, 2002; Zhu, Shen & Hillman, 2014). Thus, even if the principles of homophily mean most/all women directors generally desire to promote/aid more junior women, the degree a woman director can influence change in the firm such that more women are actually promoted, may vary. Women directors who have more prior experience as board directors might be

more able to influence the board as a unit to make gender diversity of the CEO successor candidate pool a priority.

It is also possible women directors may be less reluctant to push board attention to gender diversity issues when they are (personally) more established professionally. Scholars have explored a phenomenon which directly contrasts the trickle down effect, known as the 'queen bee' phenomenon. The queen bee phenomenon refers to a tendency of women in positions of power to distance themselves from other women, agree with gender stereotypes, and/or otherwise resist the promotion of more junior women to leadership roles (Derks, Van Laar, Ellemers, & Raghoe, 2015; Derks et al., 2016; Faniko, Ellemers, & Derks, 2021). A comprehensive review of the queen bee phenomenon is beyond the scope of this dissertation. It is however important to emphasize two key points established by this literature.

First, there is at least some demonstrated evidence of queen bee behavior by women (Derks et al., 2016; Derks, Ellemers, Van Laar, & de Groot, 2011; Ellemers, Van Den Heuvel, De Gilder, Maass, & Bonvini, 2004; Ely, 1994; Gabriel, Butts, Yuan, Rosen, & Sliter, 2018; Hoobler, Wayne, & Lemmon, 2009; Johnson & Mathur-Helm, 2011; Ng & Chiu, 2001; Rindfleish & Sheridan, 2003). Second, queen bee behavior is most often a tactic individual women employ specifically for purposes of personal advancement (Ellemers & Haslam, 2011; Ellemers, Rink, Derks, & Ryan, 2012; Derks et al., 2016). This is consistent with evidence women executives who participate in gender diversity initiatives may experience personal social and professional penalties for doing so, as their actions can be seen as nepotistic (Hekman et al., 2017; Wenneras & Wold, 2001). However, such aforementioned tactics of self-group distancing may become

unnecessary once a woman reaches a certain level of prestige/success within her field. Individual women directors who are more accomplished, such as those who have more prior directorship experience, may therefore have less of a practical impetus to engage in queen bee behavior than do women who are first-time directors.

Collectively, whether because experienced women directors are more able to influence director colleagues and/or because they have less impetus to self-group distance, I expect the trickle down effect to be stronger if the women on a given board have more prior directorship experience. This expectation is consistent with recent evidence individual directors who are members of historically underrepresented demographic groups participate more during board meetings when they have prior experience in top leadership roles (Tuggle, Sirmon., Borgholthaus, Bierman, & Bass, 2021). Such expectations are also consistent with comments of executives themselves. Maggie Wilderotter, the former CEO of Frontier Communications, has publicly discussed this issue, stating that "once you're in a boardroom and you're competent and capable, you build trust and your male counterparts can see that women add value, bring different perspectives and help directors and companies make better decisions. That opens the door for more women....so, I always had one hand out in front of me moving myself forward and reached my other hand back to yank up another woman along with me." (Reals Ellig, & Carter, 2019: 92).

Just as women directors vary in terms of how much experience they have as directors, they also vary with respect to the type of occupational background they have, and thus the type of expertise they bring to their role as director. I propose such variance is also relevant as a potential enhancer of the trickle down effect. Hillman, Cannella, and

Paetzold (2000) categorize directors into three classifications: business experts, support specialists, and community influentials. In this respect, individuals who are experienced top-level managers (i.e., c-suite level or CEO-level) of major, for-profit firms would be considered business experts. I propose women directors who are business expert directors may also a) have more influence in the boardroom and/or b) experience less of an impetus to engage in queen bee behavior, and thus the trickle down effect should be stronger when such women directors serve on a board.

Business expert directors help the board to deal with an array of governance challenges (Hambrick, Misangyi, & Park, 2015; Hillman et al., 2000; Hillman & Dalziel, 2003; Platt & Platt, 2012; Stevenson & Radin, 2009; Westphal, 1999). Business expert directors possess the type of breadth and depth of knowledge, which means they may be, (compared to support specialist/community influential directors), particularly influential in the boardroom (cf. Lungeanu, & Zajac, 2019). This is consistent with evidence firms are especially keen to hire business expert directors. Business expert directors are the most historically common type in boardrooms, and directors who have specifically served as CEOs still represent 36% of all S&P 500 directors (Spencer Stuart, 2020). Moreover, directors who have been CEOs provide legitimacy to the firm, explaining why their appointment is associated with market performance benefits (Certo, 2003; Fahlenbrach, Low, & Stulz, 2010; Fich, 2005). Thus, independent of the degree the women directors of a focal board have prior directorship experience, the women directors-gender diversity of the CEO successor candidate pool relationship should be stronger if one or more of the women directors are specifically business expert directors.

Hypothesis 2a. Women directors' directorship experience moderates the women directors-gender diversity of CEO successor candidate pool relationship, such that the relationship will be more positive when the women directors serving have more prior directorship experience.

Hypothesis 2b. Business expert women directors moderate the women directorsgender diversity of CEO successor candidate pool relationship, such that the relationship will be more positive when one or more of the women directors serving are business expert directors.

# 3.3. MEN EXECUTIVE ALLIES OF GENDER DIVERSITY INITIATIVES

The second research question I explore in this dissertation is when men impact the gender diversity of the CEO successor candidate pool, and why. In practice, understanding contingencies of the aforementioned trickle down effect can help firms create interventions to ensure their CEO successor candidate pool is gender diverse. However, there are multiple reasons why it is also practically important to explore what role men executives can play in ensuring women are included in the firm's CEO successor candidate pool.

First, boards are still mostly comprised of men directors (Spencer Stuart, 2020), and boards necessarily handle interdependent tasks and responsibilities (Hillman & Dalziel, 2003). Realities of who is in the CEO successor candidate pool, and which developmental opportunities they receive, are thus ultimately informed most by the decisions boards make as a unit. Effective development of a gender diverse CEO successor candidate pool will therefore invariably involve multiple men directors working together (and likely with women director colleagues) to ensure women

executives are identified and given the right skill-building opportunties. Thus, there is a need for improved scholarly understanding of when men directors are more/less likely to devote their time and attention toward such considerations (and why).

Second there is evidence when women executives participate in gender diversity initiatives, they may suffer personal social and professional penalties for doing so, as their actions may be seen as nepotistic. (Hekman et al., 2017; Wenneras & Wold, 2001). In this respect, it is problematic to expect women directors to be the only ones working to ensure the CEO successor candidate pool is gender diverse. Men executives, in contrast, not only avoid personal penalties for participating in gender diversity initiatives, but may even be rewarded for such participation (Cuddy, Fiske, & Glick, 2008; Hekman et al., 2017). What remains unclear is why still only some men executives participate in such initiatives (Melaku et al., 2020; Smith & Johnson, 2017).

Third, even where women directors serve on the board and are willing to risk personal sacrifices to aid more junior women, the ability of women directors to have an impact in this respect may still be constrained. Prior research indicates boards often appoint women directors primarily for impression management reasons. This is demonstrated by two phenomena. First, publicly visible companies are more likely than chance alone would predict to have only the bare minimum number of women directors needed to escape accusations of gender bias (Chang et al., 2019). Second, there is a tendency for boards to add new women candidates only to replace outgoing ones, thereby maintaining a status of women directors as being only token members of the board (Farrell & Hersch, 2005; Tinsley, Wade, Main, & O'Reilly, 2017).

Consistent with these realities, there is evidence of gender bias in committee assignment (Bilimoria & Piderit, 1994; Peterson & Philpot, 2007), and choice of board committee chairs (Field et al., 2020). Finally, qualitative evidence from women directors themselves indicates women directors are often expected to abide by those social norms set by men, even if this means repressing their own views (Pesonen et al., 2009). Collectively, such research demonstrates women directors may not always have the influence needed to change firm policy. It is therefore important to also explore when men directors will work to ensure women are in the CEO successor candidate pool. The importance of such work has been expressed directly by executives of major, for-profit firms. Brian C. Cornell, the CEO of Target, has stated he "can't emphasize enough the importance of male advocates when it comes to advancing women. This is not a time for men to step back." (Reals Ellig, & Carter, 2019: 89).

There is some research on which specific men executives will/will not act as allies of gender diversity and inclusion initiatives. Mortality salience (i.e., being reminded of their own inevitable death) may lead men executives to be more likely to promote other men candidates (Hoyt, Simon, & Reid, 2009). Men leaders with liberal political ideology are more likely to promote women candidates (Carnahan & Greenwood, 2018). Religiosity of a man leader, (i.e., the degree his religious beliefs drive his conduct at work) may worsen gender pay inequities, independent of which religion that man leader practices (Sitzmann & Campbell, 2021). Integrity, compassion, and empathy are individual-level predictors of white men's allyship of Afro-Diasporic women in the workplace (Detert & Bruno, 2017; Erskine & Bilimoria, 2019).

The personal characteristics of CEOs, who remain mostly men, inform whether they make public comments on controversial sociopolitical issues. This includes a complex relationship between a CEO's personal political ideology, their narcissism, and the expected reaction of key firm stakeholders (Hambrick & Wowak, 2021). Such insights do provide guidance on when/which men executives will make public statements supporting gender diversity and inclusion; however, whether such public support will also translate into promoting women inside the company (i.e., away from the public eye) is less clear (Erskine & Bilimoria, 2019; Krause & Miller, 2020; Smith & Johnson, 2017). This is consistent with evidence that when firms are publicly scrutinized for gender pay inequities, some respond by actually increasing pay of all women employees, but others take the minimally costly step to only increase pay for the most publicly visible women employees (Anderson, Bjarnadóttir, Dezső, & Ross, 2019).

These findings have practical value as organizations strive to determine when men will likely work to aid gender diversity and/or inclusion initiatives. However, these findings mostly speak to traits in men which are stable/ inherent (e.g., narcissism), or practically difficult to change (e.g., changing a man's political ideology, religion, or ensuring he is never reminded of his own mortality). It is also valuable to develop a broader theoretical explanation for what might help men change to become allies of gender diversity initiatives. This is important because ensuring the men who lead firms are active allies of gender diversity may require replacing those men currently serving as executives, or it may only require those incumbent men have the right transformative experiences to change how they view gender diversity issues. In lieu of broader theory on why a man becomes an ally of gender diversity, scholars are limited in their ability to

advise practitioners. For this reason, I work to build theory on how specific past work experiences of men directors may have spillover effects on how they view/approach gender diversity, and accordingly impact the gender diversity of the CEO successor candidate pool.

I broadly propose a man director's past professional experiences working with women director colleagues impact the likelihood he sees gender diversity of the CEO successor candidate pool as an important issue. This statement is compatible with the tenets of upper echelons theory (Hambrick & Mason, 1984), which establishes that not only the traits, but also the experiences of individual executives, affect how they perceive the firm's current strategic situation, ultimately impacting firm-level outcomes. To determine which men directors have had personal experiences such that they more likely see gender diversity of the CEO successor candidate pool as strategically important, I leverage a) contact theory and b) critical mass theory.

# 3.3.1. Bringing Contact and Critical Mass Theories Together

Contact theory establishes that interpersonal collaboration between majority and minority group members will reduce stereotyping (Allport, 1954; Dovidio et al., 2017; Pettigrew & Tropp 2006). Meta-analytic research indicates that such stereotype reduction effects of interpersonal contact are relatively universal (Pettigrew & Tropp, 2006). Contact theory is further validated by evidence that that those majority group members who have positive contact with minority members display an increased willingness to promote the minority group's interests (Calcagno, 2016; Olsen & Martins, 2016; Reimer et al., 2017; Selvanathan, Techakesari, Tropp, & Barlow, 2018). This research specifically indicates that positive interaction with an individual or group of individuals

from a minority/ marginalized demographic group, may lead an individual who is a member of a privileged/majority demographic group to advocate for the rights of the collective minority group (Calcagno, 2016; Selvanathan et al., 2018). Thus, a man who has positive contact with specific individual women colleagues, may be more concerned with the broader issue of women's rights thereafter, because of this positive contact. Meaningful contact with women director colleagues would therefore make a given man director less likely to stereotype women colleagues going forward, and may also lead him to promote gender diversity within the firm.

There is evidence from corporate governance research specifically in line with contact theory. Out-group director influence on board conduct is more positive when those directors share board memberships with in-group directors (Westphal & Milton 2000). Boards whose members have in past received information from diverse inputs tend to be more receptive to transfer of knowledge across interlocks (Shropshire, 2010). In addition, when younger directors (who are more likely to have had exposure to women leaders in a business context) serve on the nominating committee, boards are more likely to nominate women director candidates (Guldiken, Mallon, Fainshmidt, Judge, & Clark, 2019).

The tenets of contact theory are also consistent with management scholarship on expectancy violations theory. Expectancy violations theory assumes there is prevalent gender bias where women are seen as lacking the 'masculine' abilities (e.g., assertiveness) needed for leadership. However, when a woman demonstrates her ability to engage in masculine behaviors that are deemed admirable, this can and does change the way she is viewed (Anderson, Lievens, van Dam, & Born, 2006; Bettencourt, Dorr,

Charlton, & Hume, 2001; Jussim, Coleman, & Lerch, 1987; Prentice & Carranza, 2003; Schaumberg & Flynn, 2017). Similarly, lab studies show that exposure to images of a counter-stereotypical woman, specifically one who is in a domain dominated by men (e.g., woman engineer), reduces the degree men stereotype the capabilities of women (Leicht, de Moura, & Crisp, 2014). In this sense, even if there is a baseline reality of men having gender bias against women colleagues, such research demonstrates that these views can theoretically be changed.

There are again firsthand accounts by executives that contact with women colleagues may lead men to be more aware of the importance of gender diversity and inclusion issues, and to act as allies. Rick Goings, the former CEO of Tupperware Brands, has said: "in my late 30s, I found out what talent was there and so much of it was women; I made a decision that I was going to put those kind of glasses on in the future. I worked with these talented women, but I could see that they had limited opportunities...that was something I wanted to change [when I became a CEO]" (Reals Ellig, & Carter, 2019: 58).

That said, the stereotype reduction effects proposed by contact theory assume men directors who had prior women colleagues actually had meaningful contact with those women. Yet research on the phenomenon of tokenism demonstrates that members of minority groups are discounted when their relative presence in a group is modest, i.e., they are 'token' members (Kanter, 1977). Token members are frequently ignored (Maass & Clark, 1984; Nemeth & Wachtler, 1983), and working exclusively with token women colleagues could even reinforce gender stereotyping (cf. Acker, 1990, 1992; Kanter, 1977). Should the presence of minority individuals reach a 'critical mass,' dynamics

change as those individuals become more involved in the activities of the group (Joecks et al., 2013; Kanter, 1977; Konrad et al., 2008; Torchia et al., 2011). Qualitative evidence indicates that once there are three women on a given board, men directors do change their behaviors such that they are more likely to embrace collaborative work practices and seek more diverse opinions during discussions (Konrad et al., 2008).

This is consistent with research showing that mostly/all-men TMTs are unlikely to embrace collaborative work practices, and that this likely changes when 25% or more of the TMT are women members (cf. Tang, Nadkarni, Wei, & Zhang, 2021). Women directors themselves report that when there are at least three women in the boardroom, it is easier for women to be heard by their men colleagues (Elstad & Ladegard, 2012; Konrad et al., 2008).

Firsthand accounts from practitioners again support the specific phenomenon of a critical mass. Ilene Gordon, the former CEO of Ingredion Incorporated, has stated that "when you get your first female board member it's important, but when you add the second and third you really add a lot of value." (Reals Ellig, & Carter, 2019: 68). This is consistent with empirical evidence the performance benefits of having women on a board may be stronger once a critical mass of women directors is reached (Isidro & Sobral, 2015; Joecks et al., 2013; Strydom, Au Yong, & Rankin, 2017). Collectively, such literature shows that on boards with three or more women directors, men and women director colleagues will actually have frequent contact/collaborate with one another. This indicates that a man who has worked on a board that had three or more women directors will likely have had meaningful contact with his director colleagues who are women.

I hereafter refer to men directors who have in past served on a board that had three or more women directors as men directors with critical mass contact history. Prior literature establishes that serving on a board with a critical mass of women directors likely changes the way a man treats the women on that board (Konrad et al., 2008). However, I propose serving on a board with a critical mass of women directors may also broadly change the way a man director approaches gender diversity issues going forward.

