Power in the upper echelons: Females, racial minorities and the distribution of power

by

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Abstract

The distribution of structural power in the upper echelons is unequal, but more so for females and racial minorities in the C-suite (Kulich, Trojanowski, Ryan, Haslam & Renneboog, 2011). Discrimination towards females and racial minorities is of interest to scholars, practitioners, and government entities. Although discrimination is illegal, there are many forms of overt discrimination that negatively impact these individuals. Using S&P 500 companies, this dissertation examines the distribution of structural power to females and racial minorities in the C-suite through the lens of social dominance theory. Several moderated relationships are also examined using CEO and board of director diversity in gender and race to examine the distribution of structural power to females and racial minorities in the C-suite. Findings indicate that structural power is distributed unequally to females and racial minorities in the TMT and that the presence of an in-group CEO can decrease the unequal distribution of power to TMT members.

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List of Abbreviations and Key Definitions

AMJ: Academy of Management Journal

AMR: Academy of Management Review

ASQ: Administrative Science Quarterly

BOD: Board of Directors

C-suite: The Collective of Chief Officers in a firm

CEO: Chief Executive Officer

CFO: Chief Financial Officer

CIO: Chief Information Officer

CMO: Chief Marketing Officer

COO: Chief Operating Officer

CPO: Chief Product Officer

Diversity: female and racial diversity

DV: Dependent Variable

IRR: Inter-Rater Reliability

ISS: Institutional Shareholder Services

IV: Independent variable

JAP: Journal of Applied Psychology

JMS: Journal of Management Studies

JOF: Journal of Finance

JOM: Journal of Management

LMX: Leader-Member Exchange

MBA: Master's of Business Administration

OS: Organization Science

ROA: Return on Assets

ROE: Return on Equity

ROS: Return on Sales

SMJ: Strategic Management Journal

TMT: Top Management Team

U.S.: United States

UE: Upper Echelons

UET: Upper Echelons Theory

Power in the upper echelons: Females, racial minorities and the distribution of power

Chapter 1

Dissertation Overview

"*Power is defined as the ability to control another's outcomes… "it is power rather than reputation that enables one to discriminate in the first place*" (Sidanius & Pratto, 2001, p. 19).

Section 1.1: Introduction

There has been a recent emergence of research focusing on power in the upper echelons (Finkelstein, 1992; Triana, Miller & Trzebiatowski, 2014; Van Essen, Otten & Carberry, 2015). The distribution of power in the upper echelons is important because the preferences of these powerful individuals are likely to be reflected in the strategic actions taken by the organization (Child, 1972). Finkelstein (1992) outlines various sources of power to individuals in the upper echelons, but structural power is touted as the most common source and is comprised of organizational structure and hierarchy of authority. This overt form of power has important formal indicators such as title held and executive compensation (Finkelstein, 1992; Hambrick & D'Aveni, 1992). Power in the upper echelons is not distributed equally, and more research is needed in this area (Carpenter, Geletkanycz & Sanders, 2004; Finkelstein & Hambrick, 1996; Smith, Houghton, Hood & Ryman, 2006). Scholars have used CEO-TMT pay-disparity as a measure of the distribution of power in the C-suite (Henderson & Fredrickson, 2001). Given the impact of the distribution of structural power on organizational outcomes (Smith et al., 2006), it is important that the distribution of power in the upper echelons be non-discriminatory based on gender and race. However, females and racial minorities in the upper echelons garner less

structural power in the form of compensation (Mackey, Molloy & Morris, 2014). The primary goal of this dissertation is to better understand the distribution of structural power, via the CEO-TMT pay-disparity as well as within-position pay-disparity, to females and racial minorities in the C-suite. To better understand the discrimination in the distribution of power to these individuals this dissertation looks at TMT (Top Management Team), CEO (Chief Executive Officer), and BOD (Board of Director) diversity.

In Fortune 500 companies[1] females comprise 44.3% of employees, but only 25.1% of TMTs and 5.8% of CEO positions (Catalyst, 2017), while only 4% of Fortune 500 CEOs are racial minorities (Zillman, 2014) and only 2 Fortune 500 CEOs are female and racial minorities (Fortune, 2017). The number of racial minorities in TMTs is harder to obtain because only 3% of Fortune 500 companies share this information (Donnelly, 2017). The majority of upper echelon individuals are white males (Heidrick & Struggles, 2017), and even amongst white males, there are many forms of diversity such as age, education, functional background, etc. (Hambrick, 2007; Hambrick & Mason, 1984). However, in this dissertation CEO and BOD diversity is used to refer to individuals with female and/or a non-white status, as depicted in Table 1.1.

[1] Catalyst has reported specific data on Fortune 500 companies, a list comprised of the largest 500 companies which includes both public and private firms. This dissertation utilizes S&P 500 companies as these companies are required to report financial as well as other data in SEC filings making this list of companies more usable to researchers utilizing several variables in analysis.

Table 1.1

Diversity

		Gender	
		Male	Female
Race	White	White male	White female
	Non-white	Non-white male	Non-white female

The diversity of the TMT, CEO and BOD should be examined simultaneously to evaluate the impact of diversity above the glass ceiling better. The term glass ceiling, which according to the U.S. Federal Glass Ceiling Commission (1995), is an "unseen, yet unbreachable barrier that keeps minorities and women from rising to the upper rungs of the corporate ladder, regardless of their qualifications or achievements" is often used to discuss these challenges. In other words, the U.S. Federal Government recognizes that there is a glass ceiling and challenges faced by minority individuals. The study of discrimination amongst individuals in the upper echelons is important because these individuals directly influence the culture and behaviors of entire organizations (Hambrick & Mason, 1984), and these individuals have power within the organization which can enable both intentional and unintentional discrimination (Sidanius & Pratto, 2001). Although intentional discrimination based on gender and race has been illegal for decades in the U.S., there are many drivers of unintentional discrimination that still impede the career success of females and racial minorities. As pioneers of their in-groups above the glass ceiling, females and racial minorities often experience insolation (Kanter, 1977, 1987) lack access to mentors, formal and informal networks, influential colleagues, and role models (Elacqua, Beehr, Hansen & Webster, 2009). In addition, females and racial minorities experience

acculturative stress (i.e. the stress of adapting to a new culture) in adapting to life as a member of the corporate elite further hindering their success (Cox & Nkomo, 1990; Thomas, 1990; Westphal & Stern, 2006). These latent forms of discrimination keep the glass ceiling in place and influence the challenges that females and racial minorities experience in the upper echelons.

In addition, the glass ceiling impacts females and racial minorities at lower levels of the organization and is demotivational to these individuals (Elvira & Cohen, 2001; Richtermeyer, 2002). The glass ceiling influences the mentoring opportunities available to female and racial minorities because individuals are more likely to mentor similar others (Hu, Thomas & Lance, 2008). With few minorities in the upper echelons (Carpenter et al., 2004), minority individuals have fewer mentoring opportunities and resulting in negative outcomes in terms of promotion and compensation (Dreher & Cox, 1996; Lyness & Thompson, 2000). The demotivation impact of the glass ceiling increases turnover (Elvira & Cohen, 2001; Hom & Griffeth, 1995). Elvira and Cohen (2001) found that female turnover in the mid to upper levels of an organization decreases if there are females above the individual's level in the organization. Thus the lack of females in higher levels of the organization, compound glass ceiling effects. It is likely that this also contributes to the higher turnover of racial minorities in organizations (Hom & Griffeth, 1995). Females and racial minorities who feel that they cannot break the glass ceiling often leave organizations to become entrepreneurs (Richtermeyer, 2002; Sharif, 2015; Woodward, 1997). When these minority individuals leave an organization, they take their unique human capital with them, and an organization with fewer minority employees may not have the same competitive edge as an organization with the unique human capital that these individuals bring (Cox & Blake, 1991). In summation, all individuals have a right to equal opportunity (EEOC, 2009). However,

the glass ceiling keeps women and minorities from attaining the same career success as white males.

At this point, it is beneficial to define the usage of the terms C-suite and TMT in this dissertation. There are many ways of defining the group of executives in the upper echelons of the organization (Carpenter et al., 2004). In this dissertation, the term C-suite references the CEO and the four other highest compensated executives, assumed to be the Chief Operating Officer (COO), Chief Financial Officer (CFO), Chief Information Officer (CIO), and Chief Marketing Officer (CMO). In keeping with past research (e.g., Menz, 2012). Consistent with past CEO-TMT pay-disparity research, the term TMT references the top 4 highest paid executives in the organization excluding the CEO (Henderson & Fredrickson, 2001; Shi, Connelly & Sanders, 2016). Although these terms are often interchangeable in the management literature, in this dissertation, these two terms are not interchangeable and necessary to differentiate these groups of powerful individuals.

Recent upper echelon diversity research has included questions that revolved around the influence of minorities in the upper echelons on other minority individuals in the upper echelons across organizations (Joshi, Son & Roh, 2015; Westphal & Milton, 2000). More females at the industry level closed the rewards and performance-based gap for female executives (Joshi et al., 2015). Westphal and Milton (2000) examined how directors who have a current majority status but have had experience as a minority director increased the influence of minority directors on their board. In other words, these minority executives and directors decreased the discrimination faced by their minority peers. Nonetheless, research in this stream is young because it is only in recent years that the representation of females and minorities in the upper echelons has reached a level that allows for statistical analysis (Kossek, Su & Wu, 2016). Researchers are now able to

analyze more in-depth research questions regarding upper echelon females and racial minorities and their demographically similar counterparts.

Research has found that the compensation of a CEO is higher when there are shared demographics, such as functional background and educational degree, between the board and a CEO (Westphal & Zajac, 1995). This research did not include analysis of similarity in gender or race, most likely because of small sample sizes which may remain small due to interlocking directorates (Mizruchi, 1996) and the unification of the corporate elite based in shared social upper-class origins (Domhoff, 2011). Both the informational needs of the organization and personal managerial ties drive interlocking directorates (Mizruchi, 1996). Females and racial minorities do not have the same opportunities for interpersonal relationships (Hu et al., 2008) and promotion (Dreher & Cox, 1996, 2000) as Caucasian males. The upper social class is more likely to be comprised of Caucasian individuals, who become a politically unified corporate elite (Domhoff, 1971, 2011; Mizruchi, 1982; Mizruchi, 1996). Thus, it is inferred that females and racial minorities will be less likely to have the same upper social class origins, personal ties, or outside directorships that drive board interlocks creating a vicious cycle of discrimination that leads to further discrimination. While interlocking directorates bolster the glass ceiling, they also help to diffuse organizational diversity initiatives to include gender and racial diversity on the board (Hillman, Shropshire & Cannella, 2007). This gives a glimmer of hope for future research as long as these individuals are not simply tokens used to meet an implicit quota (Dezso, Ross & Uribe, 2016). Thus, the small number of females and racial minorities in the upper echelons have left questions of minority director influence on CEO and TMT compensation for future research.

Upper echelon research has yet to directly examine the influence of minority leaders on the compensation of minorities in the TMT. Past research examined the positive impact of

females in management on female employee compensation within the organization (Huffman, Cohen & Pearlman, 2010; Joshi, Liao & Jackson, 2006). A more recent study found a positive association with a female employee's compensation and her having a female manager, but only at the lowest levels of the organization (Abraham, 2017). While the latter study added valuable insight to our knowledge of compensation within organizations, it did not examine the influence above the glass ceiling because the study used a single organization with one CEO and more than one organization is needed to examine this question above the glass ceiling. Because of their position power, these minority individuals have the unique opportunity to influence the discrimination faced by their in-group peers. Thus in this dissertation, the position taken is that females and racial minorities face discrimination in the upper echelons, experience outcomes because of this discrimination, and the characteristics of other upper echelon individuals within the organization influence the level of discrimination that these individuals face. This view aligns with recent research that suggests that discrimination, in the form of under-compensation for TMT members, still exists in the upper echelons, (Mackey et al., 2014) and that incumbent director characteristics influence discrimination toward women and racial minorities and their likelihood of breaking the glass ceiling to board appointment (Zhu, Shen & Hillman, 2014). To understand the relationships examined in this dissertation, a strong theoretical foundation is needed.

Upper echelons theory posits that observable characteristics can be used as proxies for managerial propensities (Hambrick & Mason, 1984), allowing scholars to utilize the biodemographic characteristics of executives whose time is worth thousands of dollars by the hour. Individuals also use highly salient demographic characteristics to self-categorize into in-groups and out-groups and are biased in favor of their in-group (Tajfel, 1978; Tajfel & Turner,

1979). Social dominance theory is based on the observation that societies tend to have "group-based social hierarchies" (Sidanius & Pratto, 2001). These hierarchies are comprised of both dominant and subordinate groups. Sidanius and Pratto (2001) identified three stratification systems: age, gender, and an arbitrary-set system, such as race, used to develop social hierarchies. The dominant/subordinate stratification system is based on highly salient demographic characteristics. In other words, and keeping with self-categorization theory, high-status individuals should exhibit a positive bias toward other high-status individuals, and low-status individuals should exhibit a positive bias toward low-status individuals. However, there are processes other than self-categorization that influence the behavior of these individuals, and low-status individuals have been known to show a positive bias toward high-status individuals to distance themselves from their low-status peers (Derks, Van Laar & Ellemers, 2016). To do so the ideology of the dominant white-male group may be adopted by females and racial minorities (Chattopadhyay, Tluchowska & George, 2004). To be accepted, lower status individuals may feel the need to demonstrate an ongoing commitment to the majority's norms (Nieva & Gutek, 1981). Any favoritism exhibited toward an individuals low-status in-group may threaten their membership in the corporate elite (Duguid, Loyd & Tolbert, 2012). Although low-status individuals are motivated to promote the interests of and empower their in-group, psychological processes counter to this can also influence the actions of upper echelon individuals (Dezso et al., 2016). In other words, low-status individuals are motivated to both maintain the status quo, but also empower their in-group.

Section 1.2: Research Questions

List of the research questions that drive this dissertation

1. How does CEO, TMT and BOD diversity influence the allocation of structural power in the C-suite?
2. Following this line of inquiry, my second research questions examine how this relationship changes according to the moderating influences of CEO and BOD diversity.

Section 1.3: Research Model, Theories, and Constructs

Section 1.3.1: Research Model.

Figure 1.1

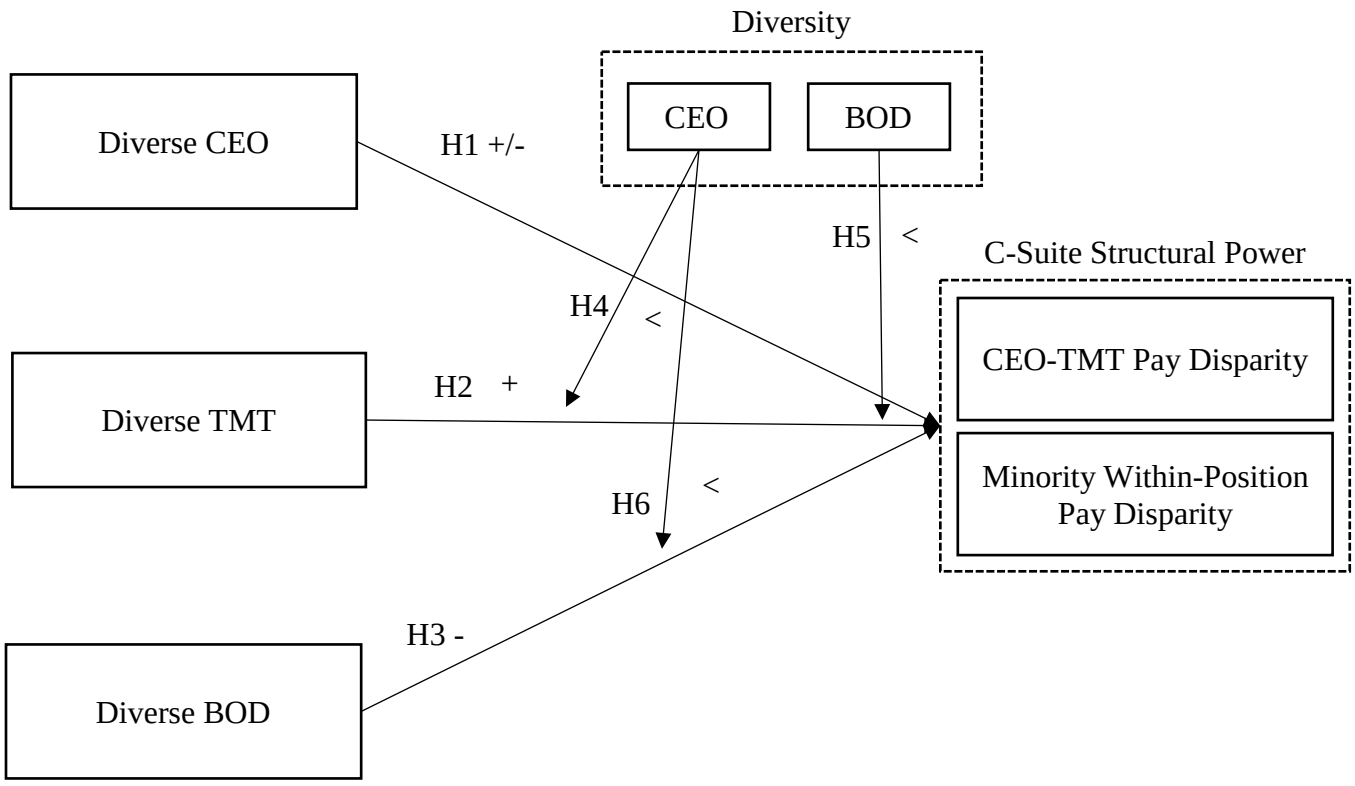


Figure 1.3.1A model of the moderating influence of in-group upper echelon individuals on C-Suite structural power disparity

Section 1.3.2: Model Relationships.

The following is a brief description of the relationships among the model constructs from the Figure displayed above (see Figure 1.1).

Section 1.3.2.1: CEO Diversity → C-Suite Allocation of Power.

Prior work suggests that females and racial minorities will be allocated less structural power because they belong to a subordinate or low-status group. Indeed, there is a gender bias for CEO board chair duality with fewer female CEOs being the chairperson of the board as compared to their male counterparts (Muller-Kahle & Schiehll, 2013). It is noteworthy that in some instances, where an organization values diversity, female CEOs receive a gender compensation premium, but this is the exception rather than the rule (Leslie, Manchester & Dahm, 2017). The same research also found that racial minorities receive equal compensation at best rather than a premium. Thus, using social dominance theory, it is proposed that female and racial minority CEOs acquire less structural power in terms of their compensation.

Section 1.3.2.2: TMT Diversity → C-Suite Allocation of Power.

Continuing the use of social dominance theory, it is proposed that a higher percentage of females and racial minorities in the TMT will lead to more allocation of structural power to the CEO. Low-status individuals are less able to obtain desirable resources, such as power or compensation, (Sidanius & Pratto, 2001). This leads to a disproportionate distribution of resources to the dominant coalition. In other words, the low-status of females and racial minorities allows the CEO to garner more power.

Section 1.3.2.3: BOD Diversity → C-Suite Allocation of Power.

The presence of low-status directors may allow the CEO to garner more power, but these individuals also have structural position power over the CEO as monitors of the organization. In addition, the presence of these out-group individuals disrupts group processes (Kroon, Van Kreveld & Rabbie, 1992) that can be counterproductive to monitoring. However, female or racial minority board members may not have the position power necessary to exert influence over the

CEO. Past research found that female directors were preferred for public affairs committees and were less likely to be part of the compensation committee (Bilimoria & Piderit, 1994). If females and racial minorities are not on the compensation committee, they may not be able to influence this aspect of structural power allocation. Nonetheless, boards of directors were created as monitors of the CEO and TMT. Boards who are demographically dissimilar to the CEO are less sympathetic toward the CEOs agenda and compensation package (Zhu et al., 2014). In other words, the presence of demographically dissimilar individuals on the board may be enough to disrupt counterproductive group processes.

Section 1.3.2.4: TMT Diversity and the Moderating Role of CEO Diversity on the Allocation of Structural Power Within the TMT.

In organizations with a higher percentage of low-status TMT members, it is expected that more power will be allocated to the CEO. However, this relationship may change when there is a low-status CEO and a greater percentage of low-status individuals in the TMT. Low-status CEOs may be more willing to allocate structural power to low-status individuals in the TMT than high-status CEO. On the other hand, a low-status CEO may want to distance themselves from low-status TMT members and display an ongoing commitment to the majority's norms (Nieva & Gutek, 1981). An overarching term has been used to describe this phenomenon as the "Queen Bee" syndrome (Derks et al., 2016). However support for this was not found in recent research (Dezso et al., 2016). Using social dominance theory and similarity attraction, hypotheses are developed to examine this relationship.

Section 1.3.2.5: TMT Diversity and the Moderating Role of BOD Diversity on the Allocation of Structural Power Within the C-Suite.

Similar to the arguments outlined in the paragraphs above, low-status directors may desire to further the interest of their in-group (Bergami & Bagozzi, 2000; Hornsey, 2008). Low-status directors bring a diversity of perspective that can disrupt group processes that would otherwise allow discrimination in the distribution of power via compensation (Zhu et al., 2014). However, these individuals may also desire to distance themselves from a low-status CEO or low-status TMT members by adopting the majority's norms (Derks et al., 2016). In other words, low-status directors may reduce discrimination in the distribution of power faced by these individuals. On the other hand, they may do nothing to reduce the discrimination but rather help to maintain the discrimination in the distribution in power to maintain their standing in the corporate elite. Hypotheses have been developed to examine this relationship.

Section 1.4: Dissertation Contributions.

This dissertation makes several contributions to power and upper echelon gender and racial diversity research. First, by using Finkelstein's (1992) structural power measure to examine the whole C-suite to include the CEO and TMT, this dissertation adds to the power literature (DeBode, 2014). Research often focuses on the power of the CEO, thereby assuming the CEO is the only powerful individual in the C-suite who matters. Another competing assumption found in research is that power is distributed equally in the TMT. By examining the C-suite as a whole and the distribution of power, prior work is extended on power in the upper echelons. Second, it adds to a growing body of literature that brings awareness to how females and racial minorities are treated unequally in the upper echelons. Awareness is the first step in reducing discrimination. Finally, by incorporating social dominance theory with Finkelstein's

power dimensions, this dissertation enables a better understanding of the distribution of power in the upper echelons when there is a mix of high-status and low-status individuals present in the upper echelons of an organization. It also gives direction for future research on this topic.

Section 1.5: Dissertation Outline

There are six chapters in this dissertation. Chapter One outlines the dissertation and the research questions examined. Chapter Two contains the literature review of pertinent articles on females and racial minorities in the upper echelons. Chapter Three develops hypotheses. Chapter Four outlines the methodologies used and data collection methods. Chapter Five reports the statistical results from the analysis. This dissertation concludes with Chapter Six which discusses the theoretical and practical implications of findings as well as suggestions for future research.