When there is a critical mass of women directors on a board, men and women director colleagues converse more, and to a greater degree of depth, with one another (Konrad et al., 2008). Consistent with this, gender diversity of the TMT is positively associated with team psychological safety (Tang et al., 2021), such that members of the TMT feel more comfortable discussing controversial issues and/or constructively challenging one another in group discussions (Edmondson, 1999; Edmondson & Lei, 2014). Qualitative evidence also specifically indicates increased team psychological safety in the TMT likely requires more than 25% of the members to be women (Tang et al., 2021). Having deeper conversations with three or more of his women director colleagues may open a man's eyes to the unfair obstacles women c-suite executives face that he did not beforehand appreciate. Such conversations with women might also change a man director's psychological standing such that he prioritizes the issue of gender diversity of the CEO successor candidate pool in future board appointments (cf. Drury & Kaiser, 2014; Sherf et al., 2017). Additionally, both men and women directors themselves report that a board with a critical mass of women directors is a more collaborative and productive unit (Konrad et al., 2008). For all these reasons, men directors who have experience serving on a board which had a critical mass of women directors may be

particularly likely advocates for better gender diversity and inclusion practices at any/all firms on which they serve as a board director. In this way, the CEO successor candidate pool of a given firm may be more gender diverse, if more of the men directors have at some point worked with a 'critical mass' of women director colleagues (i.e. they have 'critical mass contact history').

Contact theory could be leveraged to argue that men directors who have worked on the board of a firm which had a woman CEO may accordingly be less likely to stereotype women colleagues due to frequent interactions with the woman CEO. However, extant literature calls this expectation into question. First, literature on the glass cliff phenomenon (Cook & Glass, 2014; Ryan et al., 2016; Ryan & Haslam 2007), which refers to the tendency of poorly performing firms to hire women CEOs, is relevant. Firms which are struggling may be more likely to pick women CEOs because women are seen as better able to make the necessary radical changes to improve a dire situation; alternatively, women may be chosen as CEOs so that if the firm continues to struggle, they take the blame (i.e., scapegoating explanation) (Ryan et al., 2016). There is evidence indicating the latter drives the choice to pick a woman CEO (Ryan, Haslam, Hersby, & Bongiorno, 2011).

In addition, the manner in which men directors interact with women CEOs may itself be informed by gender stereotypes (Oliver, Krause, Busenbark, & Kalm, 2018). Finally, there is evidence gender bias may inform how boards (still predominately made up of men directors) evaluate sitting CEOs. While men CEOs are less likely to be dismissed when firm performance is strong, women CEOs face a similar level of dismissal likelihood regardless of firm performance (Gupta et al., 2020b). Collectively,

these findings indicate a man who has served as director of a firm which had a woman CEO, is not necessarily less gender biased because of this experience. In contrast, working specifically with a critical mass of women directors does cause a man director to listen more (and more seriously) to women colleagues (Kanter, 1977; Konrad et al., 2008), which may in turn lead him to prioritize gender diversity and inclusion considerations more thereafter, even at other firms at which he serves as a director.

*Hypothesis 3. Critical mass contact history is positively associated with the gender diversity of the CEO successor candidate pool.* 

3.3.2. Do Men Allies Indirectly Impact the Trickle Down Effect?

There may also be an interaction effect between women directors and men directors with critical mass contact history, impacting gender diversity of the CEO successor candidate pool. Queen bee behavior, whereby women executives distance themselves from other women, occurs due to women executives experiencing categorization threat, i.e., they are at risk of being negatively stereotyped on the basis of their gender (Derks et al., 2016). Such queen bee behaviors should be reduced when women executives are at less risk of gender discrimination/stereotyping (Derks et al., 2016). Contact theory and critical mass theory indicate that men directors with critical mass contact history are less likely to see women colleagues through a lens of stereotype. Thus, independent of the degree men directors with critical mass contact history personally work to ensure there are women CEO successor candidates, women directors who work alongside such men colleagues should experience less categorization threat. Where this occurs, women directors have less need to engage in queen bee behavior, and the expected trickle down effect could be less obstructed.

The expectation that the presence of certain types of men director colleagues (i.e., men directors with critical mass contact history) could change the (queen bee) behavior of women directors is in line with the broader literature on voice in work groups. There is evidence indicating one reason women leaders may speak less is due to a fear of being judged negatively by (mostly men) colleagues (Brescoll, 2011; Morrison & Milliken, 2000). This is consistent with a broader proposition in the voice literature: the decision to voice one's views represents an expectancy calculus of the anticipated success, as well as relative costs/benefits, of doing so (Ashford, Rothbard, Piderit, & Dutton, 1998; Detert & Burris, 2007; Milliken, Morrison, & Hewlin, 2003; Morrison, 2011; Tangirala & Ramanijam, 2008). Whether a woman director expresses her concern over lack of gender diversity of the CEO successor candidate pool may thus be informed by how she believes her men director colleagues would react.

Prior literature establishes individuals voice their views more when their work group is more receptive to colleagues sharing divergent/alternative viewpoints (Morrison, Wheeler-Smith, & Kamdar, 2011). Qualitative evidence indicates men directors encourage discussions on contrary/alternative viewpoints more once there is a critical mass of women directors (Konrad et al., 2008). It is therefore plausible that the men directors who have critical mass contact history generally will encourage a boardroom climate of respectful, open discussion going forward. If these men do as much, this may change outcomes related to not only what is discussed, but how much women directors expressly advocate for promoting other women. This possibility is supported by evidence indicating when board chairs encourage an atmosphere of openness between director colleagues, women directors have more influence on board decision-making (Kanadli,

Torchia, & Gabaldon, 2018). For these reasons, I hypothesize an interaction effect between women directors and men directors with critical mass contact history, ultimately impacting the gender diversity of the firm's CEO successor candidate pool.

Hypothesis 4. Critical mass contact history moderates the women directorsgender diversity of CEO successor candidate pool relationship, such that the relationship will be more positive when there are more men directors serving who have critical mass contact history.



Figure 3.1 Board Directors' Impact Upon Gender Diversity of CEO Successor Candidate Pool

# CHAPTER 4

# AN EMPIRICAL TEST OF BOARD DIRECTORS' IMPACT UPON CEO SUCCESSOR CANDIDATE GENDER DIVERSITY

In this chapter, I provide an empirical test of the theoretical model detailed in Chapter 3. I specifically detail three components of such an empirical test. First, I discuss both how the sample was collected, as well as which variables were used in my (primary) analyses. I then discuss the results of my primary analyses in detail. Finally, I discuss several supplemental analyses conducted, detailing those conducted for robustness purposes, as well as those which addressed alternative considerations relevant to the research topic.

## 4.1. METHODS

#### 4.1.1. Sample

The starting point for the sample used was the survey distributed to CHROs by the Center for Executive Succession. From 2016-2018, this survey asked CHROs about the degree that there is gender diversity in the internal CEO successor candidate pool. Extant research establishes CHROs spend notable amounts of time meeting with incumbent CEOs, as well as meeting with boards of directors, and have firsthand knowledge of how CEO succession planning is proceeding (Schepker et al., 2018). Thus, CHROs are a credible source to assess the degree there is gender diversity in the firm's CEO successor candidate pool.

I integrated the information from CES with data I collected on a) who was on the board of that same firm, b) who the c-suite executives in the firm were, and c) relevant firm-level considerations. Such information was obtained through Compustat, Execucomp, firm proxy statements, and the GMI Ratings database. I describe in detail below which sources were used to obtain scores for which variables. The ultimate sample tested had 336 firm-year observations. A total of 196 firms were represented in this sample. 79% (155 of 196) of the firms represented in the sample were Russell 1000 or comparably sized privately held firms. 98% (191 of 196) of the firms represented in the sample were US-based firms.

#### 4.1.2. Measures

Dependent Variables. For empirical hypotheses testing, I used two distinct dependent variables. The first was gender diversity of CEO successor candidate pool (immediate); the second was gender diversity of CEO successor candidate pool (longterm). The former was obtained from a survey question where CHROs indicated what percentage of their firm's internal CEO succession candidate pool was considered diverse ('percent female'), specifically for 'immediate successors (0-3 years).' The latter was obtained from a similar survey question where CHROs indicated what percentage of their firm's internal CEO succession candidate pool was considered from a similar survey question where CHROs indicated what percentage of their firm's internal CEO succession candidate pool was considered diverse ('percent female'), specifically for 'longer term successors (3-5 years).'

I explore each of these considerations separately, rather than averaging scores between these measures, because this generates insight relevant to scholars of CEO succession, as well as to scholars of gender diversity in the upper echelons. As mentioned earlier, there are multiple forms of CEO succession events, including what is known as a

planned succession [e.g., retirement] (Smith & White, 1987), or in contrast, an unexpected CEO succession event [e.g., untimely death of a CEO] (Worrell & Davidson, 1987). Though CEO succession is inevitable for any firm seeking to operate indefinitely, whether the next CEO succession event will be planned or unexpected, is not entirely in the control of actors within the firm. This is true if only because extreme 'emergency' succession events, such as untimely deaths, cannot be definitively prevented (even if reduced likelihood is possible). Boards do not necessarily always appreciate these realities and develop feasible plans to handle both emergency and planned successions (cf. Hooijberg & Lane, 2016; Loop, 2016; Schepker et al., 2018). However, whether or not a board is planning for emergency situations as they should, each type of CEO successor candidate pool matters to ensuring the firm has a viable leader ready to take over, whatever future events unfold. Having gender diversity in each pool is therefore ideal from a strategic standpoint. For these collective reasons, I deemed it valuable to comparatively test my theoretical model upon both distinct types of CEO successor candidate pools (i.e. immediate vs. long-term).

*Predictor Variables*. To determine the number of women directors, I utilized the GMI Ratings database. The ultimate measure used to operationalize this construct in the primary analyses is a tally measure. In my supplemental analyses, I discuss consistency of results when instead utilizing the Blau index to operationalize the construct.

I leveraged the GMI Ratings database to create a variable for women directors' directorship experience. GMI Ratings lists the number of total directorships (private sector firms, public or privately held) for each individual in a given year. On this basis, I computed the total number of directorships a given woman director had in the five years

before the observation. Legal requirements mandate publicly traded companies report prior directorship histories of their board's directors, in order to ensure financial transparency and thwart fraud (cf. Federal Deposit Insurance Corporation, 2017; History.com Editors, 2019). Firms must specifically report details on all five years of a director's previous board appointments, as this is the stated time period which speaks to both direct and indirect financial interests a director may currently possess, potentially influencing their governance behavior (Cornell Law School Legal Information Institute, 2022). In this sense, using five years of personal history not only has the practical advantage of ensuring availability of information for directors within my sample, but is also a duration of time that is objectively validated as relevant to informing the current behavior of an individual board director.

Using the aforementioned information from GMI Ratings, I was able to determine how many board assignments a given woman director (withing my sample) had during each of the five years before the observations. Each individual woman was given a score for board-years of experience, meaning a woman could gain multiple 'years' of experience in a single calendar year, if she served on multiple boards. For example, a woman who served on two separate boards during each of the years of the five-year period prior to the observation, would receive a score of '10'. In contrast, a woman who served on only a single board, but did so during each of the years of the five-year period prior to the observation, would receive a score of '5'. I acknowledge such a measure nevertheless has a practical scoring restriction, in that no woman can have more boardyears of experience than the number of boards on which she served, multiplied by five. I nevertheless submit this measure helps capture the degree the woman director in question

has accrued experience performing the job of director, as it considers both the importance of a) how many boards upon which a woman has served, as well as b) how much experience she has had working at each firm. While the first step in this process was to create individual scores for each woman director's directorship experience, I created an average score for the prior directorship experience of the women directors on the focal board (in the observation year), which was ultimately used for hypotheses testing.

To create a variable for business expert women directors, I used firm proxy statement director biographies. A women director in my sample was coded as a 'business expert,' if she had prior experience working as the CEO and/or c-suite level executive of a major private sector firm. This is consistent with the classification put forward by Hillman et al. (2000) and has been validated as an empirical approach by extant studies (e.g., Hillman et al., 2002). In my primary analyses, I use a dichotomous score for the board, given range restrictions. Specifically, I tested the effect of whether there is at least one business expert woman director serving on a focal board. This is appropriate, given interaction effects are hypothesized, and a board with only one woman cannot possibly have two business expert women directors. However, I acknowledge such dichotomization may eliminate meaningful variance. In my supplemental analyses, I therefore discuss additional tests conducted where I operationalized business expert women directors in alternative ways.

I used the GMI Ratings database to identify the current men directors for a focal firm, in a given year. I then used the backlog of information from the full GMI Ratings database for the five years prior to the focal year. A period of five years was again chosen given aforementioned legal mandates' reasoning firms must report director career

histories for such a specific duration of time (Cornell Law School Legal Information Institute, 2022; Federal Deposit Insurance Corporation, 2017; History.com Editors, 2019). Such totality of information in GMI Ratings allowed me to determine, using the best publicly available information, all the boards on which a given man director has served in the five years prior. GMI Ratings also provides information on the exact number of women directors serving on the board of a given company in a given year. Integrating this information allowed me to effectively determine, for each man director represented in my sample, whether that man has/has not served on a board which had three or more women directors (i.e., a critical mass) at least once in the prior five years. A man director was considered to have critical mass contact history if he previously served on any board which had a critical mass of women directors in this timeframe, whether this was the focal board (but in a year prior to the firm-year observation), or an outside board.

On this basis, I then created a tally measure for the number of men directors with critical mass contact history for each firm-year observation in the sample. In my primary analyses, to appropriately address potential multicollinearity issues, I used an orthogonalized version of this variable. This was done because the raw score for critical mass contact history had a high correlation with women directors (r = 0.51). Specifically, I regressed the variable of critical mass contact history on the predictor variable of women directors, and used the residuals as the measure of critical mass contact history. I discuss consistency of results when instead using the non-orthogonalized measure of critical mass. In the same

section, I also address the results of tests using alternative measures of critical mass contact history.

To enhance potential causal inference of results, the four aforementioned predictor variables were all coded based on information on directorship appointments in the year immediately preceding the observation. For example, if the outcome variable for a given firm-year was obtained from the CES survey in 2016, the four aforementioned predictor variables were all based on board assignments of that firm during 2015. Finally, for privately held firms which were not listed in the aforementioned databases, I leveraged firm proxy and/or annual report statements to manually obtain scores for the aforementioned variables (as well as relevant covariates described below).

*Covariates*. I used Compustat to obtain firm-level covariates for firm size (log of firm assets), return on assets (ROA), capital expenditures, and dummy coding to control for industry. I classified firms into six categories, based on standard industrial classifications (SIC) used by Schepker et al. (2018): (agricultural, fishing, mining, and construction [SIC < 20]; manufacturing [ $20 \le$  SIC < 40]; transportation, communication, and utility [ $40 \le$  SIC < 50]; wholesale and retail [ $50 \le$  SIC < 60]; finance, insurance, and real estate [ $60 \le$  SIC < 70]; and services [SIC  $\ge$  70]).

My dissertation focuses on how board directors, specifically, impact gender diversity of the CEO successor candidate pool. However, both incumbent CEOs and board directors can play a role in succession planning (cf. Joshi et al. 2021; Schepker et al., 2018). Since the goal of my empirical analyses is isolating the effects of directors upon succession planning, I included several covariates to address how the incumbent CEO might affect succession policies within the firm. I used dummy coding for

incumbent CEO gender. In addition, and in accordance with Finkelstein's (1992) recommendations to capture CEO power, I leveraged Execucomp to include a covariate for CEO pay power (i.e., total CEO pay / total pay of other executives listed in Execucomp), GMI Ratings to dummy-code for duality (i.e., where the CEO is chair of the board), and used Execucomp to create a covariate for CEO tenure. Attempting to control for CEO power is important, as incumbent CEOs can not only aid, but also impede the development of CEO successor candidates if they feel this increases the likelihood they will be removed from the job (cf. Joshi et al., 2021; Sonnenfeld, 1991). I also leveraged GMI Ratings database to control for CEO age, as firms with younger CEOs may attend less to successor candidate development.

Using the GMI Ratings database, I created additional corporate governancerelated covariates for directors (total) on the board, board meetings, and inside directors (number of directors who are not independent). I also used the GMI Ratings database to create covariates for women directors' age (as an average), women director's tenure (as an average), and critical mass contact history men's tenure (as an average). Given evidence that present outside directorships may impede directors from effectively having the time/energy to perform their governance duties (Hambrick et al., 2015; Khanna, Jones, & Boivie, 2014), I included a covariate for critical mass contact history men's appointments (i.e., current appointments) (as an average). This information was also obtained from the GMI Ratings database.