Chapter 2

Literature Review: Antecedents and Consequences of Upper Echelon Diversity

This chapter outlines the antecedents and consequences of diversity in the upper echelons. A brief review of the literature on the challenges faced by females and racial minorities in the workforce is also included to inform this review of upper echelons research, which is depicted in Figure 2.1. The literature is grouped by research regarding the TMT, CEO, and BOD and subdivided into antecedents and consequences with a focus on the glass challenges faced by females and racial minorities. At the end of each sub-section, there is a table that summarizes the literature discussed. The glass challenges faced by females and racial minorities are depicted in Figure 2.3. After a discussion of the literature, the theories utilized, and hypotheses developed in this dissertation are included in Chapter 3.

Section 2.1 Female and Racial Diversity

To inform this literature review, the next few paragraphs synthesize several issues that impact diversity in the upper echelons. Female and racial discrimination starts at birth and is partly due to stereotypes, which are constructed from societal norms, practices, and beliefs (Bian, Leslie & Cimpian, 2017; Fitzsimmons, Callan & Paulsen, 2014). Women and racial minorities have been viewed as intellectually inferior beings, a view perpetuated in the 20th and 21st century and strongly influenced by the work of Charles Darwin who outlined how this came to be over billions of years of evolution (e.g., Darwin, 1888; Darwin, 2004). Beliefs that females and racial minorities have inferior intelligence persist even though modern intelligence scores show no statistically significant difference in the scores of Caucasian males, females, and racial minorities (Neisser et al., 1996). Results from a study examining perceived gender stereotypes,

using data collected in the early 1980's was compared to data collected in 2014, indicate that basic gender stereotypes are extremely durable over time (Haines, Deaux & Lofaro, 2016). Social stereotypes strengthen glass ceiling challenges (Van Knippenberg, 2011). In fact, in the 2014 data collected in the study, stereotypes of female gender roles were higher than in the data from the 1980's. Women and racial minorities face stereotype threat, "the concern a person has about confirming a negative stereotype about his or her social group," which can negatively influence individual performance (Marx, Ko & Friedman, 2009). However, in-group role models help to alleviate stereotype threat concerns and increase individual performance (Marx et al., 2009).

Racial minorities face discrimination from stereotypes as well as other areas, and Kovel (1970) distinguished the differences in dominative and aversive racism. In prior centuries, racial minorities in the U.S. experienced dominative racism or blatant actions associated with bigoted beliefs (Kovel, 1970). However, when this form of racism was made illegal, it was predominantly replaced by aversive racism, or the negative beliefs and feelings regarding racially diverse individuals based in often non-conscious psychological processes (Dovidio & Gaertner, 2004; Dovidio, Gaertner & Pearson, 2016). Pearson, Dovidio, and Gaertner (2009) suggest that negative racial attitudes have decreased over the last several decades due to social norms of acceptance. However, racial discrimination still exists due to aversive racism. Human capital investment in education for women and racial minorities have lower returns in terms of compensation and promotion compared to their white male counterparts (Morrison & von Glinow, 1990) and it is harder for women to accumulate human capital (Fitzsimmons & Callan, 2016). Thus, it can be inferred that even in the modern world, female and racial minorities still face discrimination before and after reaching the organization. An extensive review of research

examining reasons for the glass ceiling (Morrison & von Glinow, 1990) discusses many factors that bolster the glass ceiling. These include limited access to formal and informal networks (Ibarra, 1995), stereotype threat that can decrease performance (Marx et al., 2009), and systemic effects resulting in women and racial minorities becoming tokens (Ilgen & Youtz, 1984; Kanter, 1977, 1987). Although this research is from the last century, the information is still relevant in that the reasons for the glass ceiling most likely have not drastically changed. Woman and minorities have limited access to, or are completely excluded from, informal interaction networks important to career advancement and job effectiveness (Ibarra, 1993; Morrison & von Glinow, 1990).

Research on diversity below the upper echelons extensively examines factors that influence diverse individuals in the lower levels of organizations and inhibit their climb to the top. A recent review by Kossek et al. (2016) highlights the disparities that female employees face in the workforce and suggest multilevel intervention strategies for both the organization and individual to mitigate these issues. Furst and Reeves (2008) offer reasons for why women can break through the glass ceiling in their review. A review of research on race in organizations by Cox and Nkomo (1990) highlights the fact that more research is needed in this area, as the "the recent trend is for less rather than more research" and there are still many issues faced by diverse individuals. It is important to note that once a diverse individual has broken the glass ceiling, the challenges that they face are far from over. While there are similar challenges faced by diverse individuals, there are challenges that research has examined specifically for females and or racial minorities. In some instances, the sample size for racial minorities was simply too small to be included in the study or the statistical power too small to draw inferences (e.g., Leslie et al., 2017). Thus, if a study mentioned in this review includes only gender or race, the findings are

discussed in terms of gender diversity, females, etc. or racial diversity, racial minorities, etc. This review highlights the challenges to diverse individuals through the examination of the literature on the antecedents and consequences of diversity in the upper echelons.

Women and racial minorities do not fit stereotypes of what individuals think of when they think of a successful manager (Morrison & von Glinow, 1990). Both women and racial minorities share in this discrimination. This perception persists because of historical stereotypes of white male leaders (Morrison & von Glinow, 1990). Diverse individuals come up against a pro-white male leadership bias in their climb to the top. Specifically, Gündemir, Homan, de Dreu and van Vugt (2014) found a definite pro-white bias in leadership, which may help explain minority underrepresentation in leadership positions. Perceptions of white female managers are closer to that of white male managers, as compared to female managers who are also racial minorities (Alderfer, Alderfer, Tucker & Tucker, 1980). This creates increased challenges for females who are also racial minorities. There are also perceived gender role violations that influence gender diversity at all levels within the workforce. However so slightly, traditional views of effective leadership traits as masculine in nature are changing. In the past, both genders associated effective leadership with masculine traits. However, more recent research has found a change in the perceptions of good manager traits from the 1970s to early 2000s with less emphasis put on masculinity (Powell & Butterfield, 1979; Powell, Butterfield & Parent, 2002). However, Ryan, Haslam, Hersby, and Bongiorno (2011) found that perceptions of successful manager characteristics in the U.S. are influenced by organizational context and the gender of the participant. Males perceived managerial characteristics to be stereotypically male in successful organizations, but not in unsuccessful organizations. Females perceived managerial characteristics to be both male and female, but with more emphasis on male attributes (Ryan et

al., 2011). Changes in perceptions of effective managers as masculine could allow more gender diversity in the upper echelons, but it may take decades for this to come to fruition. Thus, perceptions of leaders as white males can hinder the promotion of diverse individuals into the upper echelons.

When perceptions of effective manager traits are masculine, it creates a strong glass barrier to female advancement and success as a leader. Gender norms dictate how both men and women are supposed to act. Male leaders can exhibit masculine traits without violating gender norm expectations. On the other hand, female leaders who exhibit masculine traits violate gender role expectations. Being assertive violates the femininity gender norm expectation, causing peers of a female leader to view her as too assertive rather than as an effective leader. This creates a double-bind, or no-win situation, for females (Jamieson, 1995). Females face many different gender role violation situations. When delivering discipline, female managers are seen as less effective and fair (Atwater, Carey & Waldman, 2001). This is most likely due to violating gender role expectations that females are nurturing and fairer than males. By engaging in managerial activities, the female manager violates gender role expectations and is judged for this action. Leaders are expected to be confident, but females are expected to be humble. Thus, the female leader must navigate being confident while still appearing humble (Owens & Hekman, 2012). Women must navigate these double-binds as managers and leaders. Breaking through the glass ceiling implies that the issues faced are overcome, the struggle over. However, female leaders must still navigate the role of leader while attending to gender role expectations creating a perpetual “glass gauntlet” to success.

Perceptions of females violating gender roles can have a negative impact on females, but perceptions of females acting in accordance with gender roles can also negatively influence a

female's success. Research in the late 90's examined the association between a female's masculinity or femininity, as measured by Bem's Sex-role Inventory, and success. The results indicated that femininity, in female, mid-career managers who hold MBAs, was negatively related to income and level within the organization. Conversely, a higher level of masculinity in female manager's was positively related to income and perceived success (Kirchmeyer, 1998). However, the same research also indicated that this higher income and perceived success comes at a cost. A female behaving in masculine ways violates gender norms, and she faced negative social consequences such as being considered "butch" because of masculine behaviors. Females also negotiate less desirable employment terms as compared to their male counterparts (Kulik & Olekalns, 2012). The authors suggest that this is because agentic behaviors on the part of females violate gender role expectations and negatively hurt females in negotiations, unlike males who benefit from these behaviors. To increase negotiation outcomes, the authors indicate that females should use a powerless speech style, inclusive language, and project gender-normative warmth instead of competence.

Perceptions influence females in a plethora of ways such as perceptions of family-work conflict, perceptions that influence negotiation outcomes, and perceptions that influence the gender bias in performance ratings. Individuals regardless of gender perceived women as having more family-work conflict (Hoobler, Wayne & Lemmon, 2009). Not all women have families, and not all women who have families have family-work conflict. Some women do experience family-work conflict, but it is unfair to this generalize to all women. This perception increases glass ceiling challenges to females because they must individually prove that they do not have a family-work conflict and or are capable of accomplishing work goals. Research has also found a

gender bias in performance ratings, and Levy and Williams (2004) highlight the need to further examine gender rating bias in performance appraisals.

Perceptions influence the gender discrimination of males as well as females. Males also experienced gender discrimination in the form of negative performance evaluation bias and perceptions of gender role violations. Female managers exhibited a negative performance appraisal bias toward male employees, which is more pronounced than the negative bias of male managers toward female employees (Furnham & Stringfield, 2001). This indicated that in-group and out-group categorization by managers influenced the performance evaluations of both males and females. In traditionally female jobs, less qualified females were rated higher than males due to a perceived "lack of fit" in hiring for hypothetical mid to top-level managerial positions (Atwater & Van Fleet, 1997). This brought to light the idea that discrimination occurs for males and females in similar ways when industry human capital conditions and gender role expectations are reversed. However, gender research traditionally focused on the negative impact of gender for females because this is the most prevalent condition.

Many issues influence diverse individuals in their climb to the top. Widespread beliefs influenced the perceptions that form the basis of glass ceiling challenges to diversity in the upper echelons. However, obtaining survey information to assess the actual perceptions of individuals in the upper echelons is challenging. Thus, scholars generally relied on other methods in their research examining the antecedents and outcomes of diversity in the upper echelons. These antecedents and outcomes can be tied back to underlying perceptions identified in research at the lower levels within organizations which in turn strengthen or weaken glass ceiling challenges to diverse individuals.

There are glass ceiling challenges uniquely faced by racial minorities (Avery, McKay, Volpone & Malka, 2015; Henderson, 1999; Holzer & Ihlanfeldt, 1998; Moss & Tilly, 2001). Racial minorities face discrimination because of managerial concern that racially-averse consumer behavior will negatively impact the organization (Avery et al., 2015). Even managers who are not racially-averse themselves, fail to hire racial minorities because they fear racially-averse consumer behavior (Humphreys, 2002). This form of discrimination does not come strictly from Caucasian managers (Avery et al., 2015). African American business owners hire Caucasian "front men" as public representatives of their company (Henderson, 1999). While the majority of studies examine this discrimination at lower levels of the organization (Holzer & Ihlanfeldt, 1998; Kirschenman & Neckerman, 1991; Moss & Tilly, 2001), it was also found to hold true in leadership roles of organizations (Avery et al., 2015). This discrimination increases the strength of glass ceiling challenges experienced by racial minorities. Double-minorities, referencing women who are also racial minorities, face the glass ceiling challenges of both females and racially diverse individuals (Umolu, 2014). The commonalities and differences faced by women and minorities in organizations are depicted in Figure 2.1.

Figure 2.1: Commonalities and differences in challenges to climbing the corporate ladder for females, racially diverse males, and racially diverse females (Alderfer et al., 1980; Atwater et al., 2001; Atwater & Van Fleet, 1997; Avery et al., 2015; Bian et al., 2017; Darwin, 1888, 2004; Dovidio & Gaertner, 2004; Dovidio et al., 2016; Fitzsimmons & Callan, 2016; Fitzsimmons et al., 2014; Furnham & Stringfield, 2001; Gündemir et al., 2014; Haines et al., 2016; Henderson, 1999; Holzer & Ihlanfeldt, 1998; Hoobler et al., 2009; Humphreys, 2002; Ibarra, 1993, 1995; Ilgen & Youtz, 1984; Jamieson, 1995; Kanter, 1977, 1987; Kirchmeyer, 1998; Kirschenman & Neckerman, 1991; Kossek et al., 2016; Kovel, 1970; Kulik & Olekalns, 2012; Levy & Williams, 2004; Marx et al., 2009; Morrison & von Glinow, 1990; Moss & Tilly, 2001; Owens & Hekman, 2012; Pearson et al., 2009; Powell & Butterfield, 1979; Powell et al., 2002; Ryan et al., 2011; Umolu, 2014; Van Knippenberg, 2011).

Figure 2.1

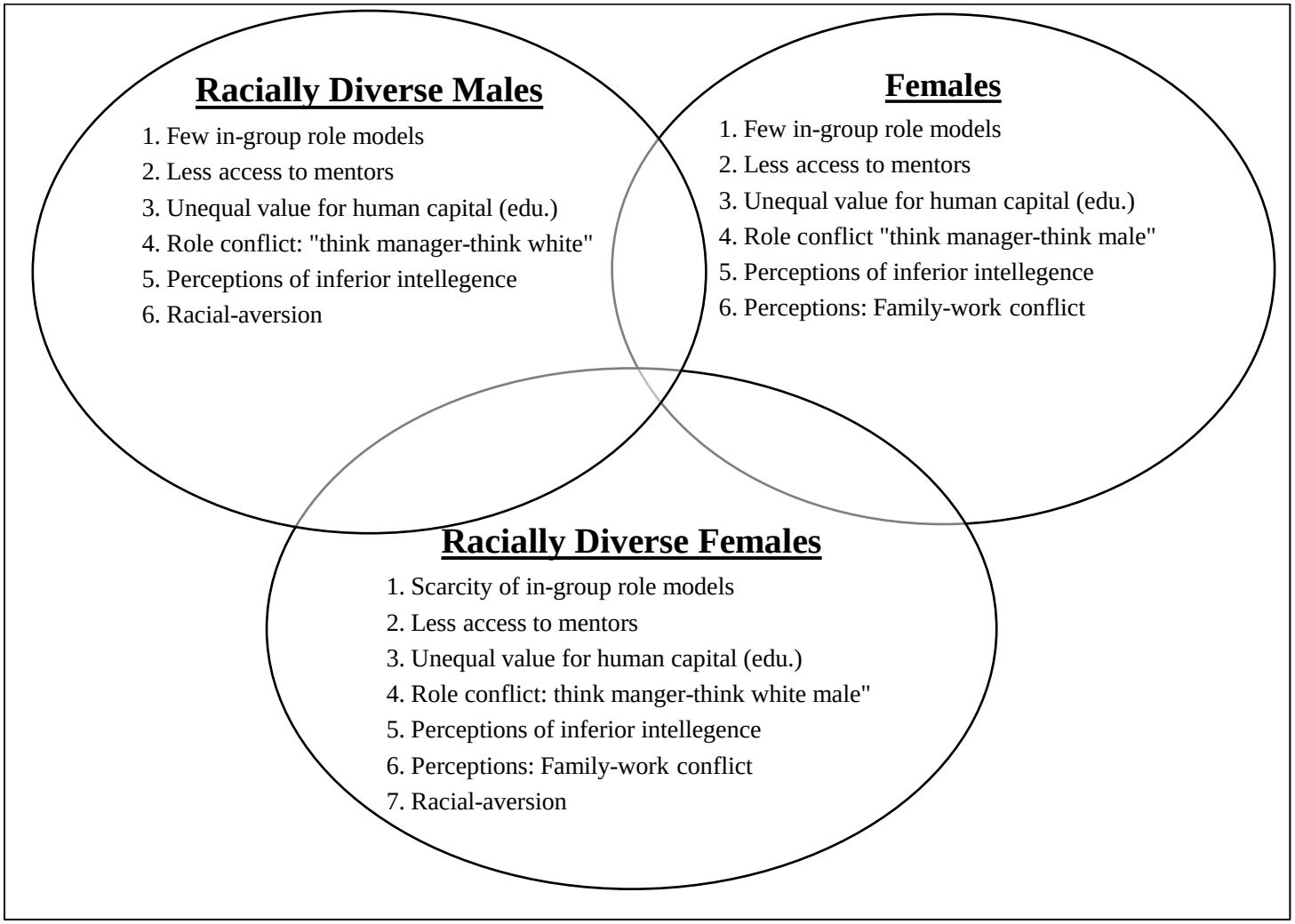


Figure 2.1: Commonalities and differences in challenges to climbing the corporate ladder for females, racially diverse males, and racially diverse females

Section 2.1.1 Diversity in the TMT – Antecedents

Breaking through the glass ceiling to the TMT can be a stepping stone to other positions in the upper echelons such as board seats or a CEO appointment both within or outside the organization. There are several antecedents to diversity in the TMT. Studies have examined leadership, industry and organizational factors that are associated with diversity in the TMT (Crossland, Zyung, Hiller & Hambrick, 2014; Gupta, Briscoe & Hambrick, 2017; Joshi et al., 2015). Other studies have explored the influence of executive search firms, an individual's reaction to not being hired for an executive position, fewer opportunities for diverse individuals, and different experiences of minority mentees as conditions that influence diversity in the TMT (Brands & Fernandez-Mateo, 2016; Covaleski, Dirsmith, Heian & Samuel, 1998; Dreher, Lee & Clerkin, 2011). These factors work together to strengthen or neutralize the glass ceiling.

It has been noted that organizational features are often neglected in diversity research, and Ely and Padavic (2007) encourage the use of organizational features in future research. Scholars have risen to the challenge, and newer research examined organizational features in diversity research. In organizations where performance was declining, diverse individuals were more likely to be appointed to the TMT or as CEO and then replaced by a white male when performance declined further (Cook & Glass, 2014; Ryan & Haslam, 2007), The "glass cliff" metaphor is used to describe these diverse leaders who break through the glass ceiling only to be fired when organizational performance declines further (Ryan, Haslam, Morgenroth, Rink, Stoker & Peters, 2016). Ryan and Haslam (2007) make several suggestions as to why females are appointed in these organizations, such as women being perceived as having better people skills. They also discuss the "think manager - think male" and "think crisis - think female" ideas citing their 2011 paper (Ryan et al., 2011). In the research, perceptions of desirable managerial

characteristics were equally male and female in successful organizations but perceived as female in organizations with poor performance (Ryan et al., 2011). They also found evidence of think crisis - think female ideologies. The authors suggest that this is driven by perceptions that women have better people skills and will be better able to handle human assets during an organizational crisis. Think manager- think white male strengthens as well as think crisis-think female strengthen glass ceiling challenges.

Continuing the use of organizational features in research, one might assume that newer organizations would have more progressive ideologies in hiring and be more open to having females in the TMT. However, the findings are counterintuitive. In a study examining TMT cognitive diversity and organizational performance, TMT gender diversity, but not racial diversity, had a statistically significant positive correlation with organization age (Wei & Wu, 2013). In other words, older organizations were more likely to have gender diversity in the TMT. In an organizational context where the previous CEO was dismissed, TMT gender heterogeneity decreased (Crossland et al., 2014). In other words, the dismissal of a CEO led to less diversity in the TMT. Through the use of archival data on employee political donations, Gupta et al. (2017) found that organizational liberalism was significant and positive with female diversity in the TMT. Yet, industry prevalence of organizational liberalism negatively moderated female diversity in the TMT. The authors suggest that organizational ideology had a greater influence on practices that are less prevalent because there is pressure to adopt these policies regardless of ideology. Organizational liberalism and female representation on the TMT was positively moderated by an organization's human capital intensity (Gupta et al., 2017). The authors suggest that this was because large numbers of employees are stakeholders of the organization and

executives were more likely to give weight to their ideologies. This unique study gives insight into the neutralizing influence of organizational liberalism on glass ceiling challenges.

Mentoring and other opportunities were different for diverse individuals even though male and female executives were equally likely to mentor with similar outcomes and future mentoring intentions (Ragins & Scandura, 1994). Same-race mentoring relationships provide more psychological support, but 63% of racial minorities are mentored by Caucasians (Thomas, 1990). Covaleski et al. (1998) found that men have different opportunities compared to women. For example, the authors mention that there are environments that women tend to avoid, such as riding the bus to work because of safety concerns. In the large organization examined, the bus was an environment conducive to professional relationship building and mentoring. In this way, the women of the organization did not have the same opportunity as the males. The authors also found that mentors were willing to be harsher on male mentees, which translated into different mentoring experiences and more successful outcomes for males. Stereotypes of "he's a man, he can take it," and the reverse for women negatively influenced females in mentorship. Even with fewer opportunities, which hindered their advancement, diverse individuals have reached the upper echelons. A paired sample study of male and female executives found that both genders appear to follow the same developmental career path even though female executives felt to a lesser degree that their advancement was due to mentoring (Lyness & Thompson, 2000). Also there is the idea that UE females are "Queen Bees" who may not want females to break the glass ceiling (Derks et al., 2016). This further highlights the idea that diverse individuals received less assistance in their climb to the top, which strengthens glass ceiling challenges.

Internal psychological factors also influence diversity in the TMT. It is true that white males are in positions of power in organizations and thus have the unique opportunity to promote

or discourage diversity in the TMT. A female's reaction to not being selected inhibits TMT diversity. Brands and Fernandez-Mateo (2016) found that a female who received an interview for a TMT position but was not chosen by the organization felt belongingness uncertainty. In other words, the equally qualified female experienced feelings that she may not belong in a man's world, feelings that men are unlikely to feel. Belongingness uncertainty, in turn, influenced the importance of fairness to females and increased the perceived unfairness of the selection process. Belongingness uncertainty along with increased perceived unfairness made these women less likely to seek employment at an organization where they had not been chosen previously as compared to males (Brands & Fernandez-Mateo, 2016). It is noteworthy that the ethnicity control was not significant in this study, but this may have been due to a small sample size. This study sheds light on the idea that glass ceiling challenges are not just caused by external factors, internal psychological processes can also strengthen the glass ceiling for those trying to break through.

Executive search firms are external entities with the power to influence TMT diversity. However, headhunters are predominantly white males, and Dreher et al. (2011) find that executive search firms were less likely to contact diverse applicants as compared to their equally qualified white male counterparts. The authors suggest that this is because of perceptions and stereotypes. Male executives experienced an increase in compensation with mobility, but diverse executives did not. These findings further support evidence of a negative pay-gap for diverse individuals. All executives who received higher levels of contact from executive search firms have higher compensation indicating that if more diverse executives were contacted their compensation would increase. Executive search firms are unique players with the responsibility to promote equality in executive placement. These executive search firms, advertently or

inadvertently, influence diversity in the TMT and strengthen glass ceiling challenges. Many different antecedents have been examined that influence TMT diversity. Table 2.1 summarizes the articles covering antecedents to diversity in the TMT.

Table 2.1

Female and Racial TMT Diversity: Antecedents

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
TMT	2016	Brands & Fernandez-Mateo	ASQ	Job rejection leads females to feel belongingness uncertainty, which in turn influences the importance of fairness and increased perceived unfairness. Women are less likely to seek employment at a company where they have not been chosen previously as compared to males.	Ethnicity control not significant
TMT	1998	Covaleski, Dirsmith, Heian, & Samuel	ASQ	Women have broken the glass ceiling, but do not have the same opportunities as males which hinders further advancement, e.g., mentors give males "no punches pulled" guidance and criticism.	
TMT	2014	Crossland, Zyung, Hiller, & Hambrick	AMJ	If the previous CEO was dismissed, TMT gender heterogeneity decreased.	
TMT	2011	Dreher, Lee, & Clerkin	JOM	Executive search firms are less likely to contact female applicants as compared to their equally qualified counterparts, a change in employer equates to higher compensation only for males.	Executive search firms are less likely to contact male minority applicants as compared to their equally qualified counterparts, a change in employer equates to higher compensation only for white males
TMT	2007	Ely & Padavic	AMR	Organizational features are often neglected in research on the genders in the workforce.	Race and gender variables should be included in the same studies.
TMT	2016	Fitzsimmons, Callan	LQ	women are not able to accumulate valuable career capital like men	
TMT	2016	Gupta, Briscoe, & Hambrick	SMJ	Organizational liberalism has a significant and positive association with the percentage of the TMT that is female.	

TMT	2000	Lyness & Thompson	JAP	Paired male and female executives report following the same developmental career path, but women feel to a lesser degree that their advancement is due to mentoring.	
TMT	1994	Ragins & Scandura	AMJ	Male and female executives are equally likely to mentor with similar outcomes and future mentoring intentions	
TMT	2011	Ryan, Haslam, Hersby, & Bongiorno	JAP	Perceived successful manager characteristics are masculine, but desirable characteristics in managers are equally male and female. Females are perceived as better crisis managers because of perceptions that women have better people skills.	
TMT	2011	Van Knippenberg	LQ	Group prototypes and societal stereotypes strengthen the glass ceiling	
TMT	2013	Wei & Wu	JMS	TMT gender diversity positively correlated with firm age.	TMT racial diversity positively correlated with firm age.

Section 2.1.2 Diversity in the TMT – Consequences

Scholars examine several consequences to diversity in the TMT (Dezso & Ross, 2012; Elvira & Cohen, 2001; Ragins & Scandura, 1994). Once there is diversity in the TMT these individuals still face challenges that impede their success (Dezso et al., 2016; Kulich et al., 2011; Mackey et al., 2014). However, diverse TMT members have a unique opportunity to influence the challenges faced by their minority peers (Ely, 1995; Ragins & Scandura, 1994). Diverse TMT members can break down negative stereotypes of diversity in the workforce and influence the perceptions and attitudes toward diversity (Dasgupta, Prat & Verardo, 2011). Even though diversity in the TMT is associated with positive outcomes such as the reduced turnover of diverse subordinates (Elvira & Cohen, 2001) and increased organizational performance (Dezso & Ross, 2012), however, diverse individuals face inequalities in compensation (Mackey et al., 2014).

The perceptions of individuals differ in organizations and industries where there are greater proportions of diverse TMT members. Scholars found that in law firms with females in the TMT, the perceptions of females at work differed from non-gender-integrated firms. In gender-integrated firms, those with female partners, females are seen as professionals and less as sexual objects (Ely, 1994). In non-gender-integrated firms the reverse is true, and female employees perceive more competition with their female peers (Ely, 1994). Furthermore, the perceptions of traditional gender roles in leadership differ from one organization to the next. Research finds that perceived gender roles differ across organizations based on the number of female executives in the organization (Ely, 1995). When there were more female executives, perceptions of traditional sex roles in leadership were less defined (Ely, 1995). This held true at the organizational and industry level. In organizations and industries with more female

executives, there was less of a gender-based bias in the rewards received by executives (Joshi et al., 2015). More female executives at the industry level removed the gender-based performance evaluations gap between males and females indicative of these females breaking down stereotypes (Joshi et al., 2015). These research findings indicate that diversity in the TMT can help to neutralize glass ceiling challenges that other diverse individuals in the TMT experience.

Diversity in the TMT influenced other human resource outcomes for organizations such as employee turnover, and the advancement of other diverse individuals (Dezso et al., 2016; Elvira & Cohen, 2001). In their study, Elvira and Cohen (2001) found that the proportion of females directly above another female employee influenced her likelihood of turnover. Females at the mid to upper levels in an organization were less likely to leave if there were more females directly above them, but this did not hold at lower levels in the organization (Elvira & Cohen, 2001). In other words, having a female in the TMT was a positive force in terms of female retention helping to neutralize glass ceiling challenges but could also have negative implications for other females in terms of promotion to the TMT, which strengthen glass ceiling challenges (Dezso et al., 2016). Future studies should examine the influence of having racial minorities in the TMT and turnover of racial minorities at lower levels. An unfortunate outcome of having a female on the TMT was that organizations seem to resist adding more female representation once this implicit female quota was met (Dezso et al., 2016). This leads to the disparaging idea that one diverse individual breaking the glass ceiling in an organization may not break the glass for all diverse individuals. Future studies should examine if there is an implicit racial diversity quota in the TMT. Thus, it is implied that each diverse individual trying to advance to the TMT may come up against a glass ceiling of their own that they must break through.

The glass ceiling is strong even though organizations experience positive outcomes due to diversity in the TMT (Heyden, Sidhu & Volberda, 2015). Diversity in the TMT has brought positive outcomes in terms of strategic innovation and entrepreneurial outcomes (Dezso & Ross, 2012; Lyngsie & Foss, 2017). Dezso and Ross (2012) found that female representation in the TMT was positively associated with innovation in organizations that were strategically focused on innovation. Lyngsie and Foss (2017) found that organizations with females in the TMT enjoy better entrepreneurial outcomes, but this is lessened when there were more females in the organization. Organizations with gender disparity between top and middle managers saw more management innovation which was counter to expectations (Lyngsie & Foss, 2017). Management innovation is most pronounced when there is gender diversity between top managers and middle managers (Heyden et al., 2015). The findings were contrary to the hypothesized relationship that gender similarity would increase the throughput function and management innovation. The norm is for top management to be mostly male and in the sample collected, only 5 percent of top managers were female (Heyden et al., 2015). Even though diversity brings positive outcomes, diverse individuals in the TMT receive less compensation, but these results should be interpreted with caution because females make up less than 6 percent of the sample (Mackey et al., 2014). Thus, more research on outcomes to diversity in the TMT is needed to examine the glass ceiling challenges that persist, especially regarding racial diversity. Table 2.2 summarizes the literature on consequences to female and racial diversity in the TMT.

Table 2.2

Female and Racial TMT Diversity: Consequences

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
TMT	2016	Derks, Van Laar, & Ellemers	LQ	Queen Bee behaviors are directed toward junior females.	
TMT	2012	Dezso & Ross	SMJ	Female representation on the TMT increases firm performance for firms strategically focused on innovation.	
TMT	2016	Dezso, Ross, & Uribe	SMJ	Firms make an effort to have a female TMT member, but resist adding more female representation once this implicit quota is met.	
TMT	2001	Elvira & Cohen	AMJ	Female turnover varies with the female's rank and more female executives. Male turnover decreases with more male executives.	White male control is significant for models with males.
TMT	1995	Ely	AMJ	Perceived gender roles differ across organizations based on number of female executives. Identifies five response profiles that females have to gender role constraints in organizations.	
TMT	1994	Ely	ASQ	The number of female executives in a firm influences the gender perceptions of females employed at the firm. In firms with fewer female executives, female employees perceive more competition with their female peers.	
TMT	2015	Heyden, Sidhu, & Volberda	JOM	Management innovation is most pronounced when there is gender diversity between top managers and middle managers.	

TMT	2015	Joshi, Son, & Roh	AMJ	More female executives at the industry level removes the gender-based rewards and performance evaluations gap between males and females.	
TMT	2016	Lyngsie, Jacob, Foss, & Nicolai	SMJ	Organizations with females enjoy better entrepreneurial outcomes, but this is lessened when there are more females in the organization.	
TMT	2014	Mackey, Molloy, & Morris	JOM	Females have less education and tenure which influences pay, but this is mitigated by women possessing scarce human capital. Used as a control in the scarce human capital in management-labor markets influence on compensation. Female TMT member is negative and significant with total pay and cash pay.	

Section 2.2 CEO Diversity

Section 2.2.1 CEO Diversity – Antecedents

There are very few diverse CEOs in Fortune 500 companies, a meager 4 percent in each category, female and or racial minority (Hoobler, Masterson, Nkomo & Michel, 2018; Zillman, 2014). There are currently two racially diverse female CEOs heading fortune 500 companies, Indra Nooyi (Indian) at PepsiCo and Joey Wat (Asian) at Yum China (Fortune, 2017), which is only 0.4 percent. This is because glass ceiling challenges to becoming CEO are extremely strong and discrimination dates back to birth (Fitzsimmons et al., 2014). Lyness and Thompson (1997) found that female executives perceive greater challenges to advancement as compared to females at lower levels and suggest the existence of a second glass ceiling that must be overcome to reach the CEO position. Furst and Reeves (2008) offer suggestions, such as turbulent environments that allow women to break through the glass ceiling. Other research found that individual consideration rather than inspirational motivation was more important to females in promotion to upper management, and the reverse was true for their male counterparts (Vinkenburg, van Engen, Eagly & Johannesen-Schmidt, 2011). Many of the antecedents to females on the TMT could also be considered antecedents to female CEOs because individuals are generally top managers before becoming a CEO. There is a dearth of studies specifically examining the antecedents to the appointment of a female CEO. Nonetheless; inspirational leadership was found to be more important for females to become CEO than their male counterparts (Vinkenburg et al., 2011). Dwivedi, Joshi, and Misangyi (2017) found that the attitudes of male predecessors influence the success of female CEOs successors. It can be inferred that, the attitudes of CEO predecessors can strengthen or work to neutralize glass ceiling challenges. In addition, there is the glass cliff where diverse individuals are more likely to be

appointed CEO in poorly performing organizations (Ryan & Haslam, 2007). However, these diverse CEOs are more likely to be subsequently replaced by a white male when performance declines further, indicating the presence of a glass cliff from which these diverse CEOs topple (Cook & Glass, 2014). It is interesting to note that when an organization is performing poorly, the glass ceiling challenges to the appointment of a diverse individual are weakened in that diverse individuals were able to become CEO of these organizations, but this led to a glass cliff, from which these CEOs were thrown, even though there can be many positive consequences associated with diverse CEOs. Table 2.3 summarizes the literature on antecedents to female and racial diversity in the CEO position.

Table 2.3

Female and Racial CEO Diversity: Antecedents

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
CEO	2014	Cook & Glass	SMJ	Females are more likely to be promoted to CEO in poorly performing firms and subsequently replaced by a white male when performance declines further.	Racial minorities are more likely to be promoted to CEO in poorly performing firms and subsequently replaced by a white male when performance declines further.
CEO		Dwivedi, Joshi, & Misangyi	AMJ	The attitudes of male CEO predecessors influence the success of female CEO successors.	
CEO	2014	Fitzsimmons, Callan, Paulsen,	LQ	Career-relevant experiences differ for the genders as far back as birth making it harder for females to become CEO.	
CEO	2008	Furst, Reeves	LQ	Offers suggestions for why women can break through the glass ceiling.	
CEO	1997	Lyness & Thompson	JAP	Females at the top perceive greater barriers to advancement compared to females in lower ranks. Coin "second glass ceiling."	
CEO	2007	Ryan & Haslam	AMR	Synthesizes the literature on females breaking the glass ceiling only to be fired. Coin the phrase "glass cliffs."	
CEO	2011	Vinkenburg, Van Engen, Eagly, Johannesen-Schmidt	LQ	"Inspirational motivation was perceived as more important for men than women and especially important for promotion to CEO. In contrast, individualized consideration was perceived as more important for women than men and especially important for promotion to senior management."	

Section 2.2.2 CEO Diversity – Consequences

Research has also examined the outcomes that diverse individuals have brought after surfacing above the second glass ceiling as well as any inequalities they faced (Keeves, Westphal & McDonald, 2017). Gender disparity between the CEO and TMT influenced resentment after ingratiatory behavior (Keeves et al., 2017). Female-led organizations engage in less risk-taking, have higher long-term performance, but lower short-term stock returns (Jeong & Harrison, 2017). The CEO position had high visibility, and the perceptions and attitudes toward diverse leaders influenced their likelihood of exit and compensation (Hill, Upadhyay & Beekun, 2015). Indeed, a glass cliff exists that is detrimental to the careers of minority individuals (Glass & Cook, 2016; Ryan et al., 2016).

Diversity between the TMT and CEO influenced human capital outcomes such as resentment toward the CEO, which led to dysfunctional behaviors such as engaging in undermining communication about the CEO to journalists (Keeves et al., 2017). The authors also found that when TMT members engage in ingratiatory behavior toward their CEO, it leads to resentment toward the CEO. Their results further indicated that CEO and TMT member diversity disparity positively moderated this relationship. Also, ingratiatory behavior created more resentment in white male TMT members toward their diverse CEO and more resentment in diverse TMT members toward their white male CEO. This resentment led to undermining the CEO to journalists (Keeves et al., 2017). This research indicates glass ceiling challenges that influence minority and even non-minority individuals.

Female CEOs experienced differences in human capital outcomes due to their gender because gender norms led to different expectations for female behavior when interacting with the TMT (Zhang, Cao & Tjosvold, 2011). Transformational leadership includes close interaction

between the CEO and the TMT, has led to positive outcomes for organizations such as increased TMT effectiveness and organizational performance (Zhang et al., 2011). However, CEOs can engage in differentiated transformational leadership, where CEO interactions with individual TMT members were not all equal. In the same study, differentiated transformational leadership decreased TMT effectiveness and subsequent organizational performance. The negative effect of differentiated transformational leadership was stronger when the CEO was female (Zhang, Li, Ullrich & van Dick, 2015). The authors suggest that this is because females are expected to be more ethical and fairer. When male and female CEOs act in the same way, but the action violates female gender role expectations, the negative effect is more pronounced for female CEOs because they violated expected gender norms. In this way, gender role expectations increase glass ceiling challenges to females.

Diversity disparity influenced evaluative methods that form opinions and increased glass challenges to diverse CEOs (Park & Westphal, 2013). The study found that white male CEOs evaluate diverse CEOs in different ways. White male CEOs were more likely to attribute low performance in diverse-led organizations to the internal attributes of the diverse CEO when talking to journalists. However, journalists who were female or minority were less likely to be influenced by the opinions of white male CEOs about female CEO performance being tied to personal attributes (Park & Westphal, 2013). Thus, disparity in diversity between an evaluating CEO, the CEO being evaluated, and journalists can strengthen glass ceiling challenges for CEOs.

Perceptions that males are more capable persist and negatively influenced female CEOs of new ventures (Bigelow, Lundmark, Parks & Wuebker, 2014). Although scholars have found that the desirable characteristics of managers to be equally male and female, successful managers were described as masculine (Ryan et al., 2011). Bigelow et al. (2014) found that equally

qualified new-venture female CEOs were perceived as less capable compared to their male counterparts. This research indicated that females experienced a new-venture gender-based capital gap (Eggers & Song, 2015). The authors suggest the existence of a "green ceiling" referring to differential treatment in terms of financing. A gender-based capital gap may inform the findings that female entrepreneurs were more likely to fail (Eggers & Song, 2015). Indeed female CEOs are given less structural power in terms of being a CEO and board chair (Muller-Kahle & Schiehll, 2013). Perceptions that females were less capable in new ventures strengthen glass challenges to the success of those female CEOs and may even become self-fulfilling prophecies. It can also be inferred that this effect might also impact stockholder support and financing in larger, publicly traded firms. This also indicates that obtaining financing for minority individuals increases the strength of glass ceiling challenges.

Male and female employees take different lengths of family leave. According to a survey conducted by the Boston College Center for Work and Family, males on average take one day of paternity leave for every month of maternity leave that a mother takes (Harrington, Van Deusen, Fraone, Eddy & Haas, 2014). In a case study, Ashcraft (1999) found that top management used a female CEO and founder entrepreneur maternity leave to revise the founder's role in the organization to include less responsibility. An inescapable reality is that females have a recovery time after the birth of a child. Females who return to work early may be negatively judged because of gender norms that suggest a longer leave of absence for females after the birth of a child. Whether due to an illness, major surgery, or the birth of a child, long leaves of absence can be used to revise the role of the individual on the leave of absence. Males should and do take paternity leave, but males return to work earlier than females and are less likely to experience a

revision in their work role. A leave of absence related to gender increases glass ceiling challenges.

The equal pay for equal work American value describes the promotion of gender equality in compensation. In June of 1963, John F. Kennedy signed into law the Equal Pay Act. Over half a century later the gender-based pay gap persists. Per the 2016 US Census Bureau, females earn 79 cents on the dollar as compared to males. Even after controlling for industry and education up to 38% of the gender pay gap can be attributed to discrimination (England, 1983; England & Folbre, 1999). However, findings by Hill et al. (2015) are counter to the expected diversity pay-gap. The authors found that diverse CEOs benefit from their minority status in the form of higher compensation in organizations that value diversity. However, the likelihood of exit differed in that females were less likely to exit, and males were more likely to exit. Scholars suggest that there were instances where the unequal compensation of female and racial minorities reverses, such as in the CEO position (Hill et al., 2015). Organizational diversity goals can create a female premium for high-level executives, or a reversal of the pay-gap (Leslie et al., 2017). However, the same study found that racial minority CEOs earn almost as much as their white counterparts, but not a premium. The authors cautioned interpreting this due to the small sample size available of racial minority CEOs (Leslie et al., 2017). Thus, diversity goals can work to neutralize the impact of glass ceiling challenges.

The performance of organizations differs based on the gender of the CEO. Although a somewhat confrontational subject, female CEOs appear to take fewer risks which in turn increased long-term organizational performance. Findings persist from early research (e.g., Muldrow & Bayton, 1979) that female executives tend to take fewer risks. In a study on compensation package design, scholars observe that female CEOs engage in less strategic risk-

taking, although the authors note that this should be interpreted with caution due to the relatively small number of female CEOs in the sample (Devers, McNamara, Wiseman & Arrfelt, 2008). Organizations with females on the TMT and in the CEO position saw a decrease in strategic risk-taking by the organization (Jeong & Harrison, 2017; Kish-Gephart & Campbell, 2015). Yet, these organizations saw lower short-term stock market returns, but higher long-term financial performance. Female CEOs who in their picture appear to have communal traits were associated with higher profits, where male CEOs who in their pictures appear powerful were associated with profits (Pillemer, Graham & Burke, 2014). In this way, appearance can strengthen glass ceiling challenges. Power in the form of CEO board chair duality for females was less likely in smaller organizations, hampering the ability of these CEOs to implement their strategies (Muller-Kahle & Schiehll, 2013). A review on managerial risk-taking highlights findings that the genders were associated with different managerial risk-taking (Hoskisson, Chirico, Zyung & Gambeta, 2017). However, a major criticism of using gender in upper echelons research is that it assumes all woman differ from all men and can bring these differences to the table to benefit organizational performance (Hoobler et al., 2018). Gender differences in managerial risk-taking need to be examined further in future research to determine if managerial risk-taking is influenced by gender norms or some other factor and the influence on glass ceiling challenges.

Although female CEOs were associated with higher long-term performance, they experience negative short-term fluctuations in organizational value (Lee & James, 2007). Stockholders reacted negatively to the announcement of a female CEO as compared to a male CEO, but less so when the female was an insider (Lee & James, 2007). This negative public reaction increases glass ceiling challenges. This was most likely because of gender role violations in leadership, but perceived competence increased when the female was an insider

who had organization-specific knowledge. Not only did organization stock value decrease when a female CEO successor was announced, but also when a female successor was announced at another organization (Dixon-Fowler, Ellstrand & Johnson, 2013). It appears as if female CEOs were treated as a coherent group and organizational stock value decreased due to the contagion effect (Dixon-Fowler et al., 2013). In further support of this Zhang and Qu (2016) found that male to female CEO succession had a negative impact on organizational performance in the following year. In addition, it was also found in the same study that male to female CEO succession also increased the likelihood of early departure of the successor, but less so where there are positive organizational attitudes toward female leadership. Initial negative reaction to female CEOs increases glass ceiling challenges. Subsequent research should include race, however, small sample sizes may limit studies on CEO succession. Table 2.4 summarizes the literature on consequences to diverse CEOs.

Table 2.4

Female and Racial CEO Diversity: Consequences

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
CEO	1999	Ashcraft	ASQ	A case study where founder entrepreneur's maternity leave is used to revise the founder's role, but not erase her role.	
CEO	2014	Bigelow, Lundmark, Parks, & Wuebker	JOM	Equally qualified new-venture female CEOs are perceived as less capable as compared to their male counterparts. Suggests that there is a new-venture capital gap based on gender.	
CEO	2008	Devers, McNamara, Wiseman, & Arrfelt	OS	Female CEO associated with lower firm risk.	
CEO	2013	Dixon-Fowler, Ellstrand, & Johnson	SMJ	Female CEOs are treated as a coherent group. The appointment of a female CEO temporarily decreases focal firm value, as well as the value of other female, led firms via contagion.	
CEO	2015	Eggers & Song	AMJ	Female CEO entrepreneurs were more likely to fail.	
CEO	2016	Glass, Cook	LQ	Glass cliff explored, females are indeed promoted to high-risk positions. Lack of authority to make strategic changes compounds the issue.	
CEO	2015	Hill, Upadhyay, & Beekun	SMJ	Female CEOs benefit from their minority status in terms of higher compensation. Likelihood of CEO exit differs between female (negative) and ethnic (positive).	Racially diverse CEOs benefit from their minority status in terms of higher compensation. Likelihood of CEO exit differs between female (negative) and ethnic (positive).
CEO	2016	Hoobler, Masterson, Nkomo, & Michel	JOM	In gender egalitarian cultures, female leaders in the upper echelons positively affect general firm performance, but more specifically positively affect sales performance.	
CEO	2017	Hoskisson, Chirico, Zyung, & Gambeta	JOM	Highlights that gender differences relate to managerial risk taking. When there is a female successor to a male CEO, risk-taking by the firm decreases.	

CEO	2016	Jeong & Harrison	AMJ	Female CEOs have higher long-term financial performance, lower short-term stock market returns. Females on the TMT and in CEO position decreases strategic risk-taking by the organization.	
CEO	2017	Keeves, Westphal, & McDonald	ASQ	Top manager resentment after ingratiatory behavior toward the CEO is moderated by CEO gender. The ingratiatory creates more resentment in white males toward female CEOs and female TMT members toward male CEOs.	Top manager resentment after ingratiatory behavior toward the CEO is moderated by CEO race. The ingratiatory creates more resentment in white males toward female CEOs and female TMT members toward male CEOs.
CEO	2015	Kish-Gephart & Campbell	AMJ	Female CEO control is negative and significant in strategic risk-taking model.	
CEO	2007	Lee & James	SMJ	Stockholders react negatively to the announcement of a female CEO as compared to a male CEO, but less so when the female is an insider.	
CEO	2016	Leslie, Manchester, & Dahm	AMJ	Diversity goals in organizations create a female premium for certain women and at the highest levels, and a reversal of the gender pay-gap is observed.	Racial minorities at the highest levels earn almost 93% as much as white males in organizations with diversity goals. Caution - low statistical power.
CEO	2013	Muller-Kahle, Schiehll,	LQ	Female CEOs are less likely to have structural power as CEO and board chair. Unless in large organizations.	
CEO	2013	Park & Westphal	ASQ	White male CEOs are more likely to attribute low firm performance in a company with a female CEO to internal attributes when talking to journalists. Journalists who are female or a racial minority are less likely to be influenced by the opinions of white male CEOs about female CEOs performance.	White male CEOs are more likely to attribute low firm performance in a company with a racial minority CEO to internal attributes when talking to journalists. Journalists who are female or a racial minority are less likely to be influenced by the opinions of white male CEOs about female CEOs performance.