I created variables for women directors' appointments (i.e., current appointments) (as an average), and for critical mass contact history men's age (as an average). While I originally intended to include these as covariates, this was not appropriate given

collinearity issues. Assessing the model with these two covariates included yielded VIF scores above the threshold of 5.00, which indicates problematic levels of collinearity (James, Witten, Hastie, & Tibshirani, 2013). Omitting these two covariates ensured my tested model had acceptable VIF scores. Specifically, the highest score was 2.08 (for firm size): well below the threshold of 5.00.

I also included covariates that spoke to qualities of the current c-suite executives at the focal firm, since these are the individuals most likely to be identified as internal CEO successor candidates. I utilized Execucomp and included a covariate for SD of pay of executives (i.e. pay for those executives who were listed in Execucomp, but were not the incumbent CEO). Greater disparity of such pay means some members of the c-suite are more financially incentivized to pursue the job of CEO (at that firm) than are others. I also used Execucomp to create covariates for the number of c-suite executives, and the number of women c-suite executives. Regarding the latter covariate, I replicated the primary analyses (i.e. Tables 4.2 and 4.3) in this dissertation, instead replacing women csuite executives with the percent of c-suite executives who are women. Results were consistent with those reported in Tables 4.2 and 4.3, respectively. Finally, I accounted for unobserved heterogeneity associated with time by using year fixed effects.

# 4.2. RESULTS: PRIMARY ANALYSES

97 of the 196 firms represented in my sample had multiple firm-year observations. Thus, there is potential for non-independence, whereby the higher-level entity of 'firm', influences the scores for the lower-level variables of the 'firm-year' observations. Not accounting for this issue would bias results (Bliese, 2000). I therefore used OLS regression, but employed clustered robust standard errors at the firm level to

address non-independence. All regression analyses results reported contain standardized coefficients for non-dichotomous variables to ease interpretation.

Descriptive statistics, including means and standard deviations, are shown in Table 4.1. Consistent with the broader propositions informing my hypotheses, the four predictor variables of theoretical interest (i.e. women directors; women directors' directorship experience; business expert women directors; critical mass contact history) are positively correlated with both gender diversity of CEO successor candidate pool (immediate), as well as gender diversity of CEO successor candidate pool (long-term). To better understand data regarding how director characteristics may impact the firm's internal CEO successor candidate pool(s), I also examined the distribution of the four aforementioned predictor variables.

Only 4% (14 of 336) of observations were boards comprised entirely of men. 20% (67 of 336) of firm-year observations had boards with only one woman director, 36% (120 of 336) had boards with two women directors, and 40% (135 of 1,110) had boards with three or more women directors. The highest number of women directors on a board was six, which occurred for only one observation. For 32% (109 of 336) of observations, the women directors serving had an average directorship experience score of under 5.00. For 49% of observations (165 of 336), the women directors serving had an average directorship experience score of under 5.00. For 49% of observations (165 of 336), the women directors serving had an average directorship experience score of observations, the women directors serving had an average directorship experience score of 0.00 or higher. The highest reported women directors' directorship experience score was 22.00, which occurred for only one observation.

Business expert women directors was a binary variable in the primary analyses, where a firm-year observation received a score of '1' if any woman director serving was a business expert. 23% (78 of 336) of observations had no business expert women directors serving, while 77% (258 of 336) of observations had at least one business expert woman director. 26% (87 of 336) of firm-year observations had no men directors with critical mass contact history, while 19% (63 of 336) of observations had only a single such man director serving. 31% (104 of 336) of firm-year observations had between two and four men directors with critical mass contact history, while 24% (82 of 336) of observations had five or more such men directors. The highest reported score for men directors with critical mass contact history was 10, which occurred for three observations.

Table 4.2 shows the results of my regression analyses, with the specific outcome variable of gender diversity of the CEO successor candidate pool (immediate). Model 1 contains covariates only and shows that women directors' tenure, c-suite executives, and women c-suite executives are directly related to the outcome variable. Model 2 incorporates direct effects for the four predictor variables of theoretical interest, while Model 3 tests the proposed moderating effects described in Hypotheses 2a, 2b, and 4, respectively.

Hypothesis 1 posits a positive relationship between women directors and gender diversity of CEO successor candidate pool (immediate). However, the results do not provide support for this hypothesis ( $\beta = 2.23, p > .10$ ). Hypothesis 2a posits the relationship between women directors and gender diversity of CEO successor candidate pool (immediate), is contingent upon women directors' directorship experience. Hypothesis 2b posits that the relationship between women directors and gender diversity

of CEO successor candidate pool (immediate) is contingent upon whether there are business expert women directors. The results in Model 3 do not support either of these proposed interaction effects ( $\beta = 0.06, p > .10; \beta = -0.44, p > .10$ ).

Hypothesis 3 posits a positive relationship between men directors with critical mass contact history and gender diversity of CEO successor candidate pool (immediate). The results in Model 2 indicate a direct effect relationship ( $\beta = 4.29, p < .01$ ) supporting this Hypothesis. Hypothesis 4 posits the relationship between women directors and gender diversity of CEO successor candidate pool (immediate), is contingent upon critical mass contact history. The results in Model 3, however, do not indicate such an interaction effect ( $\beta = -0.64, p > .10$ ).

Table 4.3 shows the results of my regression analyses, with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). Model 1 contains covariates only and shows that women directors' tenure and women c-suite executives are directly related to the outcome variable. Model 2 incorporates direct effects for the four predictor variables of theoretical interest, while Model 3 tests the proposed moderating effects described in Hypotheses 2a, 2b, and 4, respectively.

Hypothesis 1 posits a positive relationship between women directors and gender diversity of CEO successor candidate pool (long-term). The results in Model 2 provide support for this hypothesis ( $\beta = 5.82, p < .01$ ), such that having a higher number of women serve as directors on the board of a given firm, is associated with that firm having a more gender diverse CEO successor candidate pool (long-term). Hypothesis 2a posits the relationship between women directors and gender diversity of CEO successor candidate pool (long-term).

Hypothesis 2b posits the relationship between women directors and gender diversity of CEO successor candidate pool (long-term) is contingent upon whether there are business expert women directors. The results in Model 3 do not support either of these proposed interaction effects ( $\beta = -0.39$ , p > .10;  $\beta = 0.22$ , p > .10). However, Model 2 does indicate, controlling for the degree there are women directors on the board, there is a direct effect relationship between women directors' average amount of prior directorship experience and gender diversity of the firm's CEO successor candidate pool (long-term) ( $\beta = 3.17$ , p < .05).

While this does not directly support the specific wording of Hypothesis 2a, it is consistent with the logic informing Hypothesis 2a, that there may ultimately be more gender diversity of a firm's CEO successor candidate pool (in this case, the long-term pool), if the women who serve as board directors have high amounts of prior directorship experience. I also tested the direct effect of this specific predictor variable of women directors' directorship experience upon gender diversity of CEO successor candidate pool (long-term), omitting the other three predictor variables of theoretical interest (i.e. women directors; business expert women directors; critical mass contact history). The results of such a test also indicated a significant positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term).

Hypothesis 3 posits a positive relationship between men directors with critical mass contact history and gender diversity of CEO successor candidate pool (long-term). The results in Model 2 do not indicate such a direct effect relationship ( $\beta = 2.10, p < .10$ ) which can be said to be statistically significant (though it could be classified as

'marginally' significant). It is therefore not appropriate to say that Table 4.3, Model 2 provides support for Hypothesis 3. Hypothesis 4 posits the relationship between women directors and gender diversity of CEO successor candidate pool (long-term), is contingent upon critical mass contact history. The results in Model 3, however, do not indicate such an interaction effect ( $\beta = -0.29$ , p > .10).

#### 4.3. RESULTS: SUPPLEMENTAL ANALYSES

#### 4.3.1. Streamlined Models

I conducted several supplemental regression analyses to assess the robustness of the findings in my primary analyses, as well as to explore important alternative explanation considerations. First, in Tables 4.4 and 4.5, I address the possibility that my initial findings may have been largely driven by covariates included, rather than the predictor variables of theoretical interest. To address this, I followed best practice recommendations (Becker, 2005; Carlson & Wu, 2012) and re-ran my primary analyses using a 'streamlined' model with minimal covariates. Specifically, I included only covariates which indicated statistical (or marginal) significance in the primary analyses, dummy coded variables, as well as the covariate of total directors. While total directors did not show even marginal significance in the primary analyses, it was still important to include, given several of the predictor variables of theoretical interest were tallies. Not accounting for board size is thus inappropriate, since the feasibility for a specific number of women directors or men directors with critical mass contact history to influence boardlevel conduct, is at least somewhat dependent on the number of colleagues they have.

Table 4.4 shows the results of these streamlined model regression analyses, with the specific outcome variable of gender diversity of CEO successor candidate pool

(immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 1.95$ , p > .10). Model 3 does not show interaction effects to support Hypotheses 2a-2b ( $\beta = 0.16$ , p > .10;  $\beta = 0.01$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. However, there is once again support for Hypothesis 3 in Table 4.4, Model 2, such that there is a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 3.95$ , p < .01). This supports that the findings of the primary analyses in support of Hypothesis 3 are not likely driven by including superfluous covariates. As with the primary analyses, Table 4.4, Model 3 does not indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.69$ , p > .10). Taken together, this indicates the results of the streamlined model in Table 4.4 are consistent with the results in Table 4.2.

Table 4.5 shows the results of these streamlined model regression analyses with the specific outcome variable of gender diversity of CEO successor candidate pool (longterm). As with the primary analyses, the results in Model 2 do provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta$  = 4.96, p < .01). Model 3 does not indicate interaction effects to support Hypotheses 2a-2b ( $\beta$  = -0.28, p > .10;  $\beta$  = 1.09, p > .10), which spoke to how women directors' directorship experience and business expert women directors may moderate the women directors-gender diversity of CEO successor candidate pool (long-term) relationship. However, as with the primary analyses, the results in Table 4.5, Model 2 indicate a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO

successor candidate pool (long-term) ( $\beta = 2.65$ , p < .05). Table 4.5, Models 2-3 do not provide support for either Hypothesis 3 ( $\beta = 1.23$ , p > .10) or Hypothesis 4 ( $\beta = 0.52$ , p >.10). Taken together, this indicates the results of the streamlined model in Table 4.5 are consistent with the results in Table 4.3. Collectively, the results in Tables 4.4 and 4.5, indicate the effects found in the primary analyses (i.e., Tables 4.2 and 4.3) are not likely driven by including superfluous covariates.

## 4.3.2. Blau Index

I also replicated my primary analyses operationalizing the gender diversity of the board using the Blau index (rather than a tally of women directors). This served two purposes. First, it allowed me to assess the robustness of the effects found in Table 4.3 which supported Hypothesis 1. Second, it allowed me to explore if the lack of any significant interaction effects in the primary analyses to support Hypothesis 2a, 2b, and/or 4 (respectively) may have been a result of how gender diversity of the board was originally operationalized.

Table 4.6 shows the results of the regression analyses, using the Blau index instead of tally of women directors, with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not indicate a direct effect relationship between the Blau index and gender diversity of CEO successor candidate pool (immediate) to support Hypothesis 1 ( $\beta = 1.12, p > .10$ ). Model 3 does not show interaction effects to support Hypotheses 2a or 2b ( $\beta = -0.15, p > .10; \beta = 1.91, p > .10$ ), which spoke to how women directors' directorship experience and business expert women directors may affect the proposed trickle down effect. There is again support for Hypothesis 3 in Table 4.6, Model 2, in that
there is a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.06, p < .01$ ). Table 4.6, Model 3 does not indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.87, p > .10$ ). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (immediate) are comparable whether using a tally of women directors or the Blau index.

Table 4.7 shows the results of the regression analyses, using the Blau index instead of tally of women directors, with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analyses, the results in Model 2 do support the proposed trickle down effect, such that there is a positive direct effect relationship between the Blau index and gender diversity of CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta = 5.49, p < .01$ ). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.47$ , p > .10;  $\beta = 0.93$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. The results in Table 4.7, Model 2 again indicate a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 3.36$ , p < .05). Table 4.7, Models 2-3, again do not provide support for either Hypothesis 3 ( $\beta = 1.89, p > .10$ ) or Hypothesis 4 ( $\beta = -2.73, p > .10$ ) .10). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (long-term) are comparable whether using a tally of women directors or the Blau index. In this sense, the results of Table 4.6 and 4.7 indicate a) the results supporting Hypothesis 1 in Table 4.3 are robust, but also b)

the lack of any interaction effects found in the primary analyses is not likely driven by specifics of how board gender diversity was originally operationalized.

4.3.3. Orthogonalized Women Directors' Directorship Experience

In Tables 4.8 and 4.9, I re-ran the primary analyses employing an alternative measure of women directors' directorship experience. Specifically, I used an orthogonalized version of women directors' directorship experience, as the raw score had a moderately high correlation with women directors (r = 0.27). I regressed the average score for prior directorship experience of the women directors of a focal firm on the predictor variable of (tally of) women directors. I then used the residuals as the new measure of orthogonalized women directors' directorship experience.

Table 4.8 shows the results of the regression analyses, using the orthogonalized women directors' directorship experience measure, with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 2.88, p > .10$ ). Again, Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = -0.77, p > .10; \beta = -0.24, p > .10$ ), which spoke to how (in this case 'orthogonalized') women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. In Table 4.8, Model 2 there is again a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.29, p < .01$ ), supporting Hypothesis 3. Table 4.8, Model 3 does not indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.40, p > .10$ ). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of

CEO successor candidate pool (immediate) are comparable whether an orthogonalized or non-orthogonalized measure of women directors' directorship experience is used.

Table 4.9 shows the results of the regression analyses using the orthogonalized women directors' directorship experience measure with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analysis, the results in Model 2 indicate a positive direct effect relationship between women directors and gender diversity of CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta = 6.67$ , p < .01). Again, Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = -1.09$ , p > .10;  $\beta = 0.27$ , p > .10), which spoke to how (in this case 'orthogonalized') women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. The results in Table 4.9, Model 2 do indicate a positive direct effect relationship between orthogonalized women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 3.05, p < .05$ ). Table 4.9, Model 2 does indicate a positive relationship between critical mass contact history and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 2.10, p < .10$ ). However, this effect can only be said to be 'marginally significant', and thus it is not appropriate to say support for Hypothesis 3 is found. Table 4.9, Model 3 does not indicate support for the proposed interaction in Hypothesis 4 ( $\beta = -0.05$ , p > .10). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (long-term) are comparable whether an orthogonalized or non-orthogonalized measure of women directors' directorship experience is used.

4.3.4. Orthogonalized Business Expert Women Directors

In Tables 4.10 and 4.11, I re-ran the primary analyses employing an alternative measure of business expert women directors. Using a binary score in the primary analyses may have eliminated meaningful variance when conducting hypotheses testing. For example, a binary measure means observations where the board had four women directors, and all of them were business experts, would be treated the same as observations where the board had four women directors, and only one was a business expert. Using a different operationalization of business expert women directors helped explore if the lack of effects found related to business expert women directors in Tables 4.2 and 4.3, was likely due to the specific way the construct was initially operationalized, or more likely because the construct does not impact gender diversity of the CEO successor candidate pool(s), as originally hypothesized.

In Tables 4.10 and 4.11, I used an orthogonalized version of business expert women directors, as the raw (binary) score for business expert women directors had a high correlation with women directors (r = 0.47). For these analyses, I regressed the total tally of business expert women directors serving on the predictor variable of (tally of) women directors. I then used the residuals as the new measure of orthogonalized business expert women directors.

Table 4.10 shows the results of the regression analyses using the orthogonalized business expert women directors measure with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 1.71$ , p > .10). Again, Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.12$ , p > .10;  $\beta = 1.26$ , p > .10),

which spoke to how women directors' directorship experience and (in this case 'orthogonalized') business expert women directors may impact the proposed trickle down effect. In Table 4.10, Model 2, there is again a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.23$ , p < .01), supporting Hypothesis 3. Table 4.8, Model 3 does not indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.72$ , p > .10). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (immediate) are comparable whether using the binary and non-orthogonalized measure of business expert women directors or the orthogonalized measure of business expert women directors.

Table 4.11 shows the results of the regression analyses using the orthogonalized business expert women directors measure with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analysis, the results in Model 2 indicate a positive direct effect relationship between women directors and gender diversity of the CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta$  = 5.32, p < .01). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta$  = -0.27, p > .10;  $\beta$  = 0.02, p > .10), which spoke to how women directors' directorship experience and (in this case 'orthogonalized') business expert women directors may impact the proposed trickle down effect. The results in Table 4.11, Model 2 again indicate a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) ( $\beta$  = 3.01, p < .05). Table 4.11, Models 2-3 do not indicate support for Hypothesis 3 ( $\beta$  = 2.04, p > .10) or support for the proposed interaction in Hypothesis 4 ( $\beta$  = -0.58, p >

.10). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (long-term) are comparable whether using the binary measure of business expert women directors or the orthogonalized measure.