CEO	2014	Pillemer, Graham, Burke	LQ	Rate pictures. The faces of female CEO perceived to have communal traits are correlated with company rank/profits. The faces of male CEOs perceived as powerful are correlated with company rank/profits.	

CEO	2016	Ryan, Haslam, Morgenroth, Rink, Stoker, Peters	LQ	Explores the glass cliff phenomenon, whereby female CEOs are hired and then fired.	
CEO	2016	Zhang & Qu	AMJ	CEO succession (male to female) has a negative impact on investor returns and increases the likelihood of successor early departure, but less so where there are positive organizational attitudes toward female leadership.	
CEO	2015	Zhang, Li, Ullrich, & van Dick	JOM	The negative effect of differentiated transformational leadership is stronger when the CEO is female, decreasing TMT effectiveness and subsequent firm performance.	

Section 2.3 BOD Diversity

Section 2.3.1 BOD Diversity – Antecedents

Diverse individuals became directors of major U.S. companies long before they became their CEOs. There are several excellent review articles that mention research on director diversity as part of the review. In their review of board demography and organizational performance research, Forbes and Milliken (1999) note findings from the National Center for Nonprofit Boards that there were more women on non-profit boards than on for-profit boards. In an excellent multidisciplinary review of the director selection literature, Withers, Hillman, and Cannella Jr (2012) noted that diversity influenced director selection. Directors bring valuable human and social capital to organizations that often see increased performance with diverse directors. A more recent review outlines and provides a framework for understanding board gender diversity (Kirsch, 2018). Although somewhat slowly, diversity in the boardroom has increased (Daily, Certo & Dalton, 1999). The authors imply that it is encouraging that minority representation has increased but discouraging in that there should be far more diverse individuals in these positions.

There were several factors examined in research that improve the chances of a diverse board. Already being a director, having an advanced degree, or coming from a non-business background appears to weaken glass challenges to director appointment (Hillman, Cannella & Harris, 2002). Individuals from a non-business background are defined as a community influential (Hillman, Cannella & Paetzold, 2000). Hillman et al. (2002), found that female directors join multiple boards faster, were more likely to hold advanced degrees and came from non-business backgrounds as compared to their white male counterparts. The study also found that "size, industry type, firm diversification strategy, and network effects” were linked to

diversity on boards (Hillman et al., 2002). Diverse directors receive less mentoring, which led to less diversity in the boardroom strengthening glass ceiling challenges. McDonald and Westphal (2013) found that diverse first-time directors received less mentoring which led to fewer board appointments, but less so when the board had an incumbent diverse director. Having fewer mentors increases glass ceiling challenges.

There were industry and organizational factors that have led to increased board diversity. Hillman et al. (2007) found that several factors influence the likelihood of female representation on boards. Larger organizations were more visible, were expected to be progressive in diversity, and were associated with female representation on the board. Organizations in industries with more female workers were also more likely to have female board representation. The study also found that organizations pursuing an unrelated diversification strategy may place more value on the diversity that a female director can bring to the board and female representation was more likely (Hillman et al., 2007). These research findings indicated that in industries with more females, larger organizations, and organizations with unrelated diversification strategies, diverse boards were more likely and glass ceiling challenges may be weaker. Stereotypes also influence board appointment in that when there are more females in political office more females are appointed to boards, but less so when religiosity there is high in a country (Chizema, Kamuriwo & Shinozawa, 2015).

The selection of new board members was influenced by shared demographic characteristics in other areas with the board as well as ingratiation toward individuals with pivotal network connections. Because biological sex, facial features and skin tone are highly salient demographic characteristics, it increases the need for shared demographic characteristics in other areas, such as education, functional background, or age (Zhu et al., 2014). Having shared

characteristics in areas other than race or gender weakens glass challenges, but not having shared characteristics in other areas increases glass challenges. Ingratiation by TMT members toward the incumbent CEO who was also on the board of an outside organization increased TMT first-time director appointment to those outside boards or boards to which the CEO had network ties (Zhu et al., 2014). Ingratiatory behavior by diverse TMT members helps to mitigate the disparity of treatment that they otherwise received in obtaining board seats (Westphal & Stern, 2006). Although TMT ingratiatory behavior toward her CEO increased director appointments at other organizations, ingratiatory behavior toward peer directors did not have the same effect (Westphal & Stern, 2006, 2007). Ingratiatory behavior of the TMT to their incumbent CEO can help to negate glass ceiling challenges, but ingratiatory behavior towards other directors increase glass ceiling challenges. Ingratiatory behavior of diverse directors toward other directors did not result in the same number of appointments as it did for white males (Westphal & Stern, 2007). The same study also found that directors who engaged in information sharing and monitoring received fewer board seats, but more so for diverse directors. Thus, it can be inferred that engaging in behaviors expected, glass ceiling challenges are increased.

In a simulation of the effect of using low mandated quotas for female directors in the US, results indicated an increase in structural equality for females (Kogut, Colomer & Belinky, 2014). However, there could be negative ramifications from a mandated quota. Organizations may only use the mandated number of diverse directors and other directors may see the diverse directors as products of affirmative action rather than legitimate members who earned a board seat. Some countries have implemented mandated quotas and time will tell the influence that this has (Adams, 2016). Having a low mandated quota could increase diversity in the boardroom but decrease the perceived legitimacy of these individuals as directors, thus increasing glass ceiling

challenges. If appointed to the board, female directors are more likely to be appointed to specific board committees. Bilimoria and Piderit (1994), found that women are more likely to be appointed to public affairs committees and males are more likely to be appointed to compensation, executive, and finance committees. The authors suggest that this was because there are fewer females on the board, which highlights their differences and forces them into stereotypical roles. Other directors may perceive females as having human capital resources that would benefit the public affairs committee. Because females are more likely to come from non-business backgrounds (i.e. community influential) (Hillman et al., 2000), they may not be perceived as able to benefit the more powerful board committees. As counterintuitive as it may seem, coming from a business background could increase glass ceiling challenges. Once appointed to the board, diverse individuals bring several consequences with them to the organization on whose board they sit, and this research is summarized in Table 2.5.

Table 2.5

Female and Racial BOD Diversity: Antecedents

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
Dir	1994	Bilimoria & Piderit	AMJ	Board committee membership gender-based bias. Men more likely to be on compensation, executive, and finance committees. Women more likely to be on public affairs committees.	
Dir	2015	Chizema, Kamuriwo, Shinozawa	LQ	Stereotypes influence female board appointment. More females in political office is significant with more female directors and the opposite with country religiosity.	
Dir	1999	Daily, Certo, & Dalton	SMJ	Female representation is increasing in the boardroom, but not the CEO suite.	
Dir	1999	Forbes & Milliken	AMR	Females more likely to be on non-profit boards.	
Dir	2002	Hillman, Cannella, & Harris	JOM	Female directors join multiple boards faster, are more likely to hold advanced degrees and come from non-business backgrounds as compared to their white male counterparts.	Racial minority board representation linked to "size, industry type, firm diversification strategy, and network effects."
Dir	2007	Hillman, Shropshire, & Cannella	AMJ	Female board representation linked to "size, industry type, firm diversification strategy, and network effects."	
Dir	2013	Johnson, Schnatterly, & Hill	JOM	Synthesizes the diverse literature on director demography antecedents and outcomes.	Results are inconclusive as to the influence of racially diverse directors on firm outcomes.
Dir	2017	Kirsch	LQ	Review of research on female directors. Develop a "framework for understanding board gender composition."	
Dir	2014	Kogut, Colomer, & Belinky	SMJ	Simulation - Using low mandated quotas for directors in the US results in increased structural equality.	
Dir	2013	McDonald & Westphal	AMJ	First-time female directors receive less mentoring which leads to fewer board appointments, but less so when the board has an incumbent female director.	First-time racial minority directors receive less mentoring which leads to fewer board appointments, but less so when the board has an incumbent racial minority director.

Dir	2007	Westphal & Stern	AMJ	Female directors rewarded less in director labor market for ingratiation toward peer directors. Male directors rewarded for less monitoring and control activities, but female directors are penalized for engaging in the same behaviors.	Racial minority directors rewarded less in director labor market for ingratiation toward peer directors. Male directors rewarded for less monitoring and control activities, but racial directors are penalized for engaging in the same behaviors.
Dir	2006	Westphal & Stern	ASQ	TMT ingratiation toward the incumbent CEO influences TMT board appointments at other organizations where the CEO is an outside board member suggesting that ingratiation can mitigate disparity of treatment due to gender.	TMT ingratiation toward the incumbent CEO influences TMT board appointments at other organizations where the CEO is an outside board member suggesting that ingratiation can mitigate disparity of treatment due to race.
Dir	2014	Zhu, Shen, & Hillman	ASQ	Selection of demographically different new board members is influenced by shared demographic characteristics in other areas. Gender is a highly salient demographic characteristic increasing the need for shared demographic characteristics in other areas.	

Section 2.3.2 BOD Diversity – Consequences

The percentage of diverse directors exceeds the percentage of diverse CEOs and diverse TMT members, making it easier for scholars to study the outcomes of diverse directors. In their review of research on director social capital, human capital, and demographics, Johnson, Schnatterly and Hill (2013) synthesize findings about director gender and suggest that there is a critical level, such as three females, for the benefits of gender diversity to be realized in performance, but the results were inconclusive for racial minority directors. Organizations with diversity messages, but with fewer than two females on the board were viewed as lacking integrity and have reduced attractiveness to potential employees (Windscheid, Bowes-Sperry, Kidder, Cheung, Morner & Lievens, 2016). Potential employees perceived organizations with mixed diversity messages (such as having a commitment to diversity statement, but lacking director diversity) to have less integrity and less employer attractiveness (Windscheid et al., 2016). It is in the best interest of organizations with a professed commitment to diversity to put this into practice on their board. Thus, it can be inferred that symbolic commitment to diversity can increase glass ceiling challenges.

Positive outcomes associated with having diverse individuals on the board should exert influence to decrease glass ceiling challenges. Diversity on the board was positively associated with innovation and racial diversity was positively associated with firm reputation (Miller & Triana, 2009). Females and racial minorities bring unique human capital and positively influence firm performance (Withers et al., 2012). Organization whose boards include female directors experienced less fraud, and when an organization did experience fraud, negative investor reactions were less when there were female directors (Cumming, Leung & Rui, 2015). These relationships were stronger in male-dominated industries (Cumming et al., 2015). Female

directors were also positively associated with positive stock market volatility after the announcement of a new SEC rule giving shareholders greater rights in the director nomination process and lessening CEO power (Campbell, Campbell, Sirmon, Bierman & Tuggle, 2012). Shareholders may perceive female directors as better monitors of shareholder interests. However, the percentage of racial minority directors was negatively associated with positive stock market volatility after the announcement of a new SEC rule to give shareholders greater rights in the director nomination process and thus lessen CEO power (Campbell et al., 2012). Female and racial diversity on the board has been found to increase firm performance (Carter, Simkins & Simpson, 2003).

The past experience of a director as well as the experience of their peer directors can impact the influence of diverse directors (Westphal & Milton, 2000). The study had many findings, diverse directors who enjoy a majority status on the focal board but have had experience as a minority director can exert more influence over board decisions and increase the influence of other minority directors on board decisions at the focal board. Diverse directors who were part of the minority on the focal board but have past experience as a majority member have less influence over board decisions. In addition, it was also found that diverse directors who have social ties to other directors on the board had greater influence over board decisions (Westphal & Milton, 2000). Thus, peer director experience as a minority and social ties decreased glass ceiling challenges to diversity and director experience as a majority increased glass ceiling challenges to diversity. In diversity research, sometimes non-significance is significant. Boivie, Graffin and Pollock (2012) examine the influence of several factors on the likelihood of director exit in large organizations. The authors included a female director control variable which was not

significant in any of the models. However, it was significant for racially diverse directors, indicating that these individuals were less likely to leave once appointed.

The value creation that females bring to an organization was influenced by market factors (Abdullah, Ismail & Nachum, 2016). In the Malaysian emerging market, female directors were associated with a higher ROA, but a lower Tobin's q, indicating that the market discounts the value that female directors bring (Abdullah et al., 2016). The same study also found that ethnic diversity did not increase the influence of female directors. A discounting of the value that female directors bring may explain the pay-gap for female executive directors. Scholars found that female executive directors were compensated less as compared to their male counterparts (Kulich et al., 2011). These results suggest that the gender pay-gap persists for female directors and increases glass ceiling challenges in director compensation.

Board diversity had negative repercussions for board decision-making in the form of pluralistic ignorance. Pluralistic ignorance is an occurrence where individuals wrongly assume that other group members do not share their concerns about decisions (Harvey, 1974). Westphal and Bednar (2005) found that functional background, educational background and gender diversity on boards increased pluralistic ignorance in board decisions. These findings were not specific to female directors, but to gender diverse boards as a whole. Nonetheless, having a gender-diverse board may increase the likelihood of pluralistic ignorance and be detrimental to board decisions.

Organizations with powerful female directors engaged in more strategic change when the organization is performing well, but the reverse was true with cases of low organizational performance (Triana et al., 2014). The sample used covers three years of data, which was adequate for the study in question. However, the effect remains to be studied, such as the

negative or positive impact on long-term performance in these organizations. In general, it is assumed that organizations with low performance should engage in strategic change, but is this true for all organizations? Research found that female board membership was positively related to the monitoring and strategy involvement of the board, as well as accounting returns based on the socio-cultural context of an organizations' home country (Post & Byron, 2015). Caution seems to be a trend on diverse boards as organizations with female and racially diverse directors engaged in smaller and fewer acquisitions (Chen, Crossland & Huang, 2016). This may indicate a positive outcome of board gender diversity, given that organizations tended to overpay for acquisitions and saw a subsequent neutral or negative effect on long-term performance (Hayward & Hambrick, 1997). Positive firm outcomes related to the diversity of board members should encourage diversity in the boardroom and decrease glass ceiling challenges, but this is not always the case. Table 2.3.2 summarizes the literature on consequences to BOD diversity.

As evidenced by this literature review, there are many antecedents and consequences of diversity in the upper echelons that have been researched by scholars. However, there are also areas in which more research is needed, specifically with regards the dispersion of power in the upper echelons to diverse individuals. Thus, this dissertation specifically examines the presence of diverse individuals at the three levels within the upper echelons and the distribution of power to a diverse CEO and or TMT members. The many glass ceiling challenges faced by diverse individuals discussed in this literature review and summarized in the respective tables are depicted in Figure 2.2.

Table 2.6

Female and Racial BOD Diversity: Consequences

Level	Year	Author(s)	Journal	Gender - Key Findings	Race - Key Findings
Dir	2016	Abdullah, Ismail, & Nachum	SMJ	Female directors can increase or decrease firm value in emerging markets. Organizations with female directors have higher performance, but lower market value. Ownership concentration negatively moderates the increased performance seen in organizations with female directors.	Ethnic diversity of boards does not moderate (i.e. increase) the influence of female directors on firm performance.
Dir	2016	Adams	LQ	Because of the business case for females on boards, countries have implemented quotas, but there needs to be more research on the benefits of female directors before conclusions are drawn.	
Dir	2012	Boivie, Graffin, & Pollock	AMJ	Director gender is not significant with director exit.	Racial minority directors less likely to exit a board once appointed.
Dir	2012	Campbell, Campbell, Sirmon, Bierman, & Tuggle	SMJ	The percentage of directors who are female is positively associated with positive stock market volatility after the announcement of a new SEC rule to give shareholders greater rights in the director nomination process and thus lessen CEO power.	The percentage of directors who are a racial minority is negatively associated with positive stock market volatility after the announcement of a new SEC rule to give shareholders greater rights in the director nomination process and thus lessen CEO power.
Dir	2003	Carter, Simkins, & Simpson	FR	Female diversity on the board increases firm performance.	Racial diversity on the board increases firm performance.
Dir	2016	Chen, Crossland, & Huang	SMJ	Firms with female directors engage in smaller and fewer acquisitions.	Firms with racially diverse directors engage in smaller and fewer acquisitions.
Dir	2015	Cumming, Leung, & Rui	AMJ	Organizations with female directors experience less fraud. Negative investor reaction to fraud is less when there are female directors and these relationships are stronger in male dominated industries.	
Dir	2013	Johnson, Schnatterly & Hill	JOM	Authors suggest that there must be at least 3 females on the board for gender diversity to benefit firm outcomes.	

Dir	2011	Kulich, Trojanowski, Ryan, Haslam, & Renneboog	SMJ	Female executive directors are compensated less as compared to their male counterparts.	
Dir	2009	Miller & Triana	JMS	Gender diversity on the board is positively associated with innovation.	Firm reputation and innovation positively associated with board racial diversity.
Dir	2015	Post & Byron	AMJ	Female board membership is positively related to the monitoring and strategy involvement of the board, as well as accounting returns based on socio-cultural context of the organizations' home country.	
Dir	2014	Triana, Miller, & Trzebiatowski	OS	Organizations with powerful female directors engage in more strategic change when the organization is performing well, but the reverse is true when organizational performance is low.	
Dir	2005	Westphal & Bednar	ASQ	Functional background, educational background and gender diversity on boards increases pluralistic ignorance.	Functional background, educational background and racial diversity on boards increases pluralistic ignorance.
Dir	2000	Westphal & Milton	ASQ	Minority directors who have past experience as a minority director are able to exert more influence than their minority counterparts. Directors who enjoy a majority status on the focal board but have had experience as a minority director increase the influence of minority directors on the focal board. Social ties to majority directors increase the influence of minority directors.	Race control not statistically significant.
Dir	2016	Windscheid, Bowes-Sperry, Kidder, Cheung, Morner, & Lievens	JAP	Individuals perceive organizations with mixed diversity messages (a commitment to diversity statement, but lacking director diversity) to have less integrity and less employer attractiveness.	
Dir	2012	Withers, Hillman, & Cannella, Jr	JOM	Females bring diverse human and social capital to boards. Female directors positively influence firm performance.	Racial minority directors bring diverse human and social capital to boards and positively influence firm performance.

Figure 2.2

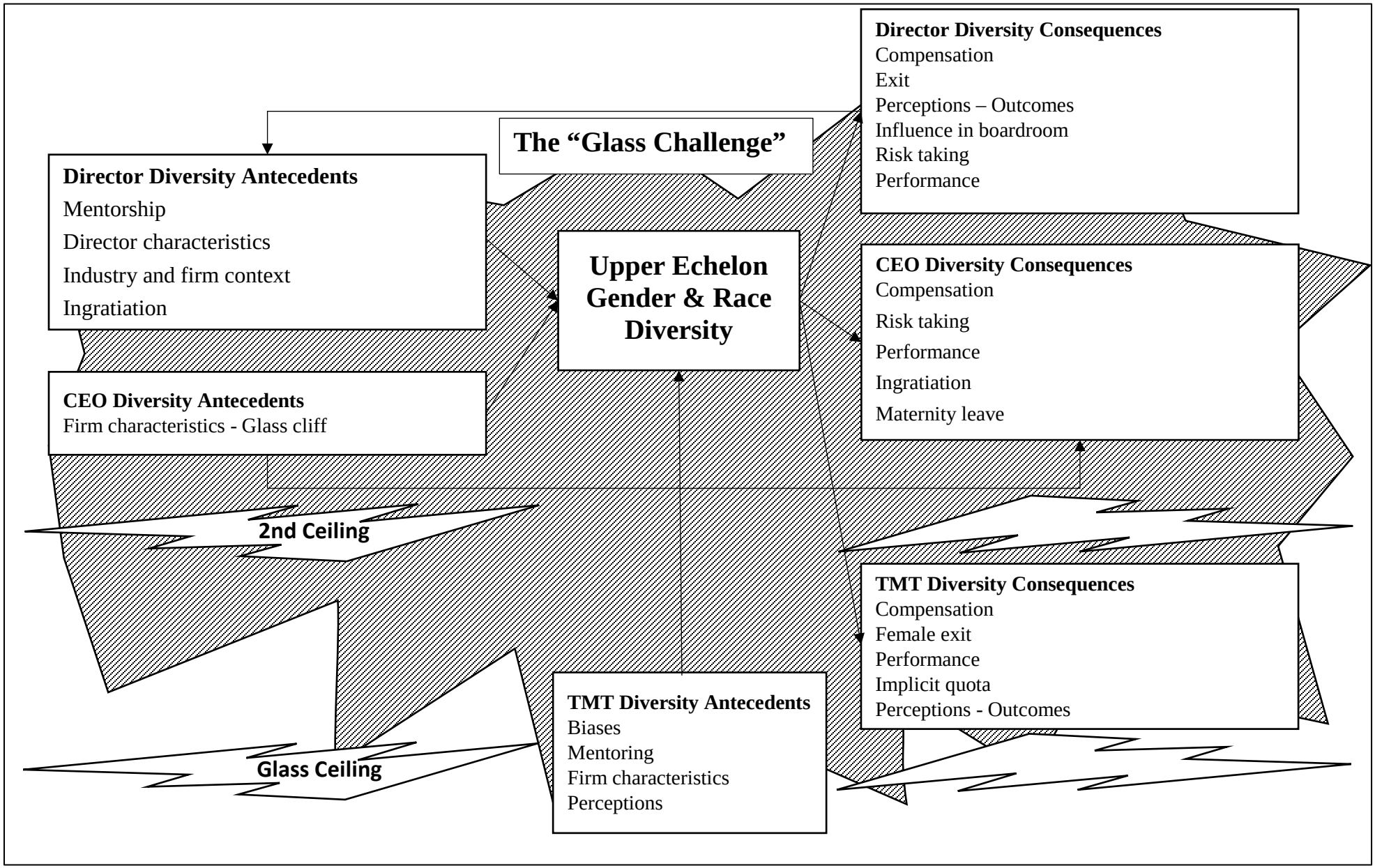


Figure 2.3: Depiction of the "Glass Challenge" – UE research on class challenges to females and racially diverse UE individuals

Chapter 3

Theory and Hypotheses

Chapter 3 outlines the theories utilized to create a foundation for the hypotheses also developed in the chapter. Key insights from the theories and perspectives utilized in hypotheses development are summarized in Table 3.1. The hypotheses developed are summarized in Table 3.2. This leads into Chapter 4 which outlines the sample, measures, and methods.