# 4.3.5. Business Expert Women Directors Proportion

In Tables 4.12 and 4.13, I re-ran the primary analyses employing a second alternative measure of business expert women directors. In this case, I used the proportion of women directors serving who were classified as 'business experts.' Running such analyses, in conjunction with the analyses in Tables 4.10 and 4.11, helped to holistically assess if the lack of any effects found related to business expert women directors in the primary analyses were likely because the construct does not actually impact gender diversity of the CEO successor candidate pool, as hypothesized.

Table 4.12 shows the results of the regression analyses using the business expert women directors proportion measure with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 1.77$ , p > .10). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.08$ , p > .10;  $\beta = -0.52$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors ('proportion,' in this case) may impact the proposed trickle down effect. In Table 4.12, Model 2, there is again a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.27$ , p <.01), supporting Hypothesis 3. Table 4.12, Model 3 does not indicate an interaction effect

to support Hypothesis 4 ( $\beta$  = -0.86, p > .10). Taking the results of Tables 4.2, 4.10, and 4.12 together supports the conclusion that business expert women directors (regardless of how such a construct is operationalized) does not impact gender diversity of CEO successor candidate pool (immediate) as originally hypothesized.

Table 4.13 shows the results of the regression analyses using the business expert women directors proportion measure with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analyses, the results in Model 2 indicate a positive direct effect relationship between women directors and gender diversity of CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta = 5.38$ , p < .01). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = -0.28$ , p > .10;  $\beta = -0.89$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors ('proportion,' in this case) may impact the proposed trickle down effect. The results in Table 4.13, Model 2 again indicate a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (longterm) ( $\beta = 3.03$ , p < .05). Table 4.13, Model 2 does indicate a positive relationship between critical mass contact history and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 2.08, p < .10$ ); however, this effect can only be said to be 'marginally significant', and thus it is not appropriate to say support for Hypothesis 3 is found. Table 4.13, Model 3 does not indicate support for the proposed interaction in Hypothesis 4 ( $\beta = -0.58$ , p > .10). Taking the results of Tables 4.3, 4.11, and 4.13 together supports the conclusion that business expert women directors (regardless of how

such a construct is operationalized) does not impact gender diversity of CEO successor candidate pool (long-term) as originally hypothesized.

### 4.3.6. Tally of Critical Mass Contact History

In the primary analyses, I used an orthogonalized measure of critical mass contact history, since the raw score tally of men directors with such a history was highly correlated with the tally of women directors serving. Nevertheless, in Tables 4.14 and 4.15, I replicated the primary analyses instead using the original raw score tally of critical mass contact history. Doing so served two purposes. First, such analyses helped assess the robustness of the direct effect found in support of Hypothesis 3 in Table 4.2 (i.e. where the specific outcome variable is gender diversity of CEO successor candidate pool [immediate]). Second, such analyses also helped assess if the null findings regarding Hypothesis 3 in Table 4.3 (i.e. where the specific outcome variable is gender diversity of CEO successor candidate pool [long-term]) may have been a function of the orthogonalizing of critical mass contact history.

Table 4.14 shows the results of the regression analyses using the tally of critical mass contact history measure with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta$  = -0.34, p > .10). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta$  = -0.44, p > .10;  $\beta$  = -0.78, p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.14, Model 2 indicates a positive direct effect relationship between tally of critical mass contact history and gender diversity of CEO

successor candidate pool (immediate) ( $\beta = 5.00, p < .01$ ), supporting Hypothesis 3. Table 4.14, Model 3 does not however indicate an interaction effect to support Hypothesis 4 ( $\beta = 1.48, p > .10$ ). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (immediate) are comparable whether using an orthogonalized or non-orthogonalized measure of critical mass contact history.

Table 4.15 shows the results of the regression analyses using the tally of critical mass contact history measure with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analyses, the results in Model 2 indicate a positive direct effect relationship between women directors and gender diversity of CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta = 4.56$ , p < .05). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = -0.84$ , p > .10;  $\beta = -0.23$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.15, Model 2 again indicates a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 3.17$ , p < .05). Table 4.15, Model 2 does indicate a positive relationship between tally of critical mass contact history and gender diversity of CEO successor candidate pool (long-term) ( $\beta = 2.45, p < .10$ ); however, this effect can only be said to be 'marginally significant', and thus it is not appropriate to say support for Hypothesis 3 is found. Table 4.15, Model 3 does not indicate support for the proposed interaction in Hypothesis 4 ( $\beta = 1.54, p > .10$ ). Collectively, this shows the results when assessing the specific outcome variable of gender diversity of CEO

successor candidate pool (long-term) are comparable whether using an orthogonalized or non-orthogonalized measure of critical mass contact history.

### 4.3.7. Critical Mass Contact History Proportion

To further assess the robustness of the initial findings regarding Hypothesis 3, I replicated the primary analyses in Tables 4.16 and 4.17 using the proportion of the men directors on a focal board who had critical mass contact history. I orthogonalized this measure, as the raw score for critical mass contact history as a proportion had a high correlation with women directors (r = 0.58). Specifically, I regressed the raw score for the proportion of men directors who had critical mass contact history on the variable of women directors, then used the residuals as the measure of critical mass contact history proportion in the analyses in Tables 4.16 and 4.17.

Table 4.16 shows the results of the regression analyses using the aforementioned critical mass contact history proportion measure with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). As with the primary analyses, the results in Model 2 do not provide support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 1.70, p > .10$ ). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.34, p > .10$ ;  $\beta = -1.27, p > .10$ ), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.16, Model 2 indicates a positive direct effect relationship between critical mass contact history proportion and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 3.81$ , p < .01), supporting Hypothesis 3. Table 4.16, Model 3 does not however indicate an interaction effect to support Hypothesis 4 ( $\beta = -2.17, p > .10$ ). Collectively, this shows

the results when assessing the specific outcome variable of gender diversity of CEO successor candidate pool (immediate) are comparable whether using an orthogonalized critical mass contact history based on the tally of men directors with such history or using an orthogonalized critical mass contact history measure based on the proportion of men directors with such history.

Though not shown, I also replicated the analyses in Table 4.16 instead using the non-orthogonalized critical mass contact history proportion measure and results were comparable to those shown in Table 4.16. These results support the robustness of the direct effect relationship found in Table 4.2 in support of Hypothesis 3, suggesting boards with more men directors with critical mass contact history also have a more gender diverse pool of immediate CEO successor candidates.

Table 4.17 shows the results of the regression analyses using the aforementioned critical mass contact history proportion measure with the specific outcome variable of gender diversity of CEO successor candidate pool (long-term). As with the primary analyses, the results in Model 2 indicate a positive direct effect relationship between women directors and gender diversity of CEO successor candidate pool (long-term), consistent with Hypothesis 1 ( $\beta$  = 5.48, p < .01). Model 3 does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta$  = -0.16, p > .10;  $\beta$  = -0.12, p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.17, Model 2 again indicates a positive direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) ( $\beta$  = 3.30,

p < .05). Table 4.17, Models 2-3 do not indicate support for Hypothesis 3 ( $\beta = 1.29, p > .10$ ) or support for the proposed interaction in Hypothesis 4 ( $\beta = -1.01, p > .10$ ).

Though not shown, I also replicated the analyses in Table 4.17 instead using the non-orthogonalized critical mass contact history proportion measure and results were comparable to those shown in Table 4.17. Taking the results of Tables 4.3, 4.15, 4.17, and the aforementioned analyses using the non-orthogonalized measure of critical mass contact history proportion together, supports the conclusion that having more men directors with critical mass contact history does not impact the gender diversity of CEO successor candidate pool (long-term) as originally hypothesized.

### 4.3.8. Tokenism Only Contact History

Research on the phenomenon of tokenism indicates members of minority groups are discounted when their relative presence in a group is modest (Kanter, 1977; Maass & Clark 1984; Nemeth & Wachtler, 1983). If men work only with token numbers of women colleagues, this may even reinforce gender stereotyping (cf. Acker, 1990, 1992; Kanter, 1977). For this reason, I ran supplemental analyses to see if/ how having men directors who have worked with women director colleagues, but only ever with token numbers of such colleagues, impacts the gender diversity of CEO successor candidate pool (immediate). My general expectation was that having more such men would negatively impact this pool.

Such analyses helped to rule out alternative explanations for the effect found in Table 4.2 in support of Hypothesis 3. Testing the impact of having men directors with critical mass contact history (specifically) was informed by the findings of extant literature. There is evidence that working with at least three women director colleagues

on a particular board changes how men view/ treat those women director colleagues, and such effects do not occur when there are only two women on a particular board (see Konrad et al., 2008). However, I acknowledge contact theory could be leveraged to argue any contact with women colleagues, including any number of women director colleagues, might lead to stereotype reduction effects which subsequently cause a man to be a more active ally of gender diversity and inclusion initiatives. To empirically assess this consideration, I created a measure of tokenism only contact history (i.e. tally of men directors on the focal board who had worked on gender diverse boards in the past five years, but never on a board which had 3+ women directors). I used an orthogonalized version of this variable, as the raw score for men directors with tokenism only contact history on the predictor variable of women directors, then used the residuals as the measure of tokenism only contact history in the analyses in Table 4.18.

Table 4.18 shows the results of the regression analyses, replicating the original model tested in Table 4.2, but now also including tokenism only contact history, with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). Model 1 contains covariates only. Model 2 incorporates direct effects for the four predictor variables of theoretical interest, plus the tokenism only contact history measure. Model 3 tests the proposed moderating effects described in Hypotheses 2a, 2b, and 4, respectively, as well as the potential tokenism only contact history X women directors interaction.

The results in Table 4.18, Model 2, do not indicate support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 2.46$ , p > .10). Model 3 also does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.02$ , p > .10;  $\beta = -0.56$ , p > .10), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.18, Model 2 indicates a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.86$ , p < .01), supporting Hypothesis 3. Table 4.18, Model 3 does not however indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.68$ , p > .10). Contrary to my expectations, Table 4.18, Model 2, does not indicate a direct effect relationship between tokenism only contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 0.80$ , p > .10). Table 4.18, Model 3 does not indicate a tokenism only contact history X women directors interaction ( $\beta = 1.26$ , p > .10).

The importance of the results in Table 4.18 are twofold. First, contrary to my expectations, having more men directors who have served on gender diverse boards, but only ever worked with 'token' numbers of women director colleagues, does not negatively impact gender diversity of CEO successor candidate pool (immediate). This does not preclude the possibility that having such men directors may be problematic in other regards, but their presence is not associated with the gender diversity of the pool of immediate CEO successor candidates. The results in Table 4.18 are also useful because they help rule out a potential alternative explanation for the effects found in support of Hypothesis 3 in Table 4.2. The model in Table 4.18, Model 2 includes measures for both tokenism only contact history and critical mass contact history, but only the latter

positively impacts the gender diversity of CEO successor candidate pool (immediate). This supports the broader proposition that not any/all contact with women colleagues will lead a man director to be a more active ally of gender diversity and inclusion initiatives going forward; rather, it is important men directors have had prior experience specifically working with a critical mass of women director colleagues.

# 4.3.9. Woman CEO-Men Director Collaboration History

I conducted one additional set of analyses to assess if it is critical mass contact history, as opposed to other forms of prior contact with women colleagues, which explain the effects found in support of Hypothesis 3 in Table 4.2. As mentioned earlier, contact theory could be used to argue a man director who has served on the board of a firm which had a woman CEO may have experienced gender stereotype reduction effects, since directors generally collaborate closely with the CEO of the firm. Prior literature points to competing expectations about the relationship between having men directors with (what I termed as) woman CEO-men director collaboration history, and gender diversity of CEO successor candidate pool (immediate).

On one hand, directors do not only vigilantly monitor the CEO, but in many cases have a collaborative relationship where the former offer valuable counsel to the latter (see Hambrick et al., 2015; Hillman & Dalziel, 2003; Westphal, 1999). Men directors who have woman CEO-men director collaboration history may therefore have had the type of frequent contact with such a woman CEO that could lead to stereotype reductions. However, there is evidence poorly performing firms are more likely to appoint women CEOs (i.e. the 'glass cliff' phenomenon) specifically because the woman CEO is used as a scapegoat (Ryan et al., 2011). Thus, it is questionable whether those men directors who

served on the board of a firm which had a woman CEO are any less gender biased against women.

To empirically assess the relationship between having men directors with woman CEO-men director collaboration history and gender diversity of CEO successor candidate pool (immediate), I leveraged both Execucomp and GMI Ratings databases. Execucomp lists the gender of the CEO of a firm, while the GMI Ratings database provided details on all the boards on which each of the men directors in my sample had served in the past five years. From this, I could determine if a man director had previously served as a director on the board of a firm which had a woman CEO. I tallied how many men on a focal board had such history to create a unit-level variable I term 'woman CEO-men director collaboration history.' I used an orthogonalized version of this variable, as the raw score for tally of men directors with woman CEO-men director collaboration history had a high correlation with the (incumbent) CEO gender (r = 0.67). Specifically, I regressed the variable of tally of men directors with woman CEO-men director collaboration history on the binary score for gender of incumbent CEO of the focal firm (where '1' meant that CEO was a woman). I then used the residuals as the measure of woman CEO-men director collaboration history in the analyses in Table 4.19.

Table 4.19 shows the results of the regression analyses, replicating the original model tested in Table 4.2, but also including woman CEO-men director collaboration history with the specific outcome variable of gender diversity of CEO successor candidate pool (immediate). Model 1 contains covariates only. Model 2 incorporates direct effects for the four predictor variables of theoretical interest, plus the woman CEO-men director collaboration history variable. Model 3 tests the proposed moderating

effects described in Hypotheses 2a, 2b, and 4, respectively, as well as the potential woman CEO-men director collaboration history X women directors interaction.

The results in Table 4.19, Model 2 do not indicate support for the direct effect of women directors proposed in Hypothesis 1 ( $\beta = 2.20, p > .10$ ). Model 3 also does not indicate interaction effects to support Hypotheses 2a or 2b ( $\beta = 0.06, p > .10; \beta = -0.45, p > .10$ ), which spoke to how women directors' directorship experience and business expert women directors may impact the proposed trickle down effect. Table 4.19, Model 2 does indicate a positive direct effect relationship between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 4.18, p < .01$ ), supporting Hypothesis 3. Table 4.19, Model 3 does not however indicate an interaction effect to support Hypothesis 4 ( $\beta = -0.62, p > .10$ ). Table 4.19, Model 2 does not indicate a direct effect relationship between woman CEO-men director collaboration history and gender diversity of CEO successor candidate pool (immediate) ( $\beta = 0.40, p > .10$ ). Moreover, Model 3 does not indicate a woman CEO-men director collaboration history X women directors interaction 3 ( $\beta = -0.06, p > .10$ ).

The results in Table 4.19 do not themselves clarify how a man director who works on the board of a firm which has a woman CEO is afterwards changed as a result of this experience. This is true because there are no significant effects found involving woman CEO-men director collaboration history. This does not preclude the possibility that woman CEO-men director collaboration history might be consequential to other outcome variables, but there is no indication this construct impacts gender diversity of the pool of immediate CEO successor candidates. These results are nevertheless important for the purposes of this dissertation. Table 4.19, Model 2 includes both woman CEO-men

director collaboration history and critical mass contact history in the model, yet only the latter is positively associated with gender diversity of CEO successor candidate pool (immediate). Taking the results of Tables 4.18 and 4.19 together supports a broader conclusion: not all men directors who have had prior professional contact with women colleagues (of any sort) will impact gender diversity of the CEO successor candidate pool (immediate). Rather, it is only those men directors who have specifically worked at some point with three or more women director colleagues on a particular board who are positively associated with gender diversity of the pool of immediate CEO successor candidates. The importance of this totality of findings is explored further in the discussion section below.

#### 4.3.10. ITCV/RIR Analyses

I conducted additional Impact Threshold of a Confounding Variable (ITCV), as well as Robustness of Inference to Replacement (RIR) analyses, to address endogeneityrelated concerns. Working with archival data means one cannot use real world executive subjects and randomly assign them to conditions, such as is done in a lab experiment. Two major concerns in conducting such research are omitted variable bias and ruling out alternative explanations (cf. Bliese, Schepker, Essman, & Ployhart, 2020; Hill, Johnson, Greco, O'Boyle, & Walter, 2021). I submit the earlier analyses on the impacts of woman CEO-men director collaboration history, as well as tokenism only contact history, help address alternative explanation for the effects found in support of Hypothesis 3 in Table 4.2. Moreover, including business expert women directors in the model originally, along with women directors' directorship experience, helps to rule out a plausible alternative

explanation for the reason the former has a direct effect impact upon gender diversity of CEO successor candidate pool (long-term) in Table 4.3.

To address if omitted variable bias may be relevant to the aforementioned direct effects found in Tables 4.2 and 4.3, I first utilized the Impact Threshold of a Confounding Variable (ITCV) tests. This test gives a minimum threshold an omitted variable would need to be correlated with the outcome variable (i.e. gender diversity of CEO successor candidate pool) and a predictor variable of interest (e.g. women directors' directorship experience; critical mass contact history), in order for its omission to call into question the results. The ITCV test helps address endogeneity-related concerns and avoids some of the drawbacks of the instrumental variables approach, including how instrumental variable residuals in models may mask actual effects if those instruments are not particularly strong (cf. Busenbark, Yoon, Gamache, & Withers, 2022; Semadeni, Withers, & Certo, 2014). The ITCV tests gave me minimum (average) correlation thresholds needed for an omitted covariate to undermine the results.

I followed best practice recommendations and focused on the partial correlations between the covariates of my model and the predictor variables of theoretical interest/ dependent variable (Busenbark et al., 2022). The ITCV test indicated an omitted variable would need to have an average correlation of .270 with both critical mass contact history and gender diversity of CEO successor candidate pool (immediate) for its omission to undermine the results. The highest relevant average partial correlation was for CEO age, which had an average partial correlation with critical mass contact history and gender diversity of CEO successor candidate pool (immediate) of .039. This indicates it is

unlikely an omitted variable would meaningfully undermine the results found in support of Hypothesis 3 in Table 4.2.

The ITCV test indicated an omitted variable would need to have an average correlation of .274 with both women directors and gender diversity of CEO successor candidate pool (long-term) for its omission to undermine the results. The highest relevant average partial correlation was for firm size, which had an average partial correlation with women directors and gender diversity of CEO successor candidate pool (long-term) of .156. This indicates it is unlikely an omitted variable would meaningfully undermine the results found in support of Hypothesis 1 in Table 4.3.

The ITCV test indicated an omitted variable would need to have an average correlation of .160 with both women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term), for its omission to undermine the results. The highest relevant average partial correlation was for firm size, which had an average partial correlation with women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) of .100. This indicates it is unlikely an omitted variable would meaningfully undermine the positive direct effect between women directors' directorship experience and gender diversity of the CEO successor candidate pool (long-term) found in Table 4.3.

I also paired the ITCV test with RIR tests. The RIR test indicates how much of an effect size must be biased in order to overturn an otherwise statistically significant parameter estimate, and this accounts for bias from any source of endogeneity not just from omitted variables (Busenbark et al., 2022; Xu & Frank, 2021). I used the RIR to determine what percentage of the estimated effect found would have to be due to bias to

invalidate this inference. Following best practice recommendations, I then re-ran analyses, including a new relevant covariate, to see if the coefficient for the effect of interest changed by more than the percentage given by the RIR results; if the coefficient did not change this much, this supports the robustness of the original results (see Busenbark et al., 2022; Xu & Frank, 2021).

With respect to the direct effect relationship found between critical mass contact history and gender diversity of CEO successor candidate pool (immediate) in Table 4.2, the RIR test indicated 37.642 % of the estimate would have to be due to bias to invalidate this inference. I found three new covariates (specifically, total pay for incumbent CEO, total pay of all non-CEO c-suite executives, and number of women c-suite executives over age of 55) to use for the aforementioned tests. I thrice replicated my original analyses, adding in one of these new covariates to the model. Doing so did not cause the coefficient for critical mass contact history to change by more than 37.642 %. The coefficient (for critical mass contact history) also remained statistically significant in all three of these tests.

With respect to the direct effect relationship found between women directors and gender diversity of CEO successor candidate pool (long-term) in Table 4.3, the RIR test indicated 38.372 % of the estimate would have to be due to bias to invalidate this inference. I thrice replicated my original analyses, adding in one of the new covariates (i.e. total pay for incumbent CEO, total pay of all non-CEO c-suite executives, and number of women c-suite executives over age of 55) to the model. Doing so did not cause the coefficient for women directors to change by more than 38.372 %. The coefficient (for women directors) also remained statistically significant in all three of these tests.

With respect to the direct effect relationship found between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) in Table 4.3, the RIR test indicated 17.414 % of the estimate would have to be due to bias to invalidate this inference. I thrice replicated my original analyses, adding in one of the new covariates (i.e. total pay for incumbent CEO, total pay of all non-CEO c-suite executives, and number of women c-suite executives over age of 55) to the model. Doing so did not cause the coefficient for women directors' directorship experience to change by more than 17.414 %. The coefficient (for women directors' directorship experience) also remained statistically significant in all three of these tests. The collective results of the aforementioned ITCV and RIR tests support the robustness of the effects found in my primary analyses (i.e. Tables 4.2 and 4.3).

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Gender Diversity of CEO Successor Candidate Pool (Immediate)	11.50	21.42											
2. Gender Diversity of CEO Successor Candidate Pool (Long-Term)	15.51	19.73	.50										
3. Firm Size	9.73	1.49	.03	.19									
4. ROA	4.72	5.65	.01	01	15								
5. Capital Expenditures	989.26	2422.53	.00	.04	.39	01							
6. CEO Pay Power	0.71	0.30	08	01	13	.04	04						
7. CEO Age	60.02	5.52	.07	.03	.23	.16	.05	02					
8. CEO Tenure	5.29	4.83	.11	02	.05	.05	03	.12	.38				
9. Total Directors	9.51	2.29	.02	.06	.44	03	.27	17	.05	04			
10. Meetings	8.40	3.22	.01	.04	.25	14	.02	19	.02	05	.12		
11. Not Independent Directors	1.41	1.06	02	05	11	04	02	08	15	09	.11	.03	
12. Women Directors' Age	57.76	13.06	.06	.05	.10	.03	.03	11	.18	.02	.12	06	15
13. Women Directors' Tenure	6.58	4.34	11	12	.03	.08	04	01	.08	.09	.07	09	10
14. Critical Mass Contact History Men's Tenure	5.08	4.36	.00	07	.14	02	.03	06	.04	01	.28	.03	.03
15. Critical Mass Contact History Men's	1.79	1.29	.00	05	.18	09	.11	05	01	10	.30	.16	.10
Appointments													
16. SD of Pay of Executives	1216.11	1408.58	.00	.00	.36	.03	.11	21	.12	.01	.15	.15	10
17. C-Suite Executives	4.61	0.97	03	.03	.02	08	02	35	06	16	.09	.20	.03
18. Women C-Suite Executives	0.66	0.76	.29	.17	03	09	09	05	13	.00	04	.10	.01
19. Women Directors	2.29	1.13	.09	.26	.39	.02	.13	23	01	02	.40	.09	.04
20. Women Directors' Directorship Experience	6.49	3.90	.07	.13	.18	06	.09	02	.02	.06	.20	01	.08
21. Business Expert Women Directors	0.77	0.42	.00	.07	.19	.07	01	10	.02	.02	.10	05	.06
22. Critical Mass Contact History	2.68	2 73	13	04	19	- 06	18	01	05	01	40	12	08

Table 4.1 Succession Planning and Director Characteristic Measures: Means, SDs, and Correlations

22. Critical Mass Contact History2.682.73.13.04.19-.06.18.01.05.01.40.12.08Notes. N = 336 observations in 196 firms. Correlations greater than .10 have p < .05. Correlations are between orthogonalized measure of critical mass<br/>contact history and other variables. Mean and SD reported are for non-orthogonalized measure of men directors with critical mass contact history. Mean<br/>and SD for orthogonalized critical mass contact history are 0.00, and 2.34, respectively.

	Mean	SD	12	13	14	15	16	17	18	19	20	21
1. Gender Diversity of CEO Successor Candidate Pool (Immediate)	11.50	21.42										
2. Gender Diversity of CEO Successor Candidate Pool (Long-Term)	15.51	19.73										
3. Firm Size	9.73	1.49										
4. ROA	4.72	5.65										
5. Capital Expenditures	989.26	2422.53										
6. CEO Pay Power	0.71	0.30										
7. CEO Age	60.02	5.52										
8. CEO Tenure	5.29	4.83										
9. Total Directors	9.51	2.29										
10. Meetings	8.40	3.22										
11. Not Independent Directors	1.41	1.06										
12. Women Directors' Age	57.76	13.06										
13. Women Directors' Tenure	6.58	4.34	.44									
14. Critical Mass Contact History Men's Tenure	5.08	4.36	.09	.15								
15. Critical Mass Contact History Men's Appointments	1.79	1.29	.02	.08	.61							
16. SD of Pay of Executives	1216.11	1408.58	05	.09	.07	.09						
17. C-Suite Executives	4.61	0.97	.05	02	.10	.16	.14					
18. Women C-Suite Executives	0.66	0.76	03	11	03	.03	03	.23				
19. Women Directors	2.29	1.13	.38	.09	.21	.14	.08	.17	.12			
20. Women Directors' Directorship Experience	6.49	3.90	.42	.42	.15	.21	.00	.10	.03	.27		
21. Business Expert Women Directors	0.77	0.42	.32	.09	.11	.04	.00	.01	.01	.47	.23	
22. Critical Mass Contact History	2.68	2.73	05	.09	.37	.38	.05	.01	04	.00	.24	02

Table 4.1 Succession Planning and Director Characteristic Measures: Means, SDs, and Correlations (Continued)

*Notes*. N = 336 observations in 196 firms. Correlations greater than .10 have p < .05. Correlations are between orthogonalized measure of critical mass contact history and other variables. Mean and SD reported are for non-orthogonalized measure of men directors with critical mass contact history. Mean and SD for orthogonalized critical mass contact history are 0.00, and 2.34, respectively.

	Model 1		Mode	el <u>2</u>	Mode	3
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	3.46	8.57	3.71	9.56
CEO Gender	0.99	4.88	0.41	4.91	0.28	4.91
Duality	-2.03	2.67	-1.66	2.62	-1.67	2.67
Firm Size	0.22	1.85	-0.29	1.91	-0.39	1.91
ROA	0.19	1.16	0.27	1.15	0.28	1.15
Capital Expenditures	-0.87	0.84	-1.41*	0.80	-1.42 <sup>†</sup>	0.82
CEO Pay Power	-2.05	1.45	-2.55†	1.33	-2.52†	1.31
CEO Age	1.04	1.38	1.21	1.39	1.26	1.39
CEO Tenure	2.23	2.11	2.05	2.14	1.99	2.09
Total Directors	1.40	1.58	-0.41	1.46	-0.37	1.45
Meetings	-0.53	1.42	-0.89	1.40	-0.87	1.41
Not Independent Directors	-0.78	1.17	-1.22	1.17	-1.16	1.18
Women Directors' Age	$2.26^{\dagger}$	1.29	1.95	1.35	2.00	1.60
Women Directors' Tenure	-2.94*	1.23	-4.21**	1.31	-4.20**	1.30
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.40	1.55	-0.44	1.57
Critical Mass Contact History Men's	0.19	1.53	-0.41	1.50	-0.54	1.50
	0.16	0.00	0.21	0.05	0.20	0.07
SD of Pay of Executives	0.16	0.98	0.31	0.95	0.30	0.96
C-Suite Executives	-2.81	1.31	-3.18	1.31	-3.15	1.33
Women C-Suite Executives	7.01	1.68	6.76	1.66	6.73	1.66
Women Directors			2.23	1.72	2.61	4.12
Women Directors' Directorship Experience			2.43	1.42	2.45	1.41
Business Expert Women Directors			-4.04	3.44	-4.15	4.70
Critical Mass Contact History			4.29**	1.36	4.59**	1.55
Women Directors X Women Directors' Directorship Experience					0.06	1.26
Women Directors X Business Expert Women Directors					-0.44	4.72
Women Directors X Critical Mass Contact History					-0.64	1.59
$R^2$	0.	16	0	20	0	20

Table 4.2 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{+}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Model 2		Model	3
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	18.38**	4.60	17.67**	5.75	17.56*	7.12
CEO Gender	1.45	4.29	-0.71	4.71	-0.80	4.73
Duality	1.55	2.46	1.93	2.45	1.88	2.48
Firm Size	4.12	1.72	2.22	1.84	2.13	1.83
ROA	1.00	1.14	0.59	1.08	0.61	1.09
Capital Expenditures	-0.72	1.14	-0.96	1.33	-0.88	1.32
CEO Pay Power	0.52	1.27	0.51	1.21	0.56	1.21
CEO Age	0.35	1.37	1.31	1.35	1.33	1.33
CEO Tenure	-1.08	1.31	-1.53	1.13	-1.55	1.09
Total Directors	0.95	1.59	-1.13	1.62	-1.11	1.59
Meetings	-0.42	1.39	-0.42	1.30	-0.43	1.28
Not Independent Directors	-0.70	1.21	-1.41	1.39	-1.38	1.39
Women Directors' Age	1.33	1.15	-0.85	1.19	-0.98	1.58
Women Directors' Tenure	-2.35*	1.16	-3.27**	1.23	-3.28**	1.21
Critical Mass Contact History Men's Tenure	-1.13	1.36	-1.93	1.43	-1.99	1.43
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.06	1.38	-1.10	1.38
SD of Pay of Executives	-0.88	0.91	-0.60	0.84	-0.60	0.85
C-Suite Executives	0.32	1.30	-0.49	1.23	-0.48	1.24
Women C-Suite Executives	3.54**	1.28	$2.88^{*}$	1.22	$2.89^{*}$	1.24
Women Directors			5.82**	1.82	5.68	4.78
Women Directors' Directorship Experience			$3.17^{*}$	1.33	3.14*	1.37
Business Expert Women Directors			-3.82	3.19	-3.72	4.53
Critical Mass Contact History			2.10 <sup>†</sup>	1.23	2.29†	1.23
Women Directors X Women Directors' Directorship Experience					-0.39	1.42
Women Directors X Business Expert Women Directors					0.22	5.07
Women Directors X Critical Mass Contact History					-0.29	1.50
$R^2$	0	.12	0.	.18	0.	18

Table 4.3 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Mode	el 1	Mode	el 2	Model	3
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.44	8.50	4.20	8.95	4.16	9.91
CEO Gender	-0.29	4.60	-0.80	4.52	-0.83	4.54
Duality	-0.33	2.66	0.05	2.63	0.05	2.66
Capital Expenditures	-0.68	0.77	-1.27*	0.71	-1.34 <sup>†</sup>	0.72
CEO Pay Power	-1.77	1.32	-2.23†	1.22	-2.23†	1.21
Total Directors	1.23	1.47	-0.89	1.40	-0.89	1.40
Women Directors' Age	$2.54^{*}$	1.26	2.53†	1.32	$2.77^{\dagger}$	1.63
Women Directors' Tenure	-2.62*	1.20	-3.86**	1.28	-3.90**	1.27
C-Suite Executives	-3.10*	1.28	-3.57**	1.29	-3.55**	1.31
Women C-Suite Executives	6.94**	1.73	6.70**	1.75	6.68**	1.74
Women Directors			1.95	1.68	1.90	4.15
Women Directors' Directorship Experience			2.03	1.32	2.08	1.32
Business Expert Women Directors			-4.31	3.40	-4.20	4.50
Critical Mass Contact History			3.95**	1.33	4.19**	1.53
Women Directors X Women Directors' Directorship Experience					0.16	1.27
Women Directors X Business Expert Women Directors					0.01	4.76
Women Directors X Critical Mass Contact History					-0.69	1.63
$R^2$	0.	.14	0	.18	0.	.18

Table 4.4 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (Streamlined Models)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Mod	Model 2		3
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	17.98**	3.53	$18.20^{**}$	4.49	17.59**	6.04
CEO Gender	1.69	4.12	-0.26	4.42	-0.25	4.43
Duality	1.43	2.27	1.73	2.25	1.74	2.26
Firm Size	$3.27^{*}$	1.39	1.86	1.41	1.96	1.42
Total Directors	0.53	1.52	-1.69	1.56	-1.74	1.52
Women Directors' Tenure	-1.90*	1.03	-3.45**	1.18	-3.48**	1.22
Women C-Suite Executives	3.46**	1.27	$2.60^{*}$	1.24	$2.67^{*}$	1.23
Women Directors			4.96**	1.81	4.07	4.49
Women Directors' Directorship Experience			$2.65^{*}$	1.21	2.61*	1.30
Business Expert Women Directors			-3.68	3.14	-3.27	4.47
Critical Mass Contact History			1.23	1.17	1.03	1.20
Women Directors X Women Directors' Directorship Experience					-0.28	1.38
Women Directors X Business Expert Women Directors					1.09	4.83
Women Directors X Critical Mass Contact History					0.52	1.51
$R^2$	0	.10	0	.15	0.	15

Table 4.5 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (Streamlined Models)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history. \*p < 0.10, \*p < 0.05, \*\*p < 0.01.