Section 3.1 Theories and Perspectives

Section 3.1.1 Upper Echelons Theory

During a time when the importance of upper management to organizational outcomes was in question (Hambrick, 2007), Hambrick and Mason (1984) synthesized an upper echelons perspective drawing on the then fragmented literature examining the influence of managerial characteristics on organization outcomes. Central to upper echelons theory is the idea that observable and unobservable characteristics shape the lenses through which upper echelon individuals perceive and evaluate alternatives in their decision-making process (Hambrick, 2007; Hambrick & Mason, 1984). In this way, scholars can use managerial characteristics to predict managerial choices (Hambrick & Mason, 1984). Upper echelons theory also acknowledges the fact that individuals are fallible humans who make assumptions about future events, cannot know all alternatives, and cannot know the impact of said alternatives (March & Simon, 1958). Hambrick and Mason (1984) posited that characteristics such as age (proxy for risk propensity), socioeconomic roots (proxy for acquisition strategy and unrelated diversification), to name a few are indicators of “givens and behaviors” that each manager brings to their decision-making process. These managerial decisions then influence firm outcomes (Boeker, 1997; D'Aveni,

1990; Eisenhardt & Schoonhoven, 1990). Initial research using upper echelons theory did not include the use of race or gender, most likely because the majority of upper echelon individuals were white males, yet this addition is a needed addition (Carpenter et al., 2004; Corner & Kinicki, 2004). Indeed, Nielsen (2010) noted that gender and race are important characteristics that were under-researched. More recent research has utilized race and gender as indicators of upper echelon behavior (Chaurasia & Shukla, 2012; Marquis & Lee, 2013). Upper echelons theory fits nicely with the social identity approach in that both theories acknowledge the importance of individual characteristics on decision making processes.

Section 3.1.2 The Social Identity Approach

The main theory utilized in this dissertation is social dominance theory. Social dominance theory is strongly rooted in the social identity approach, which includes both social identity theory and self-categorization theory. Studies developing social identity theory in the 1970s by Henri Tajfel and his colleges explore the idea that individuals categorize themselves and others in terms of in-group and out-group membership. Individuals are theorized to put themselves into social categories or groups which they represent. An individual's interaction can be at either end of a spectrum ranging from interpersonal to intergroup. Interpersonal interaction occurs when an individual relates to others purely as an individual. Intergroup interaction occurs when an individual relates to others as a representative of their group (Tajfel, 1978; Tajfel & Turner, 1979). Concept of self can be shaped by the social categories to which a person belongs (Tajfel & Turner, 1979). By furthering the interest of the group, an individual's self-concept advances because individuals wish to be part of successful groups (Bergami & Bagozzi, 2000; Hornsey, 2008). Thus, individuals have a self-motive to enhance the interests of their in-group.

Social categorization theory explains why individuals "self-categorize" themselves into in-groups and out-groups based on salient observable characteristics such as age, gender, ethnicity, functional background, and education (Turner, Hogg, Oakes, Reicher & Wetherell, 1987). It is an excellent lens through which to examine topics in gender studies because gender is a salient biodemographic characteristic. Self-categorization, which builds on the cognitive aspect of social identity theory, is a function of both accessibility and fit (Oakes, Turner & Haslam, 1991). There are two forms of accessibility: fleeting and chronic. Fleeting accessibility occurs when individuals are situationally primed to consider themselves as belonging to a specific group (Oakes et al., 1991). Context can form group bonds that otherwise might not exist (Hornsey, 2008). In other words, an individual in a specific context may identify with another individual in the same context as an in-group member. On the other hand, chronic accessibility occurs when categorization is frequently activated or when individuals are motivated to use categorization (Oakes et al., 1991). Stereotypes such as pink for girls and blue for boys often fuel chronic accessibility (Hornsey, 2008; Oakes et al., 1991). Gender and race are examples of frequently activated categories because they are salient characteristics often referenced by individuals (Abraham, 2017; Ridgeway, 1991).

Self-categorization is also a function of comparative and normative fit (Turner et al., 1987; Turner, Oakes, Haslam & McGarty, 1994). Comparative fit relates to how well an individual feels that *inter*-category differences are maximized, and *intra*-category differences are minimized. For example, an individual's comparative fit in the female group is high when they are highly dissimilar to males (inter-category differences) and are similar to other females (intra-category differences are minimized) (Pearsall, Ellis & Evans, 2008). Normative fit occurs when an individual's social behavior and group membership align with their social expectations

(Oakes et al., 1991). For example, if a female is feminine then she has high normative fit within the female group. A feeling of belongingness to a specific group shapes individual identity (Hornsey, 2008).

Identity, according to self-categorization theorists includes three types: human, social, and individual (Turner et al., 1987). In their book, Turner and colleagues outline human identity is the concept of self, or how much an individual feels part of humanity. Social identity is the concept of group membership, or how an individual feels part of social in-groups and compares those groups to social out-groups (Tajfel, 1978). Personal identity is the concept of individualism, or how an individual makes personal self-categorizations as well as interpersonal comparisons (Hornsey, 2008). All three identity types serve to help a person form a concept of self, and influence behaviors in a group. Identity and social comparisons influence individuals in the upper echelons (Fredrickson, Davis-Blake & Sanders, 2010). Thus it can be said that diverse individuals should wish to further the interest of the group to which they belong because this influences their self-concept through a desire to belong to a group that excels (Bergami & Bagozzi, 2000; Hornsey, 2008). In other words, CEOs, TMTs, and boards of directors are individuals who categorize themselves into in-groups and out-groups based on salient characteristics. Because race and gender are salient biodemographic characteristics influencing an individual's concept of self and group processes, the social identity approach is a useful lens for diversity research in the upper echelons. It is important to consider the biodemographic characteristics such as race or gender of an employee's manager when studying compensation inequality (Abraham, 2017). Thus, it is put forth in this dissertation that the presence of females and racial minority individuals in the upper echelons influence the prosperity of other females and racial minorities in the upper echelons of the same organization.

Section 3.1.3 Social Dominance Theory

Social dominance theory proposes that social hierarchies tend to be based in membership to specific groups. Greater social status is given to specific groups within a society. Membership to different groups within the social hierarchy is defined by three separate systems: age, gender, and an arbitrary set such as race. Society distributes things of positive or negative social value, such as power and compensation, differently to individuals based on their membership within the three aforementioned systems. These three systems, leading to the unequal distribution of positive or negative social value, produce systemic effects when processes at different levels work together in human societies (Pratto, Sidanius & Levin, 2006).

The three systems within social dominance theory are qualitatively different. Flexibility, level of violence, and focus are the three critical differences amongst the three systems (Sidanius & Pratto, 2001; Sidanius & Veniegas, 2000). In different societies, there is flexibility in the age and gender systems. For example, the age of minority or majority can be dependent on many factors as well as who is defined as male or female. While violence and coercion are used to an extent to maintain the age and gender systems, the arbitrary-set system is unique in that total annihilation amongst groups has actually occurred in history indicating more hostility amongst arbitrary set groups (Pratto et al., 2006). Arbitrary-set systems usually refer to race. In the US the racial hierarchy is mostly dichotomous, with individuals viewed as either Caucasian or non-Caucasian (Sidanius, Peña & Sawyer, 2001) and racial diversity are defined as such in this dissertation. With regards to focus, adults are focused on controlling children, males are focused on controlling females, and arbitrary-set dominant males are focused on controlling arbitrary-set subordinate males. Known as the ‘subordinate male target hypothesis,’ arbitrary set violence and discrimination are predominately male-on-male undertakings (Pratto et al., 2006; Sidanius &

Pratto, 2001; Veniegas & Sidanius, 2013). It is noteworthy for the arguments put forth in this dissertation that social dominance theory does not argue that arbitrary-set dominant females are necessarily focused on controlling arbitrary-set subordinate individuals, and that arbitrary-set subordinate males are not focused on controlling arbitrary set females more or less because of their membership to an arbitrary-set membership, but rather because of them belonging to the female group. In other words, according to social dominance theory, a racially diverse male CEO will not exert the same controlling behavior toward a female TMT member as would a Caucasian male CEO. Conversely, a female CEO will not exert the same controlling behavior toward a racial minority TMT member as would a Caucasian male CEO. The three qualitative differences, flexibility, violence, and focus, amongst the three systems of social dominance theory help to explain the processes behind motivation for group-based social hierarchy.

Group-based social hierarchy is both produced and maintained by several mechanisms. Discrimination via institutions, individuals, and collaborative intergroup processes produce the net effects that comprise group-based social hierarchy. Pratto et al. (2006) defines legitimizing myths as "consensually held values, attitudes, beliefs, stereotypes, and cultural ideologies." Social ideologies, or legitimizing myths, help to coordinate discrimination across the three levels, age, gender, and arbitrary-set, resulting in favor shown to dominant groups often to the detriment of subordinate groups (Pratto et al., 2006). There are two types of legitimizing myths that influence social dominance dynamics; *hierarchy-enhancing legitimizing myths* and *hierarchy-attenuating legitimizing myths.*

The oppression of groups is founded in *hierarchy-enhancing legitimizing myths,* providing both moral and intellectual justification for beliefs and actions (Pratto et al., 2006). These myths, include both racism and sexism among other examples, provide fodder for the

argument that unfair treatment is natural, legitimate, or somehow moral. Dominance is sustained through these myths giving justification for the behavior of individuals, groups, and institutions. Both dominants and subordinates behave in ways that fuel hierarchy-enhancing legitimizing myths, which further perpetuates the oppression of subordinates (Pratto et al., 2006). Yet, counter ideologies exist and influence the strength of a legitimizing myth. These counter ideologies are known as *hierarchy-attenuating legitimizing myths* and they work to reduce the effects of dominance. Egalitarianism, feminism, and humanist doctrines are all examples of such ideologies. A basic assumption of social dominance theory is that subordinates show greater support for attenuating myths, while enhancing myths receive more support from dominants. However, consensus on a myth can be reached between dominants and subordinates. The core strength of a legitimizing myth, be it enhancing or attenuating, is the consensus amongst dominant and subordinate groups regarding the myth in question. Stable social systems often experience consensus in ideologies amongst dominant and subordinate groups (Sidanius & Pratto, 2001). Thus, the legitimizing myths in stable social systems are likely to be strong in nature.

In much the same way there are hierarchy-attenuating and hierarchy-enhancing institutions. Hierarchy-enhancing institutions include security organizations, corporations, and financial institutions. Institutions that enhance the social hierarchy do so through the disproportionate distribution of social value to dominant and subordinate groups. Hierarchy enhancing institutions allocate to dominant groups more positive social value and less negative social value, which increases the discrimination faced by subordinate groups (Sidanius & Pratto, 2001). Indeed, institutional discrimination has been researched as a reason for the disproportionate imprisonment of African-American males as opposed to European-American

males (Mauer, 2006; Miller, 1996; Pratto et al., 2006). This has had many negative impacts, in the form of lost compensation, the absence of family members, and has led to an overall distrust of institutions in the African-American community (Mauer, 2006; Pratto et al., 2006).

On the other hand, hierarchy-attenuating institutions work to reduce the discrimination of subordinate groups, although their efforts do not out way the influence of hierarchy enhancing institutions. Hierarchy-attenuating institutions, such as welfare organizations or civil rights groups, work to give subordinate groups access to resources freely given to dominant groups (Pratto et al., 2006). Nonetheless, hierarchy-enhancing institutions pose a great threat to equality for several reasons. The sheer size, reach, wealth, power, generational perpetuation, establishment of institutional norms, and institutional exemption from personal culpability make hierarchy-enhancing institutions an extremely influential source of discrimination (Pratto et al., 2006; Sidanius & Pratto, 2001). In this way corporations are an influential source of discrimination.

Discrimination by individuals is often enacted in these domains. When individuals who hold key resources make decisions based on a target individual's race or gender, discrimination towards these individuals occurs. Key resources include employment, housing, and even lesser charges for offenses perpetrated (Pratto et al., 2006; Sidanius & Pratto, 2001). The current social structure further perpetuates the discrimination of individuals by other individuals. Individuals create in-groups and out-groups based on biodemographic characteristics, and thus often have friends who are similar to themselves. Thus, the white male is more likely to have white male friends and recommend those individuals for employment opportunities. If communities are segregated and educational levels differ by group, then this discriminates against children in terms of neighborhood tutoring. The stability of group-based social inequality is influenced by

the aggregation of thousands of such acts (Pratto et al., 2006; Sidanius & Pratto, 2001). The discrimination of individuals is in this way facilitated by the structure of society. The structure of society makes it easier for individuals to engage in actions that maintain or even enhance discrimination and harder to engage in attenuating actions.

Each individual has a social dominance orientation (SDO). Pratto et al. (2006) discuss SDO as a construct that "captures the extent of individuals' desires for group-based dominance and inequality" (p. 281). White males are more likely to have a higher SDO than someone who is a racial minority or a female which forms the foundation for the hypotheses in this dissertation. In other words, white males are more likely to distribute structural power unequally as compared to a racial minority or female counterpart.

Although position in the social structure influences behavior, individuals are also influenced by their social dominance orientation. Although obtaining the SDO of executives would add insight into this study, obtaining survey data of this nature from executives could pose legal issues for organizations. In keeping with other upper echelons research, biodemographic information, such as race and gender, are be used as a proxy for SDO. Furthermore, because the number of females and racial minority individuals is small to begin with, there would need to be nearly a 100% response rate to obtain enough responses to preform statistical analysis. Due to the nature of this study a complete set of responses is also required given that it would require responses from those in the TMT, the CEO, and all board members for each company in the analysis which would pose obvious challenges. Given the limitations of obtaining survey information from top managers and directors, upper echelons theory supports the use of biodemographic characteristics as proxies for top management and director actions (Hambrick & Mason, 1984). Thus, this dissertation utilized racial and gender biodemographic characteristics

of individuals as an indication of their social dominance orientation and how power is most likely to be allocated to executives in the C-suite.

Power within an organization is a valuable resource to executives, but not all executives are allocated the same amount of power within the organization. In support of social dominance theory, prior work suggests that female and racial minority executives are allocated less power within the organization. For example, past research indicates that there is a gender bias for CEO board chair duality with fewer female CEOs being chairperson of the board as compared to their male counterparts (Muller-Kahle & Schiehll, 2013). Female and racial minority individuals tend to acquire CEO positions in smaller organizations, or in terms of social dominance theory these individuals are able to acquire less powerful CEO positions (Bertrand & Hallock, 2001). The primary goal of this dissertation is to better understand the distribution of structural power, via the CEO-TMT pay-disparity, to females and racial minorities in the C-suite when female or racial minorities are present in the upper echelons of the organization. Although not a theory per say, a discussion of Finkelstein (1992) four dimensions of managerial power is vital to the development of this dissertation.

Section 3.1.4 Managerial Power

The four power dimensions include, structural power, ownership power, expert power, and prestige power (Finkelstein, 1992). These power dimensions are discussed in the paragraphs below.

Structural Power. Touted as the most common source of power, structural power is comprised of elements pertaining to organizational structure and the hierarchy of authority within the organization (Finkelstein, 1992). Structural power allows one to exert influence over subordinates. Finkelstein (1992) suggests that structural power can be measured in 3 ways: the

percentage of individuals in the C-suite with higher titles, executive compensation relative to compensation of other executives in the C-suite, and the number of titles held by an executive (i.e. president and CEO, CEO/Chair duality etc.). As noted previously, the CEO and board can influence the compensation allocated to individuals in the C-suite. Because the structural power allocated to an individual in terms of compensation is determined by the CEO and board members, this element of structural power is an important part of the model outlined in this dissertation.

Ownership Power. In the agent-principal relationship, principals or owners are more powerful than agents. Ownership power is determined by the number of shares an individual owns, the number of family shares they own, or their status as the founder or a relative of another powerful manager (Finkelstein, 1992). To an extent, compensation determines an individual's financial ability to purchase stock, but there are also personal choices and organizational stipulations involved in the number of shares an executive owns (Jensen & Murphy, 1990). Because stock ownership is determined individually, and founder or relative status cannot be allocated[2] to an individual, this power dimension is excluded from the model outlined in this dissertation.

Expert Power. Individuals who can contribute to organizational success and navigate environmental contingencies based on their critical expertise, experience in different functional areas, and/or the number of positions they have held in the firm have expert power (Finkelstein, 1992). The sources of expert power are accumulated over the entire career of an individual and may not have been influenced by the individuals in the upper echelons of the organization to

[2] Relative status cannot be allocated to an individual except in the unlikely event of marriage or adoption between upper echelon individuals. However, it can be conveyed or transferred over time.

which an individual currently is a member. Because individuals move from firm to firm the presence of female or racial minority CEOs or board members at their current firm may not have influenced the expert power accumulated by an individual over their lifetime. Thus, expert power is excluded from the model examined in this dissertation. However, the expertise power dimension is worthy of exploration in future studies, as it is the most independent of the power dimension under the control individual regardless of wealth or status.

Prestige Power. An individual's standing in society and the managerial elite influences their prestige power, which legitimizes the organization (Meyer & Scott, 1983). Prestige power can be assessed by the number of corporate boards an individual is on, the number of nonprofit boards an individual is on, the average rating of these boards, and an individual's elite education (Finkelstein, 1992). According to social dominance theory, an individual's standing in society is influenced by membership to a high-status group or a low status group. Strictly speaking this power dimension is not included in the model. However, elements from this power dimension are included in the model via an executive's membership to a high-status group or a low-status group based on gender and race. The power dimension that most aligns with the research questions examined in this dissertation is the allocation of structural power dimension via the compensation of executives.

Female and racial minority executives are likely to receive less compensation (Bertrand & Hallock, 2001; Carter, Franco & Gine, 2013). It is noteworthy that in some instances, where an organization values diversity, female CEO's receive a gender compensation premium, but this is the exception rather than the rule (Leslie et al., 2017). The same research also found that racial minorities receive equal compensation at best rather than a premium. In this way, it seems that racial minorities may suffer greater inequalities than females. Thus, using social dominance

theory, it is proposed that female and racial minority executives acquire less structural power in terms of their compensation.

Section 3.1.5 The Fairer Sex

According to gender research in the area of ethical decision making and fairness, the fairer sex may indeed be the *fairer* sex. Findings indicate that inherently, there are no differences in morality between the genders, but that differences in maturation and socialization of the genders accounts for differences in morality (Silberman & Snarey, 1993). In other words, from birth, the genders are treated differently and held to different moral standards, which leads to different moral development. It is therefore somewhat unsurprising that according to the Federal Bureau of Prisons (BOP) only 7% of the inmates in Federal prison system are female[3] (BOP, 2018). Indeed, although some findings are mixed, there is much support for the idea that the decisions of females reflect higher moral development (Hottegindre, Loison & Farjaudon, 2017; Shaub, 1994). In support of the idea that females make decisions differently, Cumming et al. (2015) found that boards with female directors experience less fraud. Because there are close ties between an individual's ethics and their fairness, or the equality with which they treat other individuals (Andre & Velasquez, 1990), it is expected that the presence of females in the upper echelons increase the fairness with which members of the C-suite are compensated. The theories and perspectives utilized in this dissertation are outlined in Table 3.1.

[3] It is noteworthy that females are given lighter sentences, on average 2 months shorter than males (Cohen, A., & Yang, C. 2018. Judicial politics and sentencing decisions. National Bureau of Economic Research.. However, this is not enough of a difference to account for the drastic differences in males and females in the federal prison system. Thus, it may be that women engage in less criminal activity or are better at not getting caught.

Table 3.1

Theories and perspectives: Key insights utilized

Theoretical perspective	**Key premise**	**Key insight(s) utilized**
Upper echelons	Individuals in the dominant coalition influence firm outcomes. The perceptions of these individuals are influenced by demographic characteristics, which in turn impact their decisions and thus firm outcomes.	The decision-making processes of individuals in the upper echelons are influenced by their demographic characteristics such as race and gender.
Social identity approach	Individuals form in-groups and out-groups based on salient demographic characteristics. Individuals are motivated to promote their in-group as this in a way promotes themselves.	Individuals in the upper echelons form in-groups and out-groups based on gender and race. Individuals are motivated to promote their in-group.
Social dominance	Fewer resources are allocated by society, organizations, and individuals to females and racial minorities.	Less structural power will be allocated to females and racial minorities in the upper echelons.
Managerial power	Outlines four dimensions of top management power: structural power, ownership power, expert power, and prestige power.	Compensation is a highly visible representation of the distribution of structural power in the upper echelons.
Perspectives on the fairer sex	Differences in maturation and socialization of the genders may lead females to be fairer.	Females in the upper echelons will exert effort to promote fairness in the distribution of structural power to members of the C-suite.

Section 3.2 Hypotheses

Past research indicates that less structural power is allocated to females and racial minority CEOs. Indeed, there is a gender bias for CEO board chair duality with fewer female CEOs being chairperson of the board as compared to their male counterparts (Muller-Kahle & Schiehll, 2013). Female and racial minority individuals tend to acquire CEO positions in smaller organizations, or in terms of social dominance theory these individuals are able to acquire less powerful CEO positions (Bertrand & Hallock, 2001). Thus, it can be inferred that one reason the

glass ceiling is stronger in larger organizations is because these are positions of great power. Acquiring less powerful CEO positions equates to lower compensation for minority CEOs because firm size accounts for 40% of the variance in CEO compensation (Tosi, Werner, Katz & Gomez-Mejia, 2000). It is noteworthy that in some instances, where an organization values diversity, female CEO's receive a gender compensation premium, but this is the exception rather than the rule (Leslie et al., 2017). The same research also found that racial minorities receive equal compensation rather than a premium. Another study found that female and racial minority CEOs benefited from their minority status and earned higher compensation (Hill et al., 2015). The debate over equality in compensation for diverse CEOs continues. Although prior research has found that female executives in general are compensated less (e.g., Munoz-Bullon, 2010; Vieito, 2012), recent research indicates that the gap is closing (Bell, 2005) and that female CEOs are even given a premium in organizations that value diversity (Hill et al., 2015). The same research did find that racial minority CEOs made equal compensation to that of their peers in organizations that valued diversity. More research is needed in this area to uncover factors that influence the compensation of minority CEO's (Hill et al., 2015).

There are differences in the compensation of females and racial minorities. Although many aspects have been considered in research with regards to differences in compensation of minorities, the pay differences have not been fully accounted for indirectly indicating an unexplained wage differential (Blau & Kahn, 2006; Graddy & Pistaferri, 2000; Leslie et al., 2017). Females are compensated less even after accounting for human capital differences (Blau & Kahn, 2006), preferences for intrinsically rewarding jobs (Tolbert & Moen, 1998), males being more likely to negotiate pay increases (Kray & Thompson, 2004), and males spending less time on personal life responsibilities (Hersch & Stratton, 2002). Racial minorities are also

compensated less, and research in this area has found that discrimination in opportunities and supportive relationships have had detrimental career effects on racial minority individuals (Greenhaus, Parasuraman & Wormley, 1990; Ilgen & Youtz, 1984). Both females and racial minorities face discrimination in compensation, although the mechanisms differ slightly in some areas. There are still many areas of overlap such as differences in mentoring opportunities, in which these diverse individuals face discrimination.

Although past research is somewhat inconclusive about the structural power allocated to diverse CEOs in the form of compensation (Leslie et al., 2017; Munoz-Bullon, 2010; Vieito, 2012), the common consensus is that diverse CEOs are compensated less than their equally qualified counterparts. According to social dominance theory, a racially diverse CEO will be allocated less structural power as compared to a Caucasian male CEO. In other words, it is expected that the CEO-TMT pay-disparity will be lower in firms that have a minority CEO, because these CEOs are allocated less structural power. In addition, CEO within-position pay-disparity will be higher if these individuals are being compensated less as compared to their white male counterparts. However, organizations also pay a premium for the scarce human capital that minority CEOs bring with them (Hill et al., 2015), so the reverse could be true in both instances respectively. In congruence with the arguments put forth, it is expected that CEO-TMT pay-disparity and CEO within-position pay-disparity for a minority CEO[4] will be a) positive or b) negative. Thus:

[4] It is noteworthy that in the dissertation proposal hypotheses a third category was included in addition to the breakout of female and racial minority individuals. This third category grouped females and racial minorities into a combined "minority" category. This additional category decreased clarity and did not add value to the results. Thus, the combined minority category was removed from all of the hypotheses in which it was present. Please note that this changed the numbering of some of the hypotheses.

Hypothesis 1.1.1: A firm's CEO-TMT pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 1.1.2: A firm's CEO-TMT pay disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 1.2.1: CEO within-position pay disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 1.2.2: CEO within-position pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.

Much of the same theory applies to the distribution of power to females and racial minorities in the TMT with one major exception. Although relatively low percentages of TMT's are made up of females and racial minorities, there are higher numbers of minorities who could become TMT members as compared to TMT members who could become CEOs (Catalyst, 2002). Thus, it is more likely that social dominance in the unequal distribution of power to minority executives will lead to the allocation of less structural power to minority individuals in the TMT in the form of lower compensation. In other words, the scarcity of minority human capital is lower, influencing "diversity value perceptions" that can influence differences in compensation (Leslie et al., 2017). Executive females and racial minorities earn less compensation (Kulich et al., 2011). This represents the power that these individuals have, as compensation is a highly visible indicator of the distribution of power in the C-suite (Finkelstein, 1992). Thus, when there are more racial minorities in the TMT there will be less power distributed to these individuals and all other things being equal, the pay-disparity between the CEO and those in the TMT will be higher. In addition, after controlling for average within position pay-disparity for non-minority TMT members, this dissertation examines the

distribution of structural power to minority members in the TMT using average within position pay-disparity for minorities in the TMT. When testing the hypotheses, minorities are categorized by gender diversity, and racial diversity because the different theories used in this dissertation indicate that the relationships may differ. Social dominance theory indicates that females and racial minorities will not vie for power in the same way as with Caucasian males. In addition, the social identity approach indicates that in-group members will favor each other. Thus:

Hypothesis 2.1: CEO-TMT pay-disparity is positively associated with the percentage of: a) female TMT members, b) racial minority TMT members.

Hypothesis 2.2: Average within-position pay-disparity for females in a TMT is positively associated with having one or more female TMT members.

Hypothesis 2.3: Average within-position pay-disparity for racial minorities in a TMT is positively associated with having one or more racial minority TMT members.

Boards of directors influence the distribution of compensation within the C-Suite because they help to set executive compensation (Fredrickson et al., 2010). In other words, directors influence the CEO-TMT pay-disparity. Board interlocks played a huge role in the evolution of corporate business and the challenges to become a director (Chu & Davis, 2016). Useem (1986) labeled these class-conscious well-connected directors as the "inner circle" and were evidence of the challenges faced by minorities to become part of the corporate elite. The inner circle was characterized by its enlightened self-interest (Mizruchi, 1982; Mizruchi, 1996), further strengthening the glass ceiling to this subculture of Caucasian social elites. Zajac and Westphal (1996) even suggest that board interlocks are "distinct and competing subcultures within the larger class of business elites." It is no wonder that minority individuals are less likely to be appointed to boards (Jones & Donnelly, 2017). Mizruchi (1982) found that in the early 1900's,

the vast majority of “large corporations were within three steps of the most central board.” Prior to the 2000’s, board interlocks were extremely strong, but the 2000’s saw a change in board hiring practices. Some scholars posit that the “inner circle” has weakened (Chu & Davis, 2016), and board interlocks are not what they once were (Schifeling, Mizruchi, David & Westerhuis, 2013), however, board interlocks are an integral part of the business world today and the subject remains a highly relevant research topic (González, 2018; Zona, Gomez-Mejia & Withers, 2018). Although the “enlightened-self-interest” of this inner circle influencing politics in a moderate and pragmatic way that helped the larger population could be missed (Mizruchi, 2017), the demise of extremely dense board interlocks could also open opportunities and weaken the glass ceiling to board appointment. Extremely dense board interlocks could have been keeping females and racial minorities out of the boardroom, but only time will tell if this change will weaken the challenges to board appointment and practices that promote equality in the upper echelons. Highly connected directors used to be white and male, however in the early 2000’s four of the five of the directors who sat on six or more boards were racial minorities (DiCarlo, 2002). Furthermore, tokenism (Kanter, 1987) can explain how racial minority directors could come to be highly connected. Indicating that minorities who can crack the inner circle are highly rewarded.

In addition, group processes whereby individuals are pressured to go along with the majority are disrupted by diversity within groups (Kroon et al., 1992). Indeed, diversity has been linked with fewer instances of reported corporate fraud (Cumming et al., 2015). Diverse directors may use their influence to ensure more fairness in the distribution of power to those in the TMT, regardless of the biodemographic of these individuals. Thus, all other things being equal, boards with more minority members are more likely to distribute structural power in the form of

compensation with more equity between the CEO and TMT and within position equity. Which leads to the following hypothesis[5].

Hypothesis 3.1: CEO-TMT pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Diverse individuals are more comfortable with and see more value in diversity as compared to Caucasian men (Barak, Cherin & Berkman, 1998). Thus, diverse individuals may be more likely to distribute power more equally to diverse members of the C-suite because these individuals have more worth in the eyes of another diverse individual. Minority status, larger social/institutional systems, and organizational context influence behavior and inhibit minority individuals from climbing the corporate ladder (Fagenson, 1990). Although there is progress in decreasing the wage gap for male and female workers, gender (as well as racial diversity) continues to be an important factor in compensation (Blau & Kahn, 2017). When a diverse individual receives less compensation it influences how that minority individual is viewed and treated (Fagenson, 1990; Reskin & Hartmann, 1986). With a few minor exceptions with regards CEOs (e.g. Hill et al., 2015), minority individuals consistently make less even when controlling for firm tenure indicating that minorities never catch up in terms of compensation (Leslie et al., 2017). Executive compensation is highly visible in SEC filings of publicly traded organizations. In other words, the relative compensation of everyone in the upper echelons is well known and that can influence how individuals are treated. When minority individuals are compensated less it can influence the positive/negative treatment of these individuals in terms of respect and influence within the organization. Individuals promote the interests of their in-group because the

[5] Sub-hypotheses 3.2 and 3.3 were relocated to hypotheses 5 sub-hypotheses for clarity purposes

success of in-group members is shared success in terms of societal perceptions of the in-group (Bergami & Bagozzi, 2000). In other words, diverse members of the upper echelons desire to be part of a successful group.

Further supporting this idea, research on social identity theory and self-categorization theory, and the social identity perspective, finds that individuals randomly assigned to groups allocate more points to in-group members as opposed to out-group members (Hornsey, 2008). These groups were arbitrarily assigned and groups did not engage in social interaction, yet within group members received higher points from other within group members (Hornsey, 2008). If groups favor within group members by allocating more points to them, board members who share demographic group membership with the incumbent CEO and members of the TMT should also allocate additional points, or in the terms of this study compensation, to the incumbent CEO, but more equally if there are also in-group members on the TMT. For example, a board member who is also female or a racial minority group should allocate more compensation to a CEO in a minority group if they have the power to do so. Furthermore, there does not seem to be a conflict between subordinate group males and females, thus it is expected that non-Caucasian males will compensate females with more equality (Sidanius & Pratto, 2001).

A diverse CEO or board member will be more likely to value the diversity that is brought to the table by diverse TMT members. Thus, when the there is a minority CEO and minorities in the TMT it is more likely that power will be distributed more equally to these individuals and the CEO-TMT pay-disparity as well as the average minority within position pay-disparity will be less in organizations with CEO diversity. This leads to the following hypotheses[6]:

[6] Hypotheses 4.2.1 and 4.2.2 were added post hoc

Hypothesis 4.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is female is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 4.1.2: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is racial minority is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 4.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 4.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 4.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.

Hypothesis 4.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.

In a similar way a diverse board should influence the structural power allocated to the TMT. Diverse directors may use their influence to ensure more fairness in the distribution of power to those in the TMT, especially diverse individuals. Thus, in organizations with diverse directors and diverse members on the TMT it is expected that (as these diverse individuals are part of the diverse in-group, the in-group board members influence the distribution of power such that more power will be given to diverse members of the TMT than otherwise). It is

possible that diverse directors may try to adhere to the norms of the dominant coalition and there will be no change in the distribution of equality CEO-TMT pay-disparity, however recent research has found that minorities in the upper echelons favor other minorities providing no support for the idea that minority individuals are somehow Queen Bees who desire to maintain their token status (Dezso et al., 2016). Furthermore, as implied by the social identity approach, group members want to be part of a successful group and thus are willing to facilitate the success of other in-group members (Hornsey, 2008). In line with this idea, past research finds that "The gender difference in salary is larger in firms with more male dominated boards" (Elkinawy & Stater, 2011). Board perceptions of leader competence impact total compensation deemed acceptable by the board of directors. The same literature shows that females perceive female leaders as more competent than males perceive female leaders (Sczesny, Spreemann & Stahlberg, 2006). A negative relationship between director diversity and a firm's CEO-TMT pay-disparity indicates that diverse directors are decreasing the power disparity or inequality between the CEO and the TMT. In other words, diverse individuals on the TMT are receiving more equality as board diversity increases, after controlling for firm performance. Thus, it is expected that female and racial minority directors will decrease the CEO-TMT pay-disparity as well as the within-position pay-disparity when females or racial minorities are present in the TMT. Thus:

Hypothesis 5.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of females in the TMT is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 5.1.2: The positive relationship between a firm's CEO-TMT pay disparity and the percentage of racial minorities in the TMT is negatively moderated (weakened) by the

percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 5.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 5.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 5.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female TMT members is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 5.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority TMT members is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Past research finds that demographic similarity equates to sympathy and an allowance for higher CEO compensation packages (Westphal & Zajac, 1995). In fact, another study conducted found that CEOs keep board sympathy in mind when appointing board members (Zhu et al., 2014). CEOs who feel pressured to increase the diversity of their board will try to appoint diverse board members who have also served on the board of a demographically similar CEO to the incumbent CEO. The authors suggest that this is a means by which the incumbent CEO can help ensure support for their leadership and their compensation package (Zhu et al., 2014). In

other words, this leads to the inference that diverse boards should be more likely to favor the compensation packages of in-group, or minority executives. Further building on the idea that having a diverse CEO or diverse directors will weaken the CEO-TMT pay-disparity is the idea that having a diverse CEO and diverse directors will increase the power of the CEO and directors resulting in synergies (Kristie, 2011). This alignment reduces opposition to promoting the in-group (minorities). Prior research has found that CEOs want board members who are demographically similar to themselves because these similar others are more likely to support the CEOs plans (Zhu et al., 2014) as those with experiences and insights useful in strategic decision making (Forbes & Milliken, 1999). In other words, minority CEOs who have directors who are also members of a minority group should have their initiatives, such as fairness in compensation, supported. Thus, in an organization with a female or racially diverse CEO and female or racially diverse board members there should be a synergistic effect with more diversity equating to more fairness in the distribution of structural power to individuals in the TMT. Thus[7]:

Hypothesis 6.1.1: The relationship between a firm's CEO-TMT pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 6.1.2: The relationship between a firm's CEO-TMT pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

[7] Hypotheses 6.2.1 and 6.2.2 added post hoc

Hypothesis 6.2.1: Female CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 6.2.2: Racial minority CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 6.3.1: The relationship between CEO within-position pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Hypothesis 6.3.2: The relationship between CEO within-position pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors..

In other words, the diverse CEO and directors should have a similar agenda to increase the power of the diverse CEO to be more equal to that of the CEO-TMT pay-disparity in other firms. Having a diverse CEO as well as diverse directors will increase the power of the CEO and directors to increase the fairness in the distribution of structural power to the diverse CEO. Dissertation hypotheses are outlined in Table 3.2 below:

Table 3.2

Dissertation Hypotheses

Hypothesis 1.1.1: A firm's CEO-TMT pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 1.1.2: A firm's CEO-TMT pay-disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 1.2.1: CEO within-position pay-disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 1.2.2: CEO within-position pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 2.1: CEO-TMT pay-disparity is positively associated with the percentage of: a) female TMT members, b) racial minority TMT members.
Hypothesis 2.2: Average within-position pay-disparity for females in a TMT is positively associated with having one or more female TMT members.
Hypothesis 2.3: Average within-position pay-disparity for racial minorities in a TMT is positively associated with having one or more racial minority TMT members.
Hypothesis 3.1: CEO-TMT pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 4.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is female is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 4.1.2: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is racial minority is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 4.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 4.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 4.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.
Hypothesis 4.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.

Table 3.2 continued

Dissertation Hypotheses

Hypothesis 5.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of females in the TMT is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 5.1.2: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of racial minorities in the TMT is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 5.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 5.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 5.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female TMT members is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 5.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority TMT members is negatively moderated (weakened) by the percentage ofindependent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.1.1: The relationship between a firm's CEO-TMT pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.1.2: The relationship between a firm's CEO-TMT pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.2.1: Female CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.2.2: Racial minority CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.3.1: The relationship between CEO within-position pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.
Hypothesis 6.3.2: The relationship between CEO within-position pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.

Chapter 4

Sample, Measures, and Methods

Chapter 4 outlines the sample used in this dissertation, data collection methods, data sources, variable definitions and variable calculations.

Section 4.1 Sample and Data

Because racial information for TMT members was collected from internet sources such as company websites, news articles, and LinkedIn, the data needed to be current and available. Thus, the sample consists of a range of S&P 500 companies from 2012-2016. This dissertation makes use of four main archival sources: Compustat, Center for Research in Security Prices (CRSP), Execucomp, and the Institutional Shareholder Services (ISS) (formerly RiskMetrics). The Compustat Fundamentals Annual database was used to obtain firm-level characteristics and industry SIC categorization data. CRSP was used to obtain beta, a market risk variable. Execucomp provided information on total compensation data as well as the gender and other demographic characteristics of executives. Demographic characteristics and other board member information came from ISS. ISS reports director information listed in annual shareholder meeting reports on an annual basis. Google and other data sources were used to find missing and supplemental data such as race.

Coding racial data: A list of companies with full financial data was used to ascertain the directors and executives whose pictures were needed for coding racial information. ISS had racial information on the directors in the database. In less than 10 cases director pictures were collected when racial data was missing in ISS for directors of companies in the dataset. There were executive directors in the sample and their racial information was obtained from ISS. Using

a probabilistic record linkage procedure, (Gupta & Wowak, 2017), an automated matching of executives and directors with the same first, middle, and last names was implemented. For all other executives in the sample, pictures were collected with the assistance of a web scaping program. The web scraping program created unique folders for each executive with their Execucomp ID and last name, which the program pulled from an excel spreadsheet. The program then executed an internet search using the executive's full name and their incumbent company, saving the HREF link to the same excel spreadsheet row as the search term. Once completed, the HREF link was then used to re-open the image search and assist with verifying the identity of the individuals in the pictures downloaded to the unique executive folder. The identity of each executive was verified in each picture before using the pictures to code race. Companies with one or more missing executive were removed from the sample as racial information on the whole C-suite is needed for each company included in the sample. There were 2,600 executives whose pictures were needed and fewer than 50 of these were unavailable. The U.S. Census Bureau, divides race into the following categories: White, Black or African American, American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander (U.S. Cencus Bureau, 2018). The Bureau considers individuals with origins in Europe, the Middle East, or North Africa Caucasian. Thus, any individual not falling in the Caucasian category was coded as non-Caucasian. Executives were coded as Caucasian/non-Caucasian, with 0 indicating a Caucasian individual and 1 indicating a non-Caucasian individual. There was a Caucasian female, primary coder and a racially diverse male, independent researcher who coded a sub-sample of pictures for an inter-rater reliability (IRR) check. The primary coder collected the pictures and knew the names of each executive. In order to prevent any bias from an ethnic name, the independent coder was not given the executive names, but their executive ID from Execucomp was used to

identify them for coding purposes. Holsti (1969) outlined a formula: (R = 2A/ NA + NB), to calculate IRR, where R represents the proportion of agreements observed, A represents the number of agreements, and NA and NB represent the number of categories coded. IRR was found to be (.96), which is indicative of high reliability (Holsti, 1969). If initial inter-rater reliability were less than (.80), (Krippendorff, 1980) any discrepancies would have been discussed and clarified.

Section 4.2 Measures

Section 4.2.1 Compensation Variables

CEO-TMT Pay-Disparity was operationalized as the difference between CEO total compensation and average TMT total compensation for the next four highest paid executives reported (Henderson & Fredrickson, 2001; Shi et al., 2016). Total compensation included salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other totals as reported by Execucomp. Average TMT total compensation was calculated as the sum of total compensation for the four highest paid executives reported divided by the number of executives reported. The compensation variables in the dataset were non-normal even after several transformations were attempted such as the natural log, cube root, etc. Using log or other transformations complicates the interpretation of coefficients. Thus, all compensation variables were winsorized (Bebchuk, Cremers & Peyer, 2011; Faleye, Reis & Venkateswaran, 2010). Compensation is often winsorized at 01 and 99 percent after adding a constant to make all observations positive (Hill et al., 2015), and a constant was added to make all observations positive. However, the data still showed considerable skewness and kurtosis. Thus the pay variables were winsorized at 02 and 98 to reduce skewness and kurtosis to single digit values close to skewness of 2 and kurtosis 7

belonging to extremely non-normal distributions with viable analysis options nonetheless (Hoyle, 1995). Bootstrapping was used in the models to deal with the violation of the normality assumption of the non-normal data (Sainani, 2012).

To operationalize within position, pay-disparity, each C-suite member was categorized into position groups based on the position they hold in their organization as outlined in past research (Bertrand & Hallock, 2001; Guest, 2016). CEO and CFO were clearly identifiable positions titles, however the remaining three positions titles for top five executives contained a lot of variability (Gayle, Golan & Miller, 2012). In keeping with past research, to match these position titles, the Execucomp variable "Annual Title" was used to make position groups of individuals with similar titles across organizations by year (Albanesi & Olivetti, 2006; Guest, 2016). Where executive title was missing, this information was obtained from company websites, bloomburg.com, or similar reputable sources. The highest annual title held by an executive was used to sort them into position groups, as ranked by past research (Bertrand & Hallock, 2001; Guest, 2016). Compensation for individuals in these position groups was used to obtain the annual median compensation for the position group. The median was a better measure than mean as the data is highly skewed in the sample (skewness around -2, +2) (Sainani, 2012). Thus, median compensation was used to reduce the influence of extreme outliers when calculating within-position pay-disparity (Focke, Maug & Niessen-Ruenzi, 2017). To calculate within position disparity for C-suite members, their total annual compensation was subtracted from the position group's median compensation, (i.e. the compensation of the CEO for a given company was subtracted from the annual median compensation of all CEOs in the sample, CFO compensation was subtracted from the annual median CFO compensation and so forth). Thus, *CEO Within-Position Pay-Disparity* was calculated by subtracting CEO compensation from

annual median CEO compensation. *Female CEO Within-Position Pay-Disparity* was calculated by multiplying CEO within-position pay-disparity by the dummy coded female CEO variable, which is defined in the following section. In much the same way, *CEO Racial Minority Within-Position Pay-Disparity* was calculated by multiplying CEO within-position pay-disparity by the dummy coded racial minority CEO variable, which is also defined in the subsequent section. *TMT Female Within-Position Pay-Disparity* was calculated by summing the within-position pay-disparity for females in the TMT and dividing by the number of females in the TMT. *TMT Racial Minority Within-Position Pay-Disparity* was calculated by summing the within-position pay-disparity for racial minorities in the TMT and dividing by the number of racial minorities. There were a few instances where there was more than one female or racial minority, respectively, in a TMT necessitating the use of an average pay-disparity variable to ascertain the pay-disparity faced by a given minority group in any given TMT.

Section 4.2.2 Diversity Variables

The predictors of executive pay-disparity used in this study focus on the race and gender of individuals in executive and director positions, which are divided amongst the following variables; CEO gender, CEO race, percent TMT female, percent TMT non-Caucasian, the percent of independent directors who were female, and the percent of independent directors who were non-Caucasian. A Blau index or the coefficient of variation are often used in diversity research (e.g., Bedeian & Mossholder, 2000; Campbell & Minguez-Vera, 2008). However, the percent female and the percent racial minority was used in this dissertation because common measures of diversity such as a Blau index or a coefficient of variation are measures of the differences within groups and do not get at the relationships examined in this dissertation. This dissertation explores the possibility that having more females or racially diverse members in a

TMT or on a BOD would influence the fairness in the distribution of power in the C-suite. For example, the Blau index is calculated as one minus the summation of the proportion of group members in each category squared or:

$$1 - \sum p_i^2$$

Where *p* is the proportion of members in each *i* category (Blau, 1977). There were two instances in the dataset, such as Cadence Design Systems Inc.in 2015 and Cognizant Tech Solutions in 2016, where 3 out of the 4 highest paid TMT members were racial minorities which equates to a Blau index of:

$$1 - \left[\left(\frac{3}{4}\right)^2 + \left(\frac{1}{4}\right)^2\right] = 0.375$$

The aforementioned TMT would have the same Blau index as a TMT with 3 white male TMT members and 1 racial minority TMT member:

$$1 - \left[\left(\frac{1}{4}\right)^2 + \left(\frac{3}{4}\right)^2\right] = 0.375$$

However, the TMT with 3 Caucasians and 1 racial minority is expected to be allocated more structural power relative to the CEO while the TMT with 3 racial minorities and 1 Caucasian is expected to be given less structural power relative to the CEO. If a Blau index were used there would be no way to differentiate the two very different TMTs. Likewise, the coefficient of variation would give similar results as it too is a measure of diversity within a group. Thus, it was necessary to use the percentage of females or percentage of racial minorities as variables to answer the research questions outlined in this dissertation. The Execucomp variable "Gender" was used to create a binary indicator of executive gender that takes a value of 1 if an executive is female and 0 if the executive is male. The archival and hand collected race

data was used to code individuals as Caucasian/non-Caucasian, 0/1. The variable *CEO Female* is a binary indicator of CEO sex taking a value of 1 for female and 0 for male. *CEO Racial Minority* was coded 1 for a racial minority CEO and 0 for a Caucasian CEO.

To calculate *TMT Percentage Female* the total number of female executives on the TMT was divided by the size of the TMT for the four highest paid executives reported excluding the CEO. *TMT Percentage Racial Minority* was calculated by totaling the number of racial minority executives in the TMT and dividing by the size of the TMT for the four highest paid executives reported excluding the CEO. To define a variable that indicates if a TMT had a) one or more females, b) one or more racial minorities. *One or More TMT Females* had a value of 1 if there was at least one female individual on the TMT and a value of 0 otherwise. *One or More TMT Racial Minorities* took a value of 1 if there was at least one racial minority individual on the TMT and a value of 0 otherwise.