	Model 1		Mode	el 2	Model	3
_	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	3.51	8.28	2.39	8.89
CEO Gender	0.99	4.88	0.87	4.87	0.77	4.86
Duality	-2.03	2.67	-1.78	2.62	-1.83	2.65
Firm Size	0.22	1.85	0.00	1.91	-0.04	1.91
ROA	0.19	1.16	0.39	1.16	0.37	1.17
Capital Expenditures	-0.87	0.84	-1.37*	0.80	-1.39†	0.82
CEO Pay Power	-2.05	1.45	-2.60*	1.33	-2.63*	1.31
CEO Age	1.04	1.38	1.07	1.38	1.07	1.38
CEO Tenure	2.23	2.11	2.11	2.11	2.15	2.11
Total Directors	1.40	1.58	0.42	1.66	0.44	1.64
Meetings	-0.53	1.42	-0.88	1.41	-0.97	1.42
Not Independent Directors	-0.78	1.17	-1.20	1.15	-1.04	1.15
Women Directors' Age	$2.26^{\dagger}$	1.29	1.96	1.43	2.71	1.87
Women Directors' Tenure	-2.94*	1.23	-4.27**	1.31	-4.46**	1.27
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.20	1.54	-0.23	1.54
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.45	1.50	-0.56	1.54
SD of Pay of Executives	0.16	0.98	0.30	0.96	0.28	0.96
C-Suite Executives	-2.81*	1.31	-3.04*	1.31	-3.00*	1.35
Women C-Suite Executives	7.01**	1.68	6.88**	1.66	6.89**	1.67
Blau Index			1.12	1.66	-0.30	2.69
Women Directors' Directorship Experience			$2.50^{\dagger}$	1.41	$2.58^{\dagger}$	1.42
Business Expert Women Directors			-3.49	3.56	-2.80	4.02
Critical Mass Contact History			4.06**	1.35	4.28**	1.38
Blau Index X Women Directors' Directorship Experience					-0.15	1.22
Blau Index X Business Expert Women Directors					1.91	3.29
Blau Index X Critical Mass Contact History					-0.87	1.54
$R^2$	0.	.16	0	.20	0.	.20

Table 4.6 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Blau Index)

*Notes*. N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Mode	Model 2		3
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	18.38**	4.60	18.41**	5.63	17.58**	6.63
CEO Gender	1.45	4.29	-0.45	4.67	-0.58	4.65
Duality	1.55	2.46	1.88	2.45	1.76	2.46
Firm Size	4.12	1.72	2.32	1.82	2.16	1.83
ROA	1.00	1.14	0.73	1.05	0.66	1.06
Capital Expenditures	-0.72	1.14	-0.79	1.20	-0.93	1.23
CEO Pay Power	0.52	1.27	0.59	1.22	0.53	1.22
CEO Age	0.35	1.37	1.32	1.33	1.40	1.30
CEO Tenure	-1.08	1.31	-1.44	1.12	-1.46	1.08
Total Directors	0.95	1.59	1.41	1.54	1.50	1.52
Meetings	-0.42	1.39	-0.34	1.32	-0.44	1.32
Not Independent Directors	-0.70	1.21	-1.40	1.38	-1.13	1.33
Women Directors' Age	1.33	1.15	-1.98	1.28	-0.66	1.97
Women Directors' Tenure	-2.35*	1.16	-3.33**	1.24	-3.56**	1.25
Critical Mass Contact History Men's Tenure	-1.13	1.36	-1.63	1.43	-1.68	1.43
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.11	1.38	-1.45	1.38
SD of Pay of Executives	-0.88	0.91	-0.51	0.83	-0.56	0.81
C-Suite Executives	0.32	1.30	-0.23	1.24	-0.03	1.28
Women C-Suite Executives	3.54**	1.28	3.01*	1.24	$2.93^{*}$	1.23
Blau Index			5.49**	1.79	4.83	4.17
Women Directors' Directorship Experience			3.36*	1.33	3.62*	1.39
Business Expert Women Directors			-4.28	3.19	-3.82	4.02
Critical Mass Contact History			1.89	1.22	$2.48^{*}$	1.15
Blau Index X Women Directors' Directorship Experience					0.47	1.49
Blau Index X Business Expert Women Directors					0.93	4.57
Blau Index X Critical Mass Contact History					-2.73	1.67
$R^2$	0.	.12	0	.18	0.	.19

Table 4.7 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Blau Index)

*Notes*. N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Mod	11	Model 2		Model 3	
	Coef	$\frac{51}{SE}$	<u>Coef</u>	$\frac{51.2}{SE}$	Coef	<u>SE</u>
Intercept	2.22	8.04	3.46	8.57	3.45	9.45
CEO Gender	0.99	4.88	0.41	4.91	0.33	4.91
Duality	-2.03	2.67	-1.66	2.62	-1.76	2.66
Firm Size	0.22	1.85	-0.29	1.91	-0.42	1.91
ROA	0.19	1.16	0.27	1.15	0.30	1.14
Capital Expenditures	-0.87	0.84	-1.41 <sup>†</sup>	0.80	-1.28	0.84
CEO Pay Power	-2.05	1.45	-2.55†	1.33	-2.47†	1.32
CEO Age	1.04	1.38	1.21	1.39	1.23	1.39
CEO Tenure	2.23	2.11	2.05	2.14	1.99	2.10
Total Directors	1.40	1.58	-0.41	1.46	-0.35	1.45
Meetings	-0.53	1.42	-0.89	1.40	-0.91	1.39
Not Independent Directors	-0.78	1.17	-1.22	1.17	-1.20	1.19
Women Directors' Age	$2.26^{+}$	1.29	1.95	1.35	1.66	1.59
Women Directors' Tenure	-2.94*	1.23	-4.21**	1.31	-4.20**	1.28
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.40	1.55	-0.49	1.56
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.41	1.50	-0.47	1.50
SD of Pay of Executives	0.16	0.98	0.31	0.95	0.34	0.96
C-Suite Executives	-2.81*	1.31	-3.18*	1.31	-3.21*	1.35
Women C-Suite Executives	7.01**	1.68	6.76**	1.66	6.75**	1.66
Women Directors			2.88	1.78	3.00	4.08
Orthogonalized Women Directors' Directorship Experience			2.33†	1.37	2.27†	1.33
Business Expert Women Directors			-4.04	3.44	-4.05	4.67
Critical Mass Contact History			4.29**	1.36	4.62**	1.55
Women Directors X Orthogonalized Women Directors' Directorship Experience					-0.77	1.29
Women Directors X Business Expert Women Directors					-0.24	4.58
Women Directors X Critical Mass Contact History					-0.40	1.62
$R^2$	0.	16	0.	.20	0	.20

Table 4.8 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Orthogonalized Women Directors' Directorship Experience)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for women directors' directorship experience and critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Model 2		Model 3	
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	18.38**	4.60	17.67**	5.75	17.29*	7.10
CEO Gender	1.45	4.29	-0.71	4.71	-0.71	4.74
Duality	1.55	2.46	1.93	2.45	1.79	2.49
Firm Size	4.12	1.72	2.22	1.84	2.13	1.83
ROA	1.00	1.14	0.59	1.08	0.63	1.09
Capital Expenditures	-0.72	1.14	-0.96	1.33	-0.78	1.27
CEO Pay Power	0.52	1.27	0.51	1.21	0.60	1.21
CEO Age	0.35	1.37	1.31	1.35	1.29	1.32
CEO Tenure	-1.08	1.31	-1.53	1.13	-1.55	1.08
Total Directors	0.95	1.59	-1.13	1.62	-1.09	1.59
Meetings	-0.42	1.39	-0.42	1.30	-0.47	1.26
Not Independent Directors	-0.70	1.21	-1.41	1.39	-1.42	1.40
Women Directors' Age	1.33	1.15	-0.85	1.19	-1.20	1.55
Women Directors' Tenure	-2.35*	1.16	-3.27**	1.23	-3.28**	1.21
Critical Mass Contact History Men's	-1.13	1.36	-1.93	1.43	-2.03	1.41
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.06	1.38	-1.04	1.38
SD of Pay of Executives	-0.88	0.91	-0.60	0.84	-0.56	0.86
C-Suite Executives	0.32	1.30	-0.49	1.23	-0.55	1.25
Women C-Suite Executives	3.54**	1.28	$2.88^{*}$	1.22	$2.90^{*}$	1.25
Women Directors			6.67**	1.84	6.30	4.81
Orthogonalized Women Directors' Directorship Experience			3.05*	1.28	2.94*	1.31
Business Expert Women Directors			-3.82	3.19	-3.62	4.52
Critical Mass Contact History			2.10 <sup>†</sup>	1.23	2.31 <sup>†</sup>	1.23
Women Directors X Orthogonalized Women Directors' Directorship Experience					-1.09	1.39
Women Directors X Business Expert Women Directors					0.27	4.96
Women Directors X Critical Mass Contact History					-0.05	1.56
$R^2$	0.	12	0.	18	0.	19

Table 4.9 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Orthogonalized Women Directors' Directorship Experience)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for women directors' directorship experience critical mass contact history.  $^{\dagger}p < 0.10, ^{*}p < 0.05, ^{**}p < 0.01$ .

	Model 1		Model 2		Model 3	
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	-0.73	8.75	-0.21	8.66
CEO Gender	0.99	4.88	0.28	4.91	0.13	4.83
Duality	-2.03	2.67	-1.60	2.60	-1.40	2.66
Firm Size	0.22	1.85	-0.40	1.88	-0.31	1.89
ROA	0.19	1.16	0.24	1.14	0.44	1.15
Capital Expenditures	-0.87	0.84	-1.37*	0.73	-1.46†	0.77
CEO Pay Power	-2.05	1.45	-2.46†	1.32	$-2.40^{\dagger}$	1.31
CEO Age	1.04	1.38	1.32	1.39	1.23	1.40
CEO Tenure	2.23	2.11	2.10	2.09	2.09	2.07
Total Directors	1.40	1.58	-0.39	1.46	-0.53	1.41
Meetings	-0.53	1.42	-0.82	1.42	-0.87	1.41
Not Independent Directors	-0.78	1.17	-1.24	1.19	-0.93	1.19
Women Directors' Age	$2.26^{\dagger}$	1.29	1.54	1.33	1.77	1.48
Women Directors' Tenure	-2.94*	1.23	-3.96**	1.29	-4.00**	1.29
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.33	1.56	-0.53	1.60
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.50	1.49	-0.55	1.50
SD of Pay of Executives	0.16	0.98	0.31	0.97	0.12	0.93
C-Suite Executives	-2.81*	1.31	-3.27*	1.32	-3.03*	1.37
Women C-Suite Executives	7.01**	1.68	$6.82^{**}$	1.67	6.92**	1.67
Women Directors			1.71	1.62	1.79	1.65
Women Directors' Directorship Experience			2.26	1.40	2.26	1.42
Orthogonalized Business Expert Women Directors			-1.50	1.43	-2.14	1.43
Critical Mass Contact History			4.23**	1.38	4.70**	1.55
Women Directors X Women Directors' Directorship Experience					0.12	1.23
Women Directors X Orthogonalized Business Expert Women Directors					1.26	1.48
Women Directors X Critical Mass Contact History					-0.72	1.60
$R^2$	0.	.16	0.	.20	0	.21

Table 4.10 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Orthogonalized Business Expert Women Directors)

*Notes*. N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for business expert women directors and critical mass contact history. <sup>†</sup>p < 0.10, <sup>\*</sup>p < 0.05, <sup>\*\*</sup>p < 0.01.

	Model	<u> 1</u>	Mode	<u>el 2</u>	Model	3
-	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	18.38**	4.60	13.63*	5.43	13.69*	5.50
CEO Gender	1.45	4.29	-0.79	4.70	-0.92	4.72
Duality	1.55	2.46	2.03	2.42	2.00	2.45
Firm Size	4.12	1.72	2.14	1.79	2.03	1.80
ROA	1.00	1.14	0.57	1.08	0.60	1.10
Capital Expenditures	-0.72	1.14	-0.95	1.27	-0.90	1.29
CEO Pay Power	0.52	1.27	0.60	1.21	0.65	1.21
CEO Age	0.35	1.37	1.42	1.34	1.45	1.36
CEO Tenure	-1.08	1.31	-1.48	1.16	-1.52	1.14
Total Directors	0.95	1.59	-1.14	1.62	-1.11	1.61
Meetings	-0.42	1.39	-0.35	1.32	-0.35	1.31
Not Independent Directors	-0.70	1.21	-1.42	1.41	-1.35	1.41
Women Directors' Age	1.33	1.15	-1.25	1.19	-1.31	1.33
Women Directors' Tenure	-2.35*	1.16	-3.03*	1.22	-3.04*	1.21
Critical Mass Contact History Men's Tenure	-1.13	1.36	-1.85	1.42	-1.92	1.44
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.16	1.37	-1.26	1.36
SD of Pay of Executives	-0.88	0.91	-0.61	0.85	-0.62	0.85
C-Suite Executives	0.32	1.30	-0.60	1.21	-0.57	1.22
Women C-Suite Executives	3.54**	1.28	$2.94^{*}$	1.22	$2.94^{*}$	1.23
Women Directors			5.32**	1.73	5.38**	1.75
Women Directors' Directorship Experience			3.01*	1.31	3.01*	1.34
Orthogonalized Business Expert Women Directors			-1.57	1.38	-1.61	1.32
Critical Mass Contact History			2.04	1.23	2.36†	1.23
Women Directors X Women Directors' Directorship Experience					-0.27	1.35
Women Directors X Orthogonalized Business Expert Women Directors					0.02	1.47
Women Directors X Critical Mass Contact History					-0.58	1.56
$R^2$	0.	12	0.	.18	0.	19

Table 4.11 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Orthogonalized Business Expert Women Directors)

*Notes*. N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for business expert women directors and critical mass contact history. <sup>†</sup>p < 0.10, <sup>\*</sup>p < 0.05, <sup>\*\*</sup>p < 0.01.

	Model 1		Model 2		Model 3	
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	-0.49	8.47	-0.49	8.83
CEO Gender	0.99	4.88	0.28	4.89	0.13	4.89
Duality	-2.03	2.67	-1.57	2.62	-1.55	2.66
Firm Size	0.22	1.85	-0.35	1.88	-0.46	1.89
ROA	0.19	1.16	0.27	1.15	0.29	1.16
Capital Expenditures	-0.87	0.84	-1.37†	0.75	-1.42 <sup>†</sup>	0.75
CEO Pay Power	-2.05	1.45	-2.49†	1.32	-2.45†	1.30
CEO Age	1.04	1.38	1.26	1.39	1.33	1.38
CEO Tenure	2.23	2.11	2.13	2.11	2.06	2.04
Total Directors	1.40	1.58	-0.47	1.43	-0.42	1.42
Meetings	-0.53	1.42	-0.87	1.41	-0.83	1.41
Not Independent Directors	-0.78	1.17	-1.13	1.19	-1.08	1.18
Women Directors' Age	$2.26^{+}$	1.29	2.00	1.38	1.96	1.49
Women Directors' Tenure	-2.94*	1.23	-4.09**	1.30	-4.04**	1.28
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.39	1.56	-0.42	1.57
Critical Mass Contact History Men's	0.19	1.53	-0.45	1.50	-0.64	1.49
Appointments						
SD of Pay of Executives	0.16	0.98	0.25	0.96	0.24	0.96
C-Suite Executives	-2.81*	1.31	-3.22*	1.30	-3.22*	1.35
Women C-Suite Executives	$7.01^{**}$	1.68	6.88**	1.67	6.83**	1.67
Women Directors			1.77	1.63	1.80	1.63
Women Directors' Directorship Experience			2.28	1.42	2.31	1.40
Business Expert Women Directors Proportion			-1.55	1.30	-1.77	1.66
Critical Mass Contact History			4.27**	1.37	4.63**	1.55
Women Directors X Women Directors' Directorship Experience					0.08	1.20
Women Directors X Business Expert Women Directors Proportion					-0.52	1.89
Women Directors X Critical Mass Contact History					-0.86	1.61
$R^2$	0.16		0.20		0.20	

Table 4.12 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Business Expert Women Directors Proportion)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{*}p < 0.10, ^{*}p < 0.05, ^{**}p < 0.01$ .