It was important to differentiate directors from incumbent executive directors in research (Jensen & Zajac, 2004). ISS identifies a director as independent if they had no material connection to the company other than a board seat. Thus, the ISS variable "classification" was used to identify directors who were independent. The ISS variable "female" was used to identify director sex with 0 indicating a male director and 1 indicating a female director. The ISS variable "ethnicity" was used to identify Caucasian/Non-Caucasian directors with 0/1 respectively. All director variables were lagged one year to account for director influence in the following year. To identify members of the compensation committee the ISS variable "comp_membership" was used with 1 indicating a compensation committee member and 0 otherwise. To calculate the variable used in analysis, *Percentage Independent Compensation Committee Directors Female*, the sum of female independent directors on the compensation committee was divided by the total

number of independent directors on the compensation committee. In a similar way, *Percentage Independent Compensation Committee Directors Racial Minority* was calculated as the sum of racial minority independent directors on the compensation committee divided by the total number of independent directors on the compensation committee.

Section 4.2.3 Moderator Variables

This dissertation included several moderators. In order to correctly run the analysis that included moderation, all independent and control variables were centered before calculating the interaction terms in order to reduce multicollinearity. Moderators utilized are calculated by multiplying a respective independent variable by another independent variable. Moderators and how they were calculated are depicted in Table 4.1 below.

Table 4.1

Moderator Calculations and Variable Names

Hypothesis	**Variable Calculation**	**Variable Name**
Hypothesis 4.1.1	(TMT % Female) * (CEO Female)	MOD_411a
	(TMT % Female) * (CEO Racial Minority)	MOD_411b
Hypothesis 4.1.2	(TMT % Racial Minority) * (CEO Female)	MOD_412a
	(TMT % Racial Minority) * (CEO Racial Minority)	MOD_412b
Hypothesis 4.3.1	(One or More TMT Females) * (CEO Female)	MOD_431a
	(One or More TMT Females) * (CEO Racial Minority)	MOD_431b
Hypothesis 4.3.2	(One or More TMT Racial Minorities) * (CEO Female)	MOD_432a
	(One or More TMT Racial Minorities) * (CEO Racial Minority)	MOD_432b
Hypothesis 5.1.1	(TMT % Female) * (% Independent Directors Female)	MOD_511a
	(TMT % Female) * (% Independent Directors Racial Minority)	MOD_511b
Hypothesis 5.1.2	(TMT % Racial Minority) * (% Independent Directors Female)	MOD_512a
	(TMT % Racial Minority) * (% Independent Directors Racial Minority)	MOD_512b
Hypothesis 5.3.1	(One or More TMT Females) * (% Independent Directors Female)	MOD_531a
	(One or More TMT Females) * (% Independent Directors Racial Minority)	MOD_531b
Hypothesis 5.3.2	(One or More TMT Racial Minorities) * (% Independent Directors Female)	MOD_532a
	(One or More TMT Racial Minorities) * (% Independent Directors Racial Minority)	MOD_532b
Hypothesis 6.1.1	(CEO Female) * (% Independent Directors Female)	MOD_611a
	(CEO Female) * (% Independent Directors Racial Minority)	MOD_611b
Hypothesis 6.1.2	(CEO Racial Minority) * (% Independent Directors Female)	MOD_612a
	(CEO Racial Minority) * (% Independent Directors Racial Minority)	MOD_612b
Hypothesis 6.3.1	(CEO Female) * (% Independent Directors Female)	MOD_631a
	(CEO Female) * (% Independent Directors Racial Minority)	MOD_631b
Hypothesis 6.3.2	(CEO Racial Minority) * (% Independent Directors Female)	MOD_632a
	(CEO Racial Minority) * (% Independent Directors Racial Minority)	MOD_632b

Section 4.2.4 Control Variables

In keeping with prior research on the determinants of executive compensation, several firm-, director-, CEO-, and TMT-level control variables were included that may influence executive compensation. *Firm Size* was controlled for by using annual firm sales. *Firm Performance* was controlled for using return on assets (ROA), calculated as net income divided by total assets, because firms with better performance should compensate their executives more. *Firm Risk* was controlled for by including beta. To control for *year*, a dummy coded year variable was included to account for any market fluctuations associated with specific years in the dataset.

The relative number of directors on the board was controlled for by including *Board Size* which is the sum of directors on the board in a given firm year (Hill et al., 2015). To control for the relative number of insiders on the board, the variable *Board Independence* is included which was calculated as 1 minus the total number of employee or linked directors on the board divided by the total number of board members (Hill et al., 2015). Director ownership increases the vested interest of board members in firm outcomes, thus *Independent Director Ownership* was included, calculated by taking the natural log of the total number of shares owned by directors.

Power in the boardroom is associated with the board chair position. Thus, *CEO Duality* was included to control for increased power associated with unity of command when the CEO was also board chair (Westphal & Zajac, 1995). Researchers have linked CEO compensation with time in office, thus *CEO Tenure* was included in years (Finkelstein & Hambrick, 1989; Van Essen et al., 2015). To account for experience based differences in CEO compensation, *CEO Age* was used (Hill et al., 2015). To control for increased CEO influence associated with increased *CEO Ownership*, the percentage of the company owned by the CEO excluding options was

included (Westphal & Zajac, 1995). TMT ownership increases the vested interest of TMT members in firm outcomes, thus *TMT Ownership* was included calculated as the sum of shares owned by the TMT excluding options. *TMT Average Age*, calculated as the sum of TMT age divided by the number of TMT members, was also included. Because relative pay is important in understanding the magnitude of a firm's pay-disparity, *Average Executive Compensation*, was included which was calculate by summing total compensation for the top five highest paid executives to include the CEO and dividing by the number of executives reported (Henderson & Fredrickson, 2001). This variable was winsorized at 02 and 98 in keeping with the other compensation variables in the dataset. Because industries vary in complexity and subsequent executive compensation, Industry was controlled for by including *Industry*, a variable comprised of two-digit SIC codes (Goldin, Kerr, Olivetti & Barth, 2017). Variable full names, shortened names used in analysis, variable descriptions, and data source are outlined in Table 4.2 below.

Table 4.2

Summary of variables, calculations, and data sources

Type	Full Variable Name	Variable Name in Analysis	Description	Data Source
DVs	*CEO-TMT Pay-Disparity*	CEO_TMT_PD	CEO compensation minus the average compensation for the next four highest paid executives	EXECUCOMP
	CEO Within-Position Pay-Disparity	CEO_WPPD	Annual median CEO compensation minus CEO compensation	EXECUCOMP
	Female CEO Within-Position Pay-Disparity	Female_CEO_WPPD	Female CEO variable multiplied by CEO WPPD	EXECUCOMP
	Racial Minority CEO Within-Position Pay-Disparity	R_Minority_CEO_WPPD	Racial minority CEO variable multiplied by CEO WPPD	EXECUCOMP, ISS
	TMT Female Within-Position Pay-Disparity	TMT_female_WPPD	The sum of within-position pay-disparity for females in the TMT divided by the number of racial minorities in the TMT.	EXECUCOMP
	TMT Racial Minority Within-Position Pay-Disparity	TMT_racial_minority_WPPD	The sum of within-position pay-disparity for racial minorities in the TMT divided by the number of racial minorities in the TMT.	EXECUCOMP, ISS, Hand collected race data
IVs	*CEO Female*	CEO_female	Coded 1 if CEO is a female and 0 otherwise.	EXECUCOMP
	CEO Racial Minority	CEO_racial_minority	Coded 1 if CEO is a racial minority and 0 otherwise.	EXECUCOMP, ISS
	TMT Percentage Female	TMT_female_percent	The total number of individual organization TMT females divided by the number of top executives in the TMT (4).	EXECUCOMP
	TMT Percentage Racial Minority	TMT_racial_minority_percent	The total number of individual organization TMT racial minorities divided by the number of top executives in the TMT (4).	EXECUCOMP, ISS, Hand collected race data
	One or More TMT Females	TMT_has_female	Coded 1 if TMT has 1 or more females and 0 otherwise.	EXECUCOMP
	One or More TMT Racial Minorities	TMT_has_r_minority	Coded 1 if TMT has 1 or more racial minorities and 0 otherwise.	EXECUCOMP, ISS, Hand collected race data
	Percentage Independent Compensation Committee Directors Female	Dir_female_percent	The total number of independent female compensation committee members divided by the total number of independent compensation committee members.	ISS
	Percentage Independent Compensation Committee Directors Racial Minority	Dir_racial_minority_percent	The total number of independent racial minority compensation committee members divided by the total number of independent compensation committee members.	ISS, Hand collected race data

Table 4.2 Continued

Summary of variables, calculations, and data sources

Type	Full Variable Name	Variable Name in Analysis	Description	Data Source
Controls	*Firm Size*	Firm_size	Sales	COMPUSTAT
	Firm Performance	Firm_performance	Return on assets (ROA), net income divided by total assets	COMPUSTAT
	Firm Risk	Beta	Beta	CRSP
	Year	Year	Fiscal year	COMPUSTAT
	Board Size	Board_size	The sum of directors in the board. Lagged by 1 year	ISS
	Board Independence	Board_ind	1 minus the total number of employee or linked directors on the board divided by the total number of board members	ISS
	Independent Director Ownership	Dir_ownership	The sum of shares owned by independent BOD members.	ISS
	CEO Duality	Duality	Coded 1 if CEO is board chair and 0 otherwise.	ISS
	CEO Tenure	CEO_tenure	The tenure of the CEO in any given year.	EXECUCOMP
	CEO Age	CEO_age	The age of the CEO in any given year.	EXECUCOMP
	CEO Ownership	CEO_ownership	The percent of company shares owned by the CEO.	ISS
	TMT Ownership	TMT_ownership	The sum of shares owned by members of the TMT.	EXECUCOMP
	TMT Average Age	TMT_avg_age	The sum of TMT age divided by the number of TMT members (4).	EXECUCOMP
	Average Executive Compensation	Avg_Csuite_comp	The sum of total compensation for all members of the C-Suite divided by the number of C-Suite members (5).	EXECUCOMP
	Industry	Industry	Two digit SIC codes	COMPUSTAT

Section 4.3 Methods and Analysis

Separate models were run to analyze CEO-TMT pay-disparity and within-position pay-disparity. To test the CEO-TMT pay-disparity and the within-position pay-disparity hypotheses, panel data multiple regression was utilized because the dependent variable is continuous, the data was collected on the same companies over a period of 5 years, and more than one predictor variable was used. The panel data multiple linear regression was completed in STATA (xtreg). Because the study includes moderation the analyses was run with centered variables. Regular regression was run to check for any issues with VIF. The VIFs were well below the recommended cutoff value of 10 indicating that collinearity was not a significant issue (Dezso & Ross, 2012; Kutner, Nachtsheim, Neter & Li, 2004). Because compensation variables often violate the assumption of normality, bootstrapping was used in the models to deal with the violation of the normality assumption of regression. For each of the models 200 iterations were used, as this is the number of iterations at which the results did not change if run multiple times (Sainani, 2012).

Results and correlation tables are included and discussed in Chapter 5.

Chapter 5

Dissertation Results

Chapter 5 outlines the descriptive statistics of the data set. Analysis results for each dependent variable are discussed and reported in a table at the end of the sub-section. Table 5.6 at the end of the chapter contains the dissertation hypotheses and support or lack of support for the hypotheses as well as the positive or negative direction of each corresponding coefficient.

Section 5.1 Descriptive Statistics

Table 5.1 shows the means, standard deviations, and correlations of all variables. All predictor variables (IV) and controls were centered, except for dummy coded variables, (CEO Female, CEO Racial Minority, One or More TMT Females, One or More TMT Racial Minorities), year, and SIC code. It is noteworthy that because these variables are centered direct interpretation of the descriptive statistics is not intuitive.

Table 5.1

Means, Standard Deviations, and Correlations

Variable	Mean	S.D.	1	2	3	4	6	7	8	9	10	11	12	13	14	15
1. CEO_TMT_PD	75877.03	4839.40														
2. CEO_WPPD	1700.61	6902.53	0.87 ***													
3. Female_CEO_WPPD	129.60	1476.33	0.16 ***	0.19 ***												
4. R_Minority_CEO_WPPD	84.77	1291.08	0.16 ***	0.17 ***	0.16 ***											
5. TMT_female_WPPD	232.09	1600.09	0.12 ***	0.29 ***	0.01	0.04										
6. TMT_racial_minority_WPPD	157.83	1142.35	0.13 ***	0.28 ***	0.07 ***	0.06 **	0.26 ***									
7. CEO_female	0.04	0.19	0.05 *	0.05 *	0.44 ***	0.08 ***	-0.01	0.02								
8. CEO_racial_minority	0.05	0.22	0.00	0.00	0.06 **	0.29 ***	0.00	-0.01	0.10 ***							
9. TMT_female_percent	0.00	0.14	0.05 **	0.04 †	-0.03	0.00	0.21 ***	0.05 *	-0.04 †	0.05 *						
10. TMT_racial_minority_percent	0.00	0.13	0.01	0.01	-0.01	-0.05 *	0.01	0.24 ***	0.00	0.14 ***	0.08 ***					
11. TMT_has_female	0.30	0.46	0.05 *	0.04	-0.03	-0.01	0.22 ***	0.06 **	-0.05 *	0.03	0.93 ***	0.08 ***				
12. TMT_has_r_minority	0.21	0.41	0.02	0.01	0.00	-0.03	0.03	0.27 ***	0.00	0.13 ***	0.10 ***	0.94 ***	0.10 ***			
13. Dir_female_percent	0.00	0.18	0.01	0.01	0.02	0.05 *	-0.02	0.02	0.07 ***	-0.05 *	0.03	0.02	0.01	0.01		
14. Dir_racial_minority_percent	0.00	0.11	0.15 ***	0.19 ***	0.04 †	0.06 **	0.05 *	0.08 ***	0.07 ***	-0.01	0.07 ***	0.05 *	0.07 ***	0.06 **	0.13 ***	
15. Avg_Csuite_comp	-20.06	3549.64	0.50 ***	0.82 ***	0.16 ***	0.16 ***	0.44 ***	0.34 ***	0.04 †	0.01	0.01	-0.02	0.01	-0.02	0.03	0.18 ***
16. CEO_ownership	0.00	0.33	0.16 ***	0.10 ***	-0.05 *	0.04 †	-0.02	-0.07 ***	-0.06 **	0.01	0.04 †	-0.03	0.02	-0.03	0.06 **	0.08 ***
17. CEO_tenure	0.07	6.74	0.11 ***	0.11 ***	-0.03	0.01	0.02	0.00	-0.08 ***	0.00	-0.02	-0.03	-0.02	-0.02	-0.04 *	-0.11 ***
18. Duality	0.52	0.50	0.15 ***	0.12 ***	0.02	0.06 **	0.00	-0.06 **	0.06 **	-0.05 *	-0.03	-0.12 ***	-0.02	-0.11 ***	-0.01	0.07 ***
19. CEO_age	0.01	6.19	0.12 ***	0.11 ***	0.01	0.02	0.02	0.02	0.00	-0.09 ***	-0.02	-0.05 *	-0.01	-0.04 †	0.03	0.01
20. TMT_avg_age	0.04	3.77	-0.01	0.03	0.05 *	0.00	-0.05 *	-0.01	0.08 ***	-0.02	-0.09 ***	-0.08 ***	-0.08 ***	-0.08 ***	0.02	0.06 **
21. TMT_ownership	45.28	45158.28	0.00	0.17 ***	0.25 ***	0.00	0.15 ***	0.24 ***	0.05 *	-0.01	0.01	0.05 *	0.02	0.06 **	0.03	0.02
22. Firm_performance	0.00	0.08	0.02	0.03	0.06 **	0.03	0.06 **	0.06 **	-0.02	0.03	0.06 **	0.05 *	0.05 **	0.04 †	-0.02	0.05 **
23. Firm_size	267.28	41897.67	0.12 ***	0.26 ***	0.11 ***	0.07 ***	0.27 ***	0.16 ***	0.05 *	0.00	0.01	-0.02	0.02	-0.01	0.11 ***	0.17 ***
24. Board_size	0.02	2.28	0.11 ***	0.20 ***	0.06 **	0.06 **	0.07 ***	0.12 ***	0.07 ***	0.10 ***	0.02	0.01	0.03	0.02	0.03	0.21 ***
25. Board_ind	0.00	0.09	0.08 ***	-0.01	-0.02	0.02	-0.06 **	-0.07 ***	0.04 †	0.03	0.01	-0.01	0.01	-0.01	0.16 ***	0.15 ***
26. Dir_ownership	33581.07	6200000.00	-0.04 †	-0.03	-0.01	0.02	0.04 †	0.00	0.22 ***	0.01	0.02	-0.03	0.03	-0.03	0.02	0.04 *
27. Industry	46.54	18.64	-0.05 *	-0.01	-0.01	-0.03	0.03	0.01	-0.03	0.07 ***	0.00	0.01	0.01	0.00	0.01	0.00
28. Year	2014.07	1.41	0.06 **	-0.03	0.05 *	0.01	0.00	-0.01	0.02	0.01	-0.04	0.00	-0.04 †	0.01	0.07 ***	0.01
29. Beta	0.00	0.46	0.02	0.04 †	-0.03	-0.02	0.00	0.02	-0.09 ***	-0.05 *	-0.01	-0.01	-0.02	-0.01	-0.02	-0.10 ***
30. MOD_411a	0.00	0.03	-0.02	-0.02	-0.14 ***	-0.04 †	0.03	-0.01	-0.21 ***	0.01	0.18 ***	-0.01	0.16 ***	-0.01	-0.02	0.03
31. MOD_411b	0.00	0.04	-0.01	-0.01	-0.03	-0.01	0.04 †	0.03	-0.01	0.17 ***	0.27 ***	0.00	0.21 ***	0.02	-0.02	0.03
32. MOD_412a	0.00	0.02	-0.03	0.00	-0.02	0.07 ***	-0.01	0.10 ***	0.00	0.14 ***	-0.01	0.18 ***	-0.01	0.19 ***	0.00	0.02
33. MOD_412b	0.00	0.04	-0.04 †	-0.05 *	0.02	-0.15 ***	-0.02	0.01	0.06 **	0.41 ***	0.00	0.34 ***	0.00	0.27 ***	-0.02	-0.05 *
34. MOD_431a	0.01	0.09	0.01	0.01	0.13 ***	0.02	0.02	0.01	0.44 ***	0.09 ***	0.13 ***	-0.01	0.13 ***	0.00	0.01	0.08 ***
35. MOD_431b	0.02	0.13	-0.02	-0.01	0.00	0.10 ***	0.04 †	0.03	0.05 *	0.59 ***	0.22 ***	0.06 **	0.20 ***	0.08 ***	-0.04 †	0.01
36. MOD_432a	0.01	0.09	-0.01	0.02	0.18 ***	0.09 ***	-0.02	0.08 ***	0.47 ***	0.16 ***	-0.03	0.15 ***	-0.03	0.18 ***	0.04 †	0.05 *
37. MOD_432b	0.02	0.15	-0.03	-0.04 †	0.04 †	-0.01	-0.02	0.01	0.09 ***	0.66 ***	0.03	0.29 ***	0.02	0.29 ***	-0.03	-0.05 **
38. MOD_511a	0.00	0.03	-0.02	-0.03	0.02	0.02	-0.05 *	0.04 †	-0.03	-0.03	0.08 ***	-0.01	0.03	0.00	-0.07 ***	0.03
39. MOD_511b	0.00	0.02	0.02	-0.01	0.00	0.05 *	0.08 ***	0.08 ***	0.01	0.02	0.09 ***	-0.01	0.07 ***	0.00	0.03	-0.01
40. MOD_512a	0.00	0.02	-0.02	-0.02	0.02	0.03	0.09 ***	0.01	0.00	-0.03	-0.01	0.05 *	-0.01	0.02	0.00	-0.05 *
41. MOD_512b	0.00	0.01	-0.01	-0.01	-0.01	0.00	0.06 **	0.17 ***	0.01	-0.10 ***	-0.01	0.06 **	0.00	0.07 ***	-0.05 *	-0.02
42. MOD_531a	0.00	0.09	-0.01	-0.02	0.02	0.06 **	-0.05 *	0.06 **	0.01	-0.05 *	0.04 †	0.00	0.00	0.01	0.51 ***	0.11 ***
43. MOD_531b	0.00	0.06	0.09 ***	0.09 ***	0.02	0.06 **	0.09 ***	0.11 ***	0.05 *	0.00	0.09 ***	0.03	0.09 ***	0.04 †	0.10 ***	0.55 ***
44. MOD_532a	0.00	0.08	0.00	0.01	0.03	0.07 ***	0.09 ***	0.05 *	0.04 †	-0.05 **	0.01	0.03	0.01	0.01	0.44 ***	0.03
45. MOD_532b	0.00	0.05	0.05 **	0.07 ***	0.01	0.02	0.10 ***	0.18 ***	0.04 †	-0.09 ***	0.03	0.08 ***	0.04 †	0.11 ***	0.03	0.45 ***
46. MOD_611a & MOD_631a	0.00	0.04	0.02	0.00	0.07 ***	0.01	0.01	0.01	0.26 ***	-0.02	-0.02	0.00	-0.03	0.01	0.25 ***	0.04 †
47. MOD_611b & MOD_631b	0.00	0.02	0.03	0.03	0.24 ***	0.06 **	0.00	0.03	0.43 ***	0.07 ***	0.03	0.02	0.03	0.02	0.06 **	0.17 ***
48. MOD_612a & MOD_632a	0.00	0.04	0.05 **	0.06 **	0.02	0.26 ***	0.02	0.04 †	0.00	-0.23 ***	-0.02	-0.03	-0.02	-0.03	0.21 ***	0.06 **
49. MOD_612b & MOD_632b	0.00	0.02	0.04 †	0.05 *	0.04 *	0.27 ***	0.03	0.01	0.08 ***	-0.05 *	0.03	-0.08 ***	0.02	-0.08 ***	0.06 **	0.22 ***