	Model 1		Model 2		Model 3		
	Coef.	SE	Coef.	SE	Coef.	SE	
Intercept	18.38**	4.60	13.93**	5.24	13.83*	5.46	
CEO Gender	1.45	4.29	-0.83	4.70	-0.92	4.73	
Duality	1.55	2.46	2.00	2.44	2.00	2.47	
Firm Size	4.12	1.72	2.15	1.81	2.03	1.80	
ROA	1.00	1.14	0.59	1.09	0.60	1.09	
Capital Expenditures	-0.72	1.14	-0.92	1.30	-0.90	1.28	
CEO Pay Power	0.52	1.27	0.57	1.21	0.65	1.21	
CEO Age	0.35	1.37	1.36	1.35	1.45	1.34	
CEO Tenure	-1.08	1.31	-1.45	1.14	-1.52	1.14	
Total Directors	0.95	1.59	-1.18	1.61	-1.11	1.60	
Meetings	-0.42	1.39	-0.39	1.31	-0.35	1.30	
Not Independent Directors	-0.70	1.21	-1.32	1.43	-1.35	1.42	
Women Directors' Age	1.33	1.15	-0.81	1.21	-1.31	1.48	
Women Directors' Tenure	-2.35*	1.16	-3.16*	1.22	-3.04*	1.21	
Critical Mass Contact History Men's	-1.13	1.36	-1.92	1.43	-1.92	1.43	
Tenure Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.09	1.37	-1.26	1.37	
SD of Pay of Executives	-0.88	0.91	-0.66	0.84	-0.62	0.85	
C-Suite Executives	0.32	1.30	-0.53	1.21	-0.58	1.23	
Women C-Suite Executives	3.54**	1.28	$3.00^{*}$	1.22	$2.94^{*}$	1.23	
Women Directors			5.38**	1.74	5.44**	1.75	
Women Directors' Directorship Experience			3.03*	1.32	3.01*	1.34	
Business Expert Women Directors Proportion			-1.44	1.21	-1.83	1.61	
Critical Mass Contact History			$2.08^{\dagger}$	1.23	$2.36^{+}$	1.22	
Women Directors X Women Directors' Directorship Experience					-0.28	1.36	
Women Directors X Business Expert Women Directors Proportion					-0.89	1.89	
Women Directors X Critical Mass Contact History					-0.58	1.55	
$R^2$	0.12		0.18		0.	0.19	

Table 4.13 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Business Expert Women Directors Proportion)

*Notes*. N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .
	Model 1		Mode	el 2	Model 3	
_	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	3.46	8.57	3.19	9.34
CEO Gender	0.99	4.88	0.41	4.91	0.88	4.88
Duality	-2.03	2.67	-1.66	2.62	-1.71	2.65
Firm Size	0.22	1.85	-0.29	1.91	-0.01	1.91
ROA	0.19	1.16	0.27	1.15	0.24	1.16
Capital Expenditures	-0.87	0.84	-1.41*	0.80	-1.44*	0.83
CEO Pay Power	-2.05	1.45	-2.55†	1.33	-2.58†	1.32
CEO Age	1.04	1.38	1.21	1.39	1.07	1.40
CEO Tenure	2.23	2.11	2.05	2.14	2.10	2.15
Total Directors	1.40	1.58	-0.41	1.46	-0.44	1.46
Meetings	-0.53	1.42	-0.89	1.40	-0.95	1.37
Not Independent Directors	-0.78	1.17	-1.22	1.17	-1.42	1.20
Women Directors' Age	$2.26^{\dagger}$	1.29	1.95	1.35	1.92	1.60
Women Directors' Tenure	-2.94*	1.23	-4.21**	1.31	-4.16**	1.28
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.40	1.55	-0.33	1.57
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.41	1.50	-0.18	1.52
SD of Pay of Executives	0.16	0.98	0.31	0.95	0.39	0.99
C-Suite Executives	-2.81*	1.31	-3.18*	1.31	-3.40*	1.32
Women C-Suite Executives	7.01**	1.68	6.76**	1.66	6.73**	1.68
Women Directors			-0.34	1.83	0.06	4.17
Women Directors' Directorship Experience			2.43 <sup>†</sup>	1.42	2.33 <sup>†</sup>	1.40
Business Expert Women Directors			-4.04	3.44	-4.16	4.61
Tally of Critical Mass Contact History			5.00**	1.59	4.42*	1.75
Women Directors X Women Directors' Directorship Experience					-0.44	1.28
Women Directors X Business Expert Women Directors					-0.78	4.55
Women Directors X Tally of Critical Mass Contact History					1.48	1.88
$R^2$	0.16		0.	.20	0.	21

Table 4.14 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Tally of Critical Mass Contact History)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Model 2		Model 3		
	Coef.	SE	Coef.	SE	Coef.	SE	
Intercept	18.38**	4.60	17.67**	5.75	17.06*	7.15	
CEO Gender	1.45	4.29	-0.71	4.71	-0.26	4.71	
Duality	1.55	2.46	1.93	2.45	1.83	2.47	
Firm Size	4.12	1.72	2.22	1.84	2.48	1.83	
ROA	1.00	1.14	0.59	1.08	0.57	1.09	
Capital Expenditures	-0.72	1.14	-0.96	1.33	-0.92	1.36	
CEO Pay Power	0.52	1.27	0.51	1.21	0.51	1.22	
CEO Age	0.35	1.37	1.31	1.35	1.16	1.32	
CEO Tenure	-1.08	1.31	-1.53	1.13	-1.47	1.09	
Total Directors	0.95	1.59	-1.13	1.62	-1.17	1.59	
Meetings	-0.42	1.39	-0.42	1.30	-0.50	1.24	
Not Independent Directors	-0.70	1.21	-1.41	1.39	-1.60	1.45	
Women Directors' Age	1.33	1.15	-0.85	1.19	-0.97	1.63	
Women Directors' Tenure	-2.35*	1.16	-3.27**	1.23	-3.24**	1.21	
Critical Mass Contact History Men's Tenure	-1.13	1.36	-1.93	1.43	-1.89	1.41	
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.06	1.38	-0.80	1.37	
SD of Pay of Executives	-0.88	0.91	-0.60	0.84	-0.52	0.87	
C-Suite Executives	0.32	1.30	-0.49	1.23	-0.72	1.20	
Women C-Suite Executives	3.54**	1.28	$2.88^{*}$	1.22	$2.88^{*}$	1.25	
Women Directors			$4.56^{*}$	1.79	4.49	4.77	
Women Directors' Directorship Experience			3.17*	1.33	3.03*	1.36	
Business Expert Women Directors			-3.83	3.19	-3.71	4.54	
Tally of Critical Mass Contact History			2.45†	1.43	1.91	1.51	
Women Directors X Women Directors' Directorship Experience					-0.84	1.42	
Women Directors X Business Expert Women Directors					-0.23	4.80	
Women Directors X Tally of Critical Mass Contact History					1.54	1.80	
$R^2$	0.12		0.	18	0.	0 19	

Table 4.15 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Tally of Critical Mass Contact History)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	NG 111		M. 1.10		1112	
	<u>Model I</u>		$\frac{\text{Model } 2}{6}$		$\frac{\text{Model } 3}{C - f}$	
<b>T</b> , , ,	Coej.	SE	Coej.	SE	Coef.	SE 10 5 C
Intercept	2.22	8.04	2.31	9.34	3.81	10.56
CEO Gender	0.99	4.88	-0.15	5.02	-0.60	5.04
Duality	-2.03	2.67	-1.53	2.63	-1.69	2.70
Firm Size	0.22	1.85	-0.45	1.93	-0.56	1.91
ROA	0.19	1.16	0.34	1.15	0.42	1.14
Capital Expenditures	-0.87	0.84	-1.24	0.83	-1.38†	0.81
CEO Pay Power	-2.05	1.45	-2.37†	1.33	-2.35†	1.30
CEO Age	1.04	1.38	1.30	1.39	1.42	1.37
CEO Tenure	2.23	2.11	1.91	2.14	1.68	1.93
Total Directors	1.40	1.58	0.99	1.46	1.07	1.43
Meetings	-0.53	1.42	-0.70	1.39	-0.73	1.40
Not Independent Directors	-0.78	1.17	-1.10	1.17	-0.92	1.18
Women Directors' Age	$2.26^{\dagger}$	1.29	2.00	1.37	2.41	1.65
Women Directors' Tenure	-2.94*	1.23	-4.14**	1.30	<b>-</b> 4.19*	1.29
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.39	1.55	-0.49	1.57
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.66	1.48	-1.11	1.44
SD of Pay of Executives	0.16	0.98	0.32	0.96	0.25	0.93
C-Suite Executives	-2.81*	1.31	-3.25*	1.32	-3.17*	1.32
Women C-Suite Executives	7.01**	1.68	6.75**	1.65	6.75**	1.65
Women Directors			1.70	1.74	2.77	4.18
Women Directors' Directorship Experience			2.51*	1.42	$2.60^{+}$	1.39
Business Expert Women Directors			-3.72	3.48	-4.18	4.73
Critical Mass Contact History Proportion			3.81**	1.27	4.71**	1.57
Women Directors X Women Directors' Directorship Experience					0.34	1.24
Women Directors X Business Expert Women Directors					-1.27	4.84
Women Directors X Critical Mass Contact History Proportion					-2.17	1.85
$R^2$	(	0.16	0	.20		0.21

Table 4.16 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Critical Mass Contact History Proportion)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history proportion.  ${}^{\dagger}p < 0.10$ ,  ${}^{*}p < 0.05$ ,  ${}^{**}p < 0.01$ .

	Model 1		Model 2		Model 3	
	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	18.38**	4.60	17.40**	6.17	17.83*	7.78
CEO Gender	1.45	4.29	-0.74	4.74	-0.99	4.76
Duality	1.55	2.46	1.94	2.45	1.84	2.48
Firm Size	4.12	1.72	2.21	1.84	2.13	1.83
ROA	1.00	1.14	0.61	1.09	0.66	1.10
Capital Expenditures	-0.72	1.14	-0.87	1.33	-0.87	1.34
CEO Pay Power	0.52	1.27	0.61	1.22	0.64	1.22
CEO Age	0.35	1.37	1.35	1.35	1.40	1.33
CEO Tenure	-1.08	1.31	-1.58	1.14	-1.68	1.12
Total Directors	0.95	1.59	-0.45	1.62	-0.40	1.57
Meetings	-0.42	1.39	-0.30	1.30	-0.33	1.29
Not Independent Directors	-0.70	1.21	-1.37	1.36	-1.28	1.35
Women Directors' Age	1.33	1.15	-0.90	1.18	-0.79	1.59
Women Directors' Tenure	-2.35*	1.16	-3.21**	1.22	-3.25**	1.21
Critical Mass Contact History Men's Tenure	-1.13	1.36	-1.78	1.43	-1.86	1.42
Critical Mass Contact History Men's Appointments	-0.80	1.38	-1.09	1.37	-1.28	1.39
SD of Pay of Executives	-0.88	0.91	-0.61	0.84	-0.64	0.84
C-Suite Executives	0.32	1.30	-0.53	1.24	-0.49	1.24
Women C-Suite Executives	3.54**	1.28	$2.88^{*}$	1.21	2.91*	1.22
Women Directors			5.48**	1.79	5.62	4.84
Women Directors' Directorship Experience			3.30*	1.34	3.31*	1.38
Business Expert Women Directors			-3.71	3.21	-3.73	4.66
Critical Mass Contact History Proportion			1.29	1.24	1.75	1.21
Women Directors X Women Directors' Directorship Experience					-0.16	1.42
Women Directors X Business Expert Women Directors					-0.12	5.16
Women Directors X Critical Mass Contact History Proportion					-1.01	1.42
$R^2$	0.12		0	18	0.18	

Table 4.17 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Long-Term) (with Critical Mass Contact History Proportion)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measure used for critical mass contact history proportion.  ${}^{\dagger}p < 0.10$ ,  ${}^{*}p < 0.05$ ,  ${}^{**}p < 0.01$ .

	Model 1		Model 2		Model 3	
T	Coef.	SE	Coef.	SE 0.40	Coef.	SE
Intercept	2.22	8.04	3.01	8.49	3.24	9.36
CEO Gender	0.99	4.88	0.51	4.93	0.29	4.98
Duality	-2.03	2.67	-1.73	2.60	-1.64	2.62
Firm Size	0.22	1.85	-0.13	1.93	-0.35	1.95
ROA	0.19	1.16	0.27	1.16	0.18	1.17
Capital Expenditures	-0.87	0.84	-1.45†	0.81	-1.56†	0.82
CEO Pay Power	-2.05	1.45	-2.57†	1.32	-2.63*	1.31
CEO Age	1.04	1.38	1.18	1.38	1.34	1.37
CEO Tenure	2.23	2.11	2.11	2.14	2.02	2.03
Total Directors	1.40	1.58	-0.87	1.67	-0.76	1.71
Meetings	-0.53	1.42	-0.92	1.39	-0.85	1.40
Not Independent Directors	-0.78	1.17	-1.31	1.19	-1.33	1.18
Women Directors' Age	2.26†	1.29	1.87	1.37	2.09	1.60
Women Directors' Tenure	-2.94*	1.23	-4.18**	1.30	-4.17**	1.30
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.44	1.55	-0.48	1.58
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.50	1.52	-0.59	1.52
SD of Pay of Executives	0.16	0.98	0.30	0.96	0.33	0.97
C-Suite Executives	-2.81*	1.31	-3.19*	1.31	-3.31*	1.36
Women C-Suite Executives	7.01**	1.68	6.78**	1.66	6.83**	1.66
Women Directors			2.46	1.78	2.95	4.07
Women Directors' Directorship Experience			2.37 <sup>†</sup>	1.42	2.42†	1.40
Business Expert Women Directors			-3.99	3.43	-4.03	4.70
Critical Mass Contact History			4.86**	1.74	5.52**	2.04
Tokenism Only Contact History			0.80	1.35	1.44	1.55
Women Directors X Women Directors' Directorship Experience					0.02	1.29
Women Directors X Business Expert Women Directors					-0.56	4.76
Women Directors X Critical Mass Contact History					-0.68	1.61
Women Directors X Tokenism Only Contact History					1.26	1.22
$R^2$	0.16		0.	20	0.21	

Table 4.18 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Tokenism Only Contact History)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for critical mass contact history and tokenism only contact history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

	Model 1		Model 2		Model 3	
_	Coef.	SE	Coef.	SE	Coef.	SE
Intercept	2.22	8.04	3.41	8.65	3.68	9.65
CEO Gender	0.99	4.88	0.55	5.07	0.44	5.06
Duality	-2.03	2.67	-1.63	2.64	-1.64	2.69
Firm Size	0.22	1.85	-0.31	1.91	-0.42	1.91
ROA	0.19	1.16	0.27	1.15	0.28	1.16
Capital Expenditures	-0.87	0.84	-1.45†	0.81	-1.46†	0.86
CEO Pay Power	-2.05	1.45	-2.57†	1.33	-2.55†	1.31
CEO Age	1.04	1.38	1.22	1.39	1.26	1.40
CEO Tenure	2.23	2.11	2.07	2.14	2.02	2.09
Total Directors	1.40	1.58	-0.44	1.47	-0.40	1.50
Meetings	-0.53	1.42	-0.90	1.40	-0.87	1.42
Not Independent Directors	-0.78	1.17	-1.29	1.22	-1.24	1.22
Women Directors' Age	2.26 <sup>†</sup>	1.29	1.93	1.35	1.97	1.59
Women Directors' Tenure	-2.94*	1.23	-4.18**	1.31	-4.18**	1.31
Critical Mass Contact History Men's Tenure	0.38	1.54	-0.35	1.56	-0.39	1.57
Critical Mass Contact History Men's Appointments	0.19	1.53	-0.42	1.51	-0.55	1.51
SD of Pay of Executives	0.16	0.98	0.30	0.95	0.29	0.96
C-Suite Executives	-2.81*	1.31	-3.14*	1.33	-3.11*	1.36
Women C-Suite Executives	7.01**	1.68	6.76**	1.67	6.73**	1.67
Women Directors			2.20	1.73	2.59	4.14
Women Directors' Directorship Experience			$2.42^{\dagger}$	1.42	2.45†	1.43
Business Expert Women Directors			-4.07	3.45	-4.19	4.72
Critical Mass Contact History			4.18**	1.36	4.48**	1.54
Woman CEO-Men Director Collaboration			0.40	1.38	0.41	1.29
History Women Directors X Women Directors' Directorship Experience					0.06	1.27
Women Directors X Business Expert Women Directors					-0.45	4.74
Women Directors X Critical Mass Contact History					-0.62	1.71
Women Directors X Woman CEO-Men Director Collaboration History					-0.06	1.61
$R^2$	0.16		0.	.20	0.	.20

Table 4.19 Regression Results Predicting Gender Diversity of CEO Successor Candidate Pool (Immediate) (with Woman CEO-Men Director Collaboration History)

*Notes.* N = 336 observations in 196 firms. Two-tailed tests. Year and Industry controls included in all models. Robust standard errors (SE) reported, clustered by firm. Variables are standardized; orthogonalized measures used for critical mass contact history and woman CEO-men director collaboration history.  $^{\dagger}p < 0.10$ ,  $^{*}p < 0.05$ ,  $^{**}p < 0.01$ .

# CHAPTER 5

# DISCUSSION

In this dissertation, I explored two related research questions: when do women directors positively impact the gender diversity of the internal CEO successor candidate pool (and why), and when do men directors positively impact the gender diversity of the internal CEO successor candidate pool (and why). Exploring these questions is important for at least four reasons. First, having more women CEOs who are promoted within the company is beneficial to the firm, as well as a sociological imperative in its own right. Second, having women in the c-suite may not be enough to guarantee the internal CEO successor candidate pool as feasible, including gender diversity specifically, is inherently part of prudent succession planning. Finally, having more women in the CEO successor candidate pool may help to ensure those women who do take on the role of CEO had more access to valuable developmental/skills-building opportunities enabling them to thrive in the role.

The results herein represent an intriguing combination of effects. Both women directors' directorship experience and critical mass contact history positively impact gender diversity of CEO successor candidates, and both are direct effect relationships. Although the effects found in the primary analyses are robust, neither aforementioned predictor variable impacted both types of successor candidate pools (i.e., immediate vs. long-term). The totality of results point to several theory-building implications.

# 5.1. THEORETICAL IMPLICATIONS

In this dissertation, I help generate insights on how the variance between individual women directors in terms of their career histories may help scholars better understand the trickle down effect (e.g. Ali et al., 2020; Bilimoria, 2006; Gould et al., 2018; Matsa & Miller, 2011; You, 2021). The results in this dissertation do indicate having more women serve on the board may lead to a more gender diverse CEO successor candidate pool (long-term) (see Table 4.3), consistent with broader findings in the trickle down effect literature. I did not find this specific effect was strengthened by having women directors with higher amounts of prior directorship experience serve, or by specifically having 'business expert' women directors serve. However, I did find that controlling for the number of women directors serving, there is a direct effect positive relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term) (see Table 4.3). The findings herein apply specifically to the gender diversity of the CEO successor candidate pool (long-term). Nevertheless, these results point to an important new consideration for trickle down effect scholars: promotion of junior women at a firm may be better explained by considering not only the total number of women who serve at the top, but also the individual board service histories of those women collectively.

The second contribution I make in this dissertation is twofold, helping build both contact theory and critical mass theory. The results herein indicate a positive direct effect relationship between having more men directors with critical mass contact history and gender diversity of CEO successor candidate pool (immediate). The use of orthogonalized measures of critical mass contact history suggest that effect comes from

having more men directors with critical mass contact history than would be expected based on the number of women directors presently on the focal board; however, similar effects are found when using a non-orthogonalized measure (see Table 4.14). Supplemental analyses specifically indicate it is having men directors who had contact with a critical mass of women director colleagues at some point prior which is positively associated with a more gender diverse CEO successor candidate pool (immediate). Simply having men directors who have worked with women colleagues at all, such as only working with token numbers of such colleagues (see Table 4.18), or having men directors who have served on boards of firms which had a woman CEO (see Table 4.19), is not associated with a more gender diverse CEO successor candidate pool (immediate). This builds contact theory by shifting the conversation in that literature to an important future research agenda. The results herein suggest it may not be all/any contact with women colleagues which lead a man executive to experience the type of stereotype reduction/ transformative effects such that he will be an active gender diversity ally going forward. This implies future scholars should particularly test if/how working with a critical mass of women colleagues in a single unit vs. working with only a 'token' number of women colleagues in a unit, may differently impact the future conduct of men.

These same results also make a theory-building contribution to critical mass theory. Extant literature establishes that having a critical mass of women in a boardroom (or on the TMT) changes the way men executives perceive and treat those specific women colleagues (Konrad et al., 2008; Tang et al., 2021). However, it is not clear if this transformative effect only extends to that specific work unit, or if men who work in such a critical mass context will broadly behave differently going forward. The results herein

indicate that having more men directors who have been on a critical mass board at some point prior to the observation year is positively associated with a more gender diverse CEO successor candidate pool (immediate). This provides support that men directors working with a critical mass of women director colleagues may actually have meaningful spill-over and spill-forward effects, even beyond the organization where this initial 'critical mass' experience occurred.

In this dissertation, I also help build theory on what is required to ensure an effective CEO succession. CEO succession is practically consequential, as the cost of hiring the wrong CEO may be as high as \$100 billion (Fernández-Aráoz, 2015). However, scholars have focused on studying the succession event itself. Scholars know much less about how boards of directors plan in advance for the departure of the current CEO, which internal executives are most actively groomed to be the next CEO, and why (Berns & Klarner, 2017; Cragun et al., 2016; Nyberg et al., 2021). The results in this dissertation offer insights about how and why the personal traits of directors, both with respect to demographics and career histories, ultimately impact the degree women executives are included in the CEO successor candidate pool(s). Such insights help scholars to better advise practitioners on the steps needed to ensure the development of all talented executives in the firm, not just the development of the men executives.

#### **5.2. PRACTICAL IMPLICATIONS**

Prior work has explored the proposed trickle down effect, whereby having more women directors should lead to the promotion of more junior women throughout the organization (Ali et al., 2020; Bilimoria, 2006; Delgado-Piña et al., 2020; Matsa & Miller, 2011). The results herein are compatible with this (see Table 4.3). However, the

results of this dissertation also add to the trickle down effect literature by demonstrating the tally of women directors may not be the only relevant consideration. In at least some regards, it may be valuable to recruit to the board women who have more prior directorship experience, as these specific types of women directors may play a key role in ensuring gender diversity in the CEO successor candidate pool (long-term). Such realities should nevertheless be balanced with other practical considerations for ensuring effective corporate governance. This includes ensuring the optimal mix of different types of occupational expertise brought by the members of the board. As an example, there may be times when it is ultimately better to a) hire a woman director who brings rare expertise desperately needed at that firm (such as cyber-security expertise), but is a relatively inexperienced director, rather than b) hire a woman director with ample prior directorship experience whose occupational expertise is very similar to that of the board's current directors.

The results of this dissertation also suggest having more men directors serve who have specifically worked with a critical mass of women director colleagues (i.e. three such colleagues on a given board), may be relevant to ensuring a more gender diverse upper echelons of the firm. However, this does not imply hiring men directors with critical mass contact history is comparatively more important than hiring women directors. Men directors with critical mass contact history may help ensure gender diversity for the pool of immediate CEO successor candidates, while women directors may be the ones helping ensure gender diversity for the pool of long-term CEO successor candidates. Ensuring both pools are gender diverse, as well as having nominating committees add/retain women directors, are all important individual subcomponents of

the broader sociological imperative for equitable representation of women in the succession planning pool. Rather, the results in this dissertation suggest when board nominating committees are reviewing CVs of potential new men directors, it is worthwhile to specifically assess whether a given man candidate has worked with three women director colleagues at once.

# 5.3. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The results in this dissertation indicate women directors' directorship experience impacts gender diversity of CEO successor candidate pool (long-term), but not gender diversity of CEO successor candidate pool (immediate). In contrast, critical mass contact history impacts gender diversity of CEO successor candidate pool (immediate), but not gender diversity of CEO successor candidate pool (long-term). Without board transcripts detailing which directors made which statements regarding the firm's succession planning, it is not feasible to directly verify why this is so. There are nevertheless two points to emphasize in this regard.

First, although the immediate and long-term CEO successor candidate pools are distinct, both are practically important. All else being equal, diversity of CEO successor candidates helps the firm have an array of viable options when choosing the next CEO, whenever the next CEO succession event occurs. When exactly the next succession event will occur, is unknown. It may ultimately happen earlier than expected, exactly when expected, or later than expected. The ideal situation is to therefore have both CEO successor candidate pools be gender diverse. Thus, the results herein do not imply critical mass contact history or women directors' directorship experience are comparatively more

important for ensuring the degree of gender diversity of CEO successor candidates to which firms should aspire: both are important, but for different reasons.

Second, attempting to explain why critical mass contact history and women directors' directorship experience each impact gender diversity of only one type of CEO successor candidate pool represents a meaningful agenda for future research. One interpretation of the findings in this dissertation is that even when comparing men and women executives who are all comparably committed advocates of gender diversity and inclusion, there are nevertheless gender differences in terms of which gender diversity and inclusion initiatives men vs. women advocates prioritize. There is specific evidence of gender differences between men directors and women directors in terms of personal values, some of which do, and some of which do not, mirror the broader population. Like in the broader population (i.e., women vs. men), women directors are more universally concerned than men directors; however, in direct contrast to the broader population, women directors are actually more risk-prone than men directors (Adams & Funk, 2012). One or both of these realities could help explain the findings in this dissertation. Women directors with ample directorship experience may be the ones who are more prone to think about the multi-year skills building opportunities the firm can provide women csuite executives to ensure their own personal growth and development. At the same time, men directors with critical mass contact history may be more likely to prioritize issues of who is in the emergency CEO succession pool generally, due to their risk preferences. Future research should explore these considerations in greater depth.

A related future research opportunity is to explore if and how having a) women directors with more directorship experience and/or b) men directors with critical mass

contact history, impact other gender diversity and inclusion initiatives throughout the firm. Company records on when/where employees are required to attend unconscious biases and/or harassment awareness training programs, or records on firm sponsored higher education programs for women employees (particularly in subjects historically populated by men, such as STEM), could be leveraged in this regard. Such information on internal policies could be paired with information on who serves on the board to further assess if women directors with more directorship experience and men directors with critical mass contact history may tend to support gender diversity and inclusion in distinct ways from one another. Such work would be meaningful because it could build theory beyond an (admittedly needed) understanding of which executives are supporters of diversity and inclusion, to detail how such executive supporters foster diversity and inclusion (and why).

The dependent variables used in the analyses in this dissertation represented the percent a given CEO successor candidate pool was gender diverse, rather than the absolute tally of women in the pool. The CES survey distributed from 2016-2018 did not consistently collect information on the overall number of internal successor candidates, and thus such tally measures were not possible. The use of a percentage may be seen as a limitation to these findings, since there may be observations with the same percentage scores, yet different absolute numbers of women in the pool. For example, a firm with a successor candidate pool with one woman and one man successor candidate, and a firm with a successor candidate pool with two women and two men successor candidates, would both have a percentage score of 50% women (i.e. 50% gender diverse). There are two realities that mitigate these concerns.

First, there are cases where a percentage score is an arguably better way of assessing a firm's commitment to gender diversity in the CEO successor candidate pool. For example, a firm with a candidate pool of two individuals with one woman (50%) women) arguably has a stronger commitment to gender diversity than does a firm with a candidate pool of ten individuals with two women (20% women). Second, designing the survey to ask CHROs to volunteer information on the percent of women in their CEO successor candidate pool (and not the tally of such women) was intentional. CES associates were concerned that some CHROs may fear negative public relations implications of revealing their firm only has a single woman CEO successor candidate, but may be more comfortable highlighting that women represent 50% of the firm's candidate pool. In this way, the survey was designed to maximize the likelihood the individuals surveyed would actually be willing to answer the questions on CEO successor candidate pool diversity and limit the effect of social desirability bias. Thus, concerns over how the dependent variables were specifically measured need to be weighed against the practical challenges of obtaining a large and representative enough sample size of survey responses to empirically study gender diversity of the CEO successor candidate pool at all.

Although I hypothesized having business expert women directors would impact the gender diversity of the CEO successor candidate pool, the results did not show any effects to support this. However, future research should explore if there are other important outcomes that are impacted by having more business expert women directors (specifically). One promising option involves meta-analytic findings that a gender diverse TMT is associated with better firm performance, specifically mediated by reduced risk-

taking (Jeong & Harrison, 2017). This is at odds with evidence women directors are more prone to take risks than are their men director colleagues (Adams & Funk, 2012). Any woman director who has prior experience serving on the TMT of a for-profit firm would, by definition, be a 'business expert' woman director. Thus, the specific consideration of having business expert (as opposed to support specialist/ community influential) women directors, may help reconcile this set of findings.

The findings in this dissertation show that women directors' directorship experience is positively associated with the gender diversity of CEO successor candidate pool (long-term). In formulating the hypothesis related to this effect, I discussed multiple mechanisms. This included both a) how/why women directors with more directorship experience are more able to influence their colleagues, but also b) how/why such women directors may have less impetus to engage in 'queen bee' behavior. In the absence of board meeting transcripts, I cannot verify the precise degree each of these two mechanisms explain the direct effect found. Investigating this issue in more depth is a fruitful opportunity for future research.

The logic that reduced 'queen bee' behavior would strengthen the expected trickle down effect, also informed the interaction proposed in Hypothesis 4. Given that no support was found for Hypothesis 4, this arguably strengthens the case that the direct effect relationship between women directors' directorship experience and gender diversity of CEO successor candidate pool (long-term), is due more to such women wielding influence, rather than such women being less likely to withhold their views on gender diversity. Nevertheless, exploring when/why women executives may or may not bring attention to gender diversity and inclusion issues is an important research future

research agenda that can contribute to both literature on the experience of women in the upper echelons, as well as to the broader literature on employee voice (e.g. Brescoll, 2011; Morrison & Milliken, 2000; Milliken et al., 2003; Morrison, 2011).

As with any empirical study, my choice of sample used implies limitations in terms of the generalizability of findings. This is true in at least three regards. First, 98% (191 of 196) of the firms represented in the sample used were specifically US-based firms. The findings herein may not generalize to all other national contexts. However, given evidence the representation of women on boards is itself positively impacted by the degree the local jurisdiction has gender progressive laws in place (Thams, Bendell, & Terjesen, 2018), it is plausible the effects herein may be stronger in certain other countries. 80% (155 of 196) of the firms represented in the sample used were Russell 1000 or comparably sized privately-held (for-profit) firms. The findings herein may not generalize to all other types of organizations. However, there is evidence board gender diversity positively impacts performance more for smaller firms, since directors in large firms have less direct influence over performance (Li & Chen, 2018). The effects found herein could therefore actually be stronger for smaller firms.

The sample tested leveraged the CES surveys from 2016-2018. I submit this is a recent enough time period that there is no baseline reason to think effects found will not hold in present circumstances. I nevertheless acknowledge the merit in exploring the impact of specific events occurring after 2018. One option is to integrate work on how interactions via digital platforms differ from face-to-face contexts (e.g. McFarland & Ployhart, 2015) with theory on how large-scale events change behavior within organizations (e.g. Morgeson, Mitchell, & Liu, 2015) to assess the impact of the COVID-

19 pandemic. This pandemic forced all boards of directors to meet virtually during 2020. It could be beneficial to explore if/how meetings in this virtual context may have altered the behavior of specific types of board directors with respect to how they did/ did not voice their views on gender diversity of the CEO successor candidate pool.

### 5.4. CONCLUSION

In this dissertation, I explored how the career histories of individual board directors impact the gender diversity of a firm's internal CEO successor candidate pool. I revisited the broader literature on CEO succession, literature on the consequences of having more women in the upper echelons, and literature on the unique challenges women face, to develop a theoretical model on which types of directors would be associated with a more gender diverse CEO successor candidate pool. The findings of my empirical analyses indicate that both women directors with more prior directorship experience, and men directors who have specifically worked with a critical mass of women director colleagues, may play an important role in ensuring CEO successor candidate pools are gender diverse. This dissertation therefore helps scholars gain a richer understanding of a) how career histories of individual women directors may help predict where trickle down effects occur, b) how working with three or more women colleagues at once can make men executives more active allies of gender diversity and inclusion going forward, and c) how/why the specific backgrounds of individual board directors may impact CEO succession planning activities within the firm.

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