†. $p \leq .10$; *. $p \leq .05$; **. $p \leq .01$; ***. $p \leq .001$

Table 5.1 continued

Means, Standard Deviations, and Correlations

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1. CEO_TMT_PD																	
2. CEO_WPPD																	
3. Female_CEO_WPPD																	
4. R_Minority_CEO_WPPD																	
5. TMT_female_WPPD																	
6. TMT_racial_minority_WPPD																	
7. CEO_female																	
8. CEO_racial_minority																	
9. TMT_female_percent																	
10. TMT_racial_minority_percent																	
11. TMT_has_female																	
12. TMT_has_r_minority																	
13. Dir_female_percent																	
14. Dir_racial_minority_percent																	
15. Avg_Csuite_comp																	
16. CEO_ownership	0.03																
17. CEO_tenure	0.09 ***	0.25 ***															
18. Duality	0.07 ***	0.50 ***	0.27 ***														
19. CEO_age	0.06 **	0.17 ***	0.44 ***	0.30 ***													
20. TMT_avg_age	0.05 *	-0.05 *	0.09 ***	0.07 ***	0.26 ***												
21. TMT_ownership	0.17 ***	-0.09 ***	-0.05 *	-0.06 **	-0.02	0.08 ***											
22. Firm_performance	0.02	-0.04	0.04 †	-0.02	0.01	0.00	0.01										
23. Firm_size	0.42 ***	0.02	-0.01	0.08 ***	0.08 ***	0.14 ***	0.01	0.01									
24. Board_size	0.23 ***	-0.06 **	-0.07 ***	0.06 ***	0.08 ***	0.16 ***	0.03	-0.07 ***	0.21 ***								
25. Board_ind	-0.07 ***	0.42 ***	-0.18 ***	0.23 ***	0.00	-0.11 ***	-0.10 ***	-0.08 ***	0.03	0.08 ***							
26. Dir_ownership	-0.01	-0.14 ***	-0.05 *	-0.05 *	0.00	0.00	0.00	0.01	-0.01	0.08 ***	0.02						
27. Industry	0.03	-0.02	0.16 ***	-0.07 ***	0.05 *	-0.07 ***	0.05 **	0.01	0.03	0.00	-0.10 ***	-0.06 **					
28. Year	0.07 ***	-0.04	0.02	-0.05 *	0.04	0.09 ***	0.03	-0.05 *	0.00	0.00	0.05 *	0.00	-0.01				
29. Beta	0.06 **	0.04 †	0.04 †	-0.03	-0.03	-0.08 ***	0.01	-0.23 ***	-0.09 ***	-0.07 ***	0.03	0.01	-0.14 ***	0.01			
30. MOD_411a	-0.02	0.03	0.00	0.00	0.02	0.01	-0.04 †	0.01	-0.03	-0.01	-0.02	0.07 ***	-0.03	-0.01	0.03		
31. MOD_411b	-0.01	0.00	0.03	-0.06 ***	-0.06 **	0.03	0.00	0.08 ***	-0.01	0.10 ***	0.06 **	0.04	0.01	0.00	0.00	0.09 ***	
32. MOD_412a	0.01	0.01	0.00	0.00	-0.03	0.01	0.11 ***	-0.05 *	0.02	0.02	0.02	-0.09 ***	-0.04 *	-0.01	-0.01	-0.07 ***	-0.03
33. MOD_412b	-0.05 *	0.01	0.04 †	-0.06 **	-0.07 ***	-0.05 *	0.00	0.02	-0.04 †	-0.09 ***	-0.02	-0.01	0.04 *	0.01	0.00	-0.02	0.00
34. MOD_431a	0.00	-0.01	-0.05 *	0.04 †	0.02	0.06 **	-0.01	-0.01	0.00	0.03	0.02	0.25 ***	-0.05 *	0.01	-0.04 †	0.73 ***	0.09 ***
35. MOD_431b	0.00	-0.02	0.00	-0.07 ***	-0.10 ***	0.00	-0.01	0.06 **	0.00	0.16 ***	0.05 *	0.04 †	0.05 *	0.01	-0.03	0.10 ***	0.83 ***
36. MOD_432a	0.02	-0.02	-0.04 †	0.02	-0.02	0.04 *	0.13 ***	-0.06 **	0.03	0.05 *	0.03	0.02	-0.05 *	0.01	-0.05 *	-0.15 ***	-0.02
37. MOD_432b	-0.04	0.00	0.05 *	-0.05 *	-0.08 ***	-0.04 †	-0.01	0.01	-0.04 †	-0.05 *	-0.02	0.00	0.04 †	0.02	-0.02	-0.01	0.12 ***
38. MOD_511a	-0.05 *	-0.01	-0.06 **	-0.08 ***	-0.04 †	-0.06 **	0.01	-0.01	-0.04	-0.07 ***	-0.06 ***	0.02	0.02	0.00	0.01	0.08 ***	-0.07 ***
39. MOD_511b	-0.03	0.01	-0.05 *	0.03	0.01	0.00	-0.02	0.00	0.02	-0.03	0.01	0.01	0.00	0.01	-0.05 *	0.12 ***	0.04 †
40. MOD_512a	0.02	-0.01	-0.02	-0.06 **	-0.02	-0.03	0.04 *	0.00	0.03	-0.02	0.00	-0.01	-0.02	0.04 †	0.00	-0.02	0.01
41. MOD_512b	0.00	-0.01	0.06 **	0.04 †	0.04 †	-0.02	-0.01	-0.04 †	0.05 *	0.01	-0.04 †	-0.02	-0.06 **	0.01	0.01	-0.01	-0.06 **
42. MOD_531a	-0.03	0.01	-0.07 ***	-0.08 ***	0.00	-0.02	0.03	-0.03	0.05 *	-0.04 †	0.04	0.03	0.01	0.05 *	-0.01	0.03	-0.06 **
43. MOD_531b	0.07 ***	0.06 **	-0.09 ***	0.07 ***	0.01	0.04 *	-0.01	0.03	0.12 ***	0.08 ***	0.10 ***	0.04 †	-0.01	0.03	-0.09 ***	0.10 ***	0.03
44. MOD_532a	0.04 †	0.00	-0.05 *	-0.06 **	-0.01	-0.02	0.07 ***	-0.02	0.10 ***	0.01	0.07 ***	0.00	-0.01	0.07 ***	-0.02	-0.04 †	0.00
45. MOD_532b	0.07 ***	0.02	0.00	0.07 ***	0.05 *	0.00	0.00	-0.01	0.13 ***	0.10 ***	0.04 †	0.01	-0.05 *	0.01	-0.03	0.00	-0.05 *
46. MOD_611a & MOD_631a	-0.02	-0.05 *	-0.05 *	0.02	-0.01	0.00	0.04 †	-0.01	0.02	0.01	0.03	0.07 ***	-0.05 *	0.01	-0.04	-0.09 ***	-0.03
47. MOD_611b & MOD_631b	0.03	-0.06 **	-0.02	0.03	0.01	0.05 *	0.00	0.04 *	0.03	0.02	0.03	0.21 ***	-0.06 **	-0.02	-0.06 ***	0.17 ***	0.01
48. MOD_612a & MOD_632a	0.06 ***	-0.01	-0.02	0.07 ***	0.08 ***	0.03	0.00	0.00	0.06 **	0.02	0.03	-0.03	-0.11 ***	0.03	0.00	-0.05 *	-0.09 ***
49. MOD_612b & MOD_632b	0.06 **	0.05 *	-0.03	0.07 ***	0.03	0.04 †	0.00	0.04 †	0.05 *	-0.01	0.04 †	0.01	-0.07 ***	-0.03	0.00	0.02	0.12 ***

†. $p \leq .10$; *. $p \leq .05$; **. $p \leq .01$; ***. $p \leq .001$

Table 5.1 continued

Means, Standard Deviations, and Correlations

Variable	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
1. CEO_TMT_PD																	
2. CEO_WPPD																	
3. Female_CEO_WPPD																	
4. R_Minority_CEO_WPPD																	
5. TMT_female_WPPD																	
6. TMT_racial_minority_WPPD																	
7. CEO_female																	
8. CEO_racial_minority																	
9. TMT_female_percent																	
10. TMT_racial_minority_percent																	
11. TMT_has_female																	
12. TMT_has_r_minority																	
13. Dir_female_percent																	
14. Dir_racial_minority_percent																	
15. Avg_Csuite_comp																	
16. CEO_ownership																	
17. CEO_tenure																	
18. Duality																	
19. CEO_age																	
20. TMT_avg_age																	
21. TMT_ownership																	
22. Firm_performance																	
23. Firm_size																	
24. Board_size																	
25. Board_ind																	
26. Dir_ownership																	
27. Industry																	
28. Year																	
29. Beta																	
30. MOD_411a																	
31. MOD_411b																	
32. MOD_412a																	
33. MOD_412b	0.23 ***																
34. MOD_431a	-0.04	0.03															
35. MOD_431b	0.05 *	0.18 ***	0.17 ***														
36. MOD_432a	0.86 ***	0.20 ***	0.18 ***	0.07 ***													
37. MOD_432b	0.24 ***	0.86 ***	0.07 ***	0.40 ***	0.25 ***												
38. MOD_511a	-0.02	0.00	0.03	-0.07 ***	-0.04 †	0.00											
39. MOD_511b	-0.02	-0.05 *	0.11 ***	0.02	-0.01	-0.05 *	0.14 ***										
40. MOD_512a	0.06 **	-0.05 *	-0.02	0.00	0.05 *	-0.06 **	0.12 ***	0.01									
41. MOD_512b	0.11 ***	-0.10 ***	0.00	-0.07 ***	0.08 ***	-0.11 ***	0.01	0.11 ***	-0.02								
42. MOD_531a	-0.02	0.00	0.02	-0.08 ***	-0.01	-0.01	0.77 ***	0.15 ***	0.13 ***	-0.03							
43. MOD_531b	0.00	-0.05 *	0.14 ***	0.01	0.03	-0.05 *	0.14 ***	0.78 ***	-0.03	0.07 ***	0.20 ***						
44. MOD_532a	0.06 ***	-0.06 **	-0.02	-0.01	0.08 ***	-0.08 ***	0.10 ***	0.04 †	0.84 ***	0.02	0.36 ***	0.04 *					
45. MOD_532b	0.10 ***	-0.10 ***	0.04	-0.06 **	0.10 ***	-0.13 ***	0.03	0.11 ***	0.01	0.84 ***	0.05 *	0.33 ***	0.08 ***				
46. MOD_611a & MOD_631a	0.02	0.02	0.04	-0.04 †	0.14 ***	0.01	-0.07 ***	-0.02	-0.04 †	-0.03	0.06 **	0.00	0.08 ***	-0.01			
47. MOD_611b & MOD_631b	0.10 ***	0.06 **	0.45 ***	0.06 **	0.27 ***	0.07 ***	-0.02	-0.03	-0.04 †	0.01	0.01	0.06 ***	-0.01	0.09 ***	0.25 ***		
48. MOD_612a & MOD_632a	0.05 *	-0.08 ***	-0.06 **	-0.18 ***	0.04 *	-0.16 ***	0.08 ***	0.02	0.19 ***	0.10 ***	0.21 ***	0.06 **	0.29 ***	0.13 ***	0.10 ***	0.00	
49. MOD_612b & MOD_632b	0.10 ***	-0.23 ***	0.08 ***	0.06 **	0.11 ***	-0.24 ***	0.02	0.15 ***	0.09 ***	0.14 ***	0.05 *	0.18 ***	0.12 ***	0.23 ***	0.00	0.09 ***	0.27 ***

†. $p \leq .10$; *. $p \leq .05$; **. $p \leq .01$; ***. $p \leq .001$

Section 5.1.1 Females and Racial Minorities in the Sample

The final sample contained 1,959 firm year observations with complete data, with 75 of those firm years having female CEOs and 97 firm years with a racial minority CEO, or 3.83% female CEO and 4.95% racial minority firm years. In the dataset, the percentage of the TMT that was female ranged from 0.00% to 75%, i.e. 0 to 3 members of the 4 highest paid executives excluding the CEO were female. The percentage of the TMT that was racial minorities ranged from 0.00% to 75%, i.e. 0 to 3 members of the 4 highest paid executives excluding the CEO were racial minorities. It is surprising that there would be a TMT with 3 females or 3 racial minorities in the corporate world, nonetheless there were fewer than 6 of these firm years in the dataset. One commonality in these firms is that they are technology or software firms, where diversity may be highly valuable to the dynamic and constantly changing technology industry. Table 5.2 summarizes the firm years with females and racial minorities at each upper echelon level, TMT, CEO, BOD (members in the independent compensation committee).

Table 5.2

Firm years in the sample with females and racial minorities in the upper echelons by level.

	TMT Member			
	Females		Racial minorities	
	Count	% of sample	Count	% of sample
Firm years with 0	1,364	69.63%	1540	78.61%
Firm years with 1	502	25.63%	355	18.12%
Firm years with 2	90	4.59%	62	3.16%
Firm years with 3[8]	3	0.15%	2	0.10%
Firm years with 1 or more	595	30.37%	419	21.39%
	In CEO Position			
	Females		Racial minorities	
	Count	% of sample	Count	% of sample
Firm years with 0	1,884	96.17%	1862	95.05%
Firm years with 1	75	3.83%	97	4.95%
	Independent Compensation Committee Member			
	Females		Racial minorities	
	Count	% of sample	Count	% of sample
Firm years with 0	1,157	59.06%	811	41.40%
Firm years with 1	619	31.60%	848	43.29%
Firm years with 2	161	8.22%	275	14.04%
Firm years with 3[7]	22	1.12%	25	1.28%
Firm years with 1 or more	802	40.94%	1148	58.6%

[8] There were no firm years with more than three females or racial minorities in the TMT or independent members of the compensation committee in the dataset.

Section 5.2 Regression Analyses

Section 5.2.1 CEO-TMT Pay-Disparity

The regression results from predicting CEO-TMT Within-Position Pay-Disparity are summarized in Table 5.3 at the end of the sub-section. CEO Female demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity ($\beta = 1157.13$, ns), indicating lack of support for hypothesis 1.1.1.a and hypothesis 1.1.2a that female CEOs would have a) less or b) more relative structural power with their TMTs relative to their male peers. Likewise, CEO Racial Minority demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity ($\beta = -214.06$, ns), indicating lack of support for hypothesis 1.1.1.b and hypothesis 1.1.2b that racial minority CEOs would have a) less or b) more relative structural power with their TMTs relative to their male peers.

TMT Percentage Female demonstrated a significant and positive relationship with CEO-TMT Pay-Disparity ($\beta = 1779.36$, $p < .05$), indicating support for hypothesis 2.1.a, that TMTs with more females would have less structural power relative to the CEO. However, TMT Percentage Racial Minority demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity ($\beta = 19.36$, ns), indicating lack of support for hypothesis 2.1.b, that TMTs with more racial minorities would have less structural power relative to the CEO. Percentage Independent Compensation Committee Directors Female[9] demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity ($\beta = -347.86$, ns), indicating lack of support for hypothesis 3.1.a, that a higher percentage of independent, female, compensation committee members would lead to more equality in the distribution of power between the CEO and TMT.

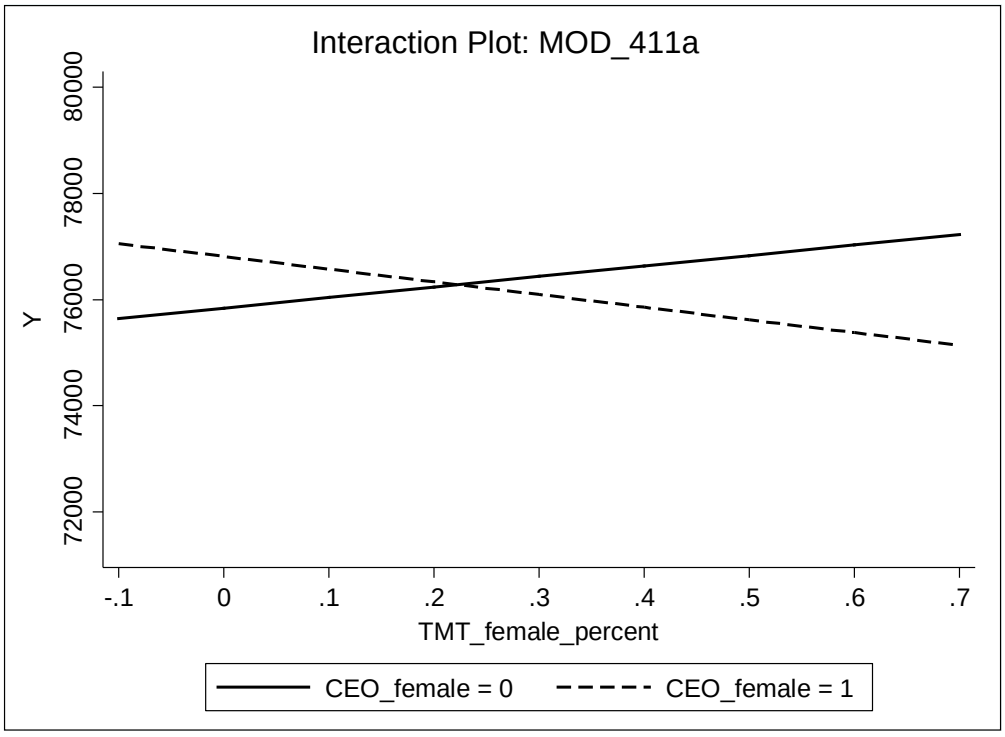
[9] The analysis was also run using dummy coded variables when the compensation committee had 2 or more members and when it had 3 or more members, but the results remained insignificant where already insignificant using percentage female or racial minority respectively.

In addition, Percentage Independent Compensation Committee Directors Racial Minority demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity (β = 705.98, ns), indicating lack of support for hypothesis 3.1.b, that a higher percentage of independent, racial minority, compensation committee members would lead to more equality in the distribution of power between the CEO and TMT.

Several moderators of the CEO-TMT Pay-Disparity relationship with females and racial minorities were analyzed. MOD_411a: (TMT Percentage Female x CEO Female) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -4353.29, ns), indicating lack of support for hypothesis 4.1.1.a, that female TMT members whose incumbent CEO was female would be given more relative structural power. Figure 5.1 depicts the interaction plot for MOD_411a.

Figure 5.1

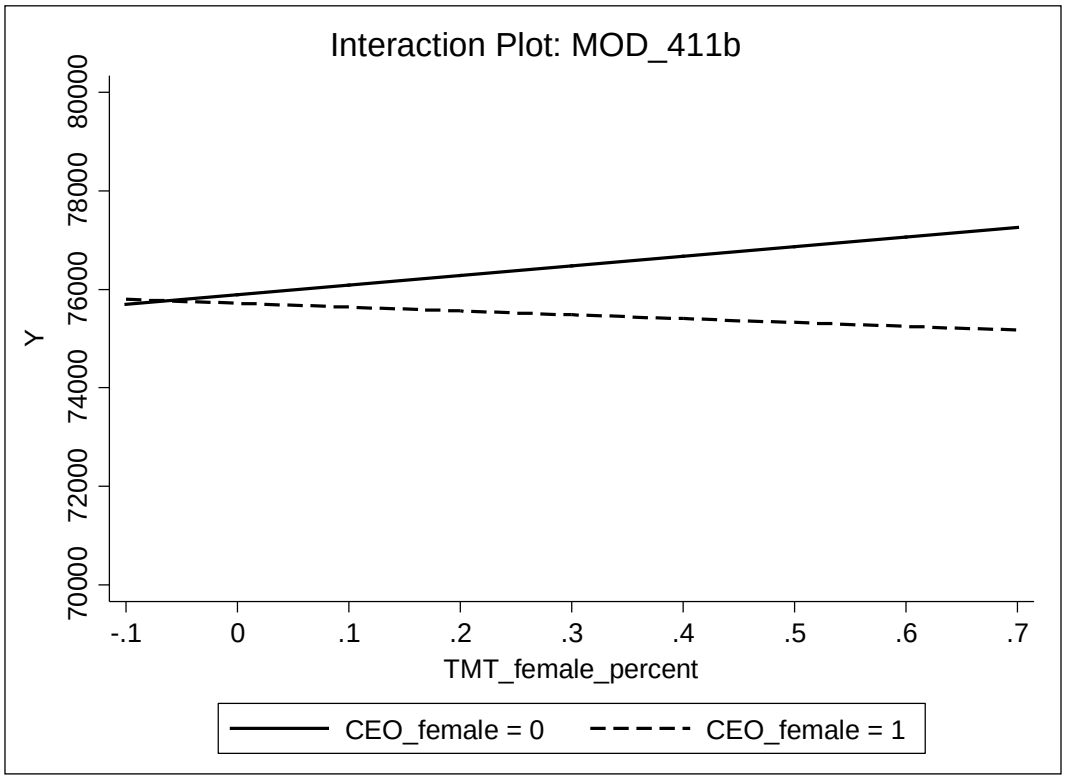
Plotting MOD_411a: TMT Percentage Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_411b: (TMT Percentage Female x CEO Racial Minority) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -2742.61, ns), indicating lack of support for hypothesis 4.1.1.b, that female TMT members whose incumbent CEO was a racial minority would be given more relative structural power. Figure 5.2 depicts the interaction plot for MOD_411b.

Figure 5.2

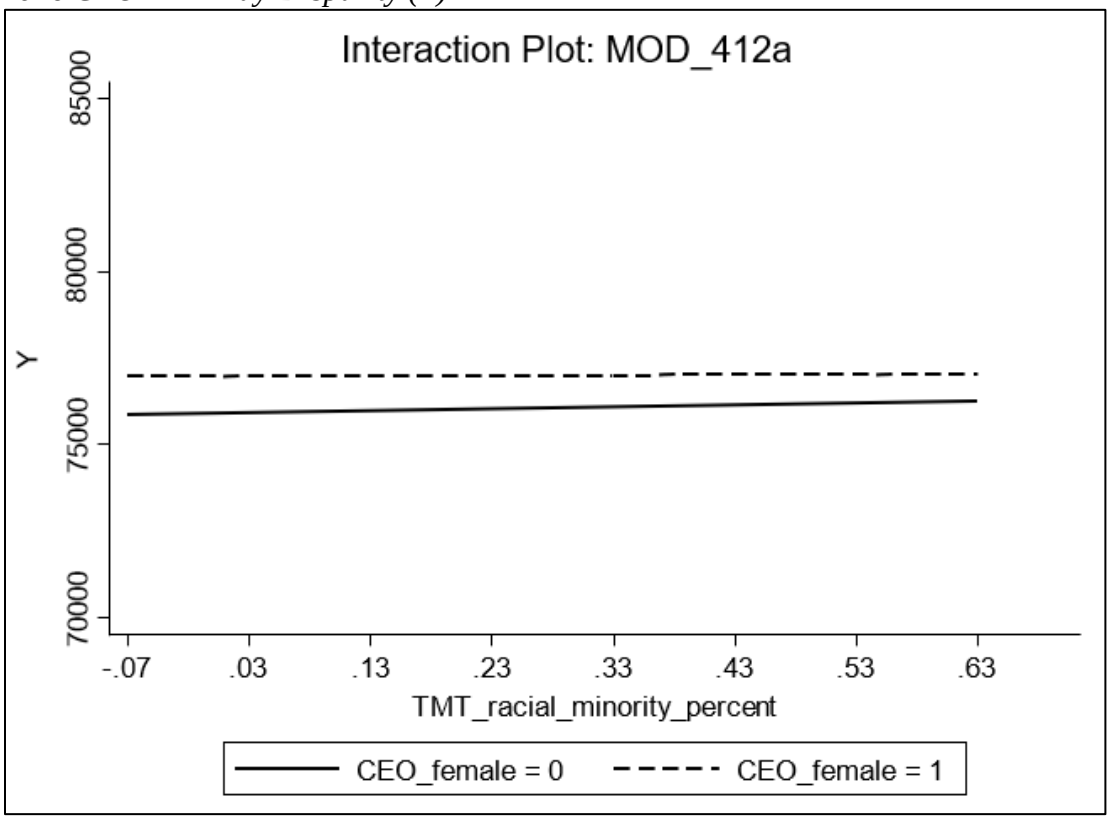
Plotting MOD_411b: CEO Female (X) x TMT Percentage Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_412a: (TMT Percentage Racial Minority x CEO Female) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -298.04, ns), indicating lack of support for hypothesis 4.1.2., that racial minority TMT members whose incumbent CEO was a female would be given more relative structural power. Figure 5.3 depicts the interaction plot for MOD_412a

Figure 5.3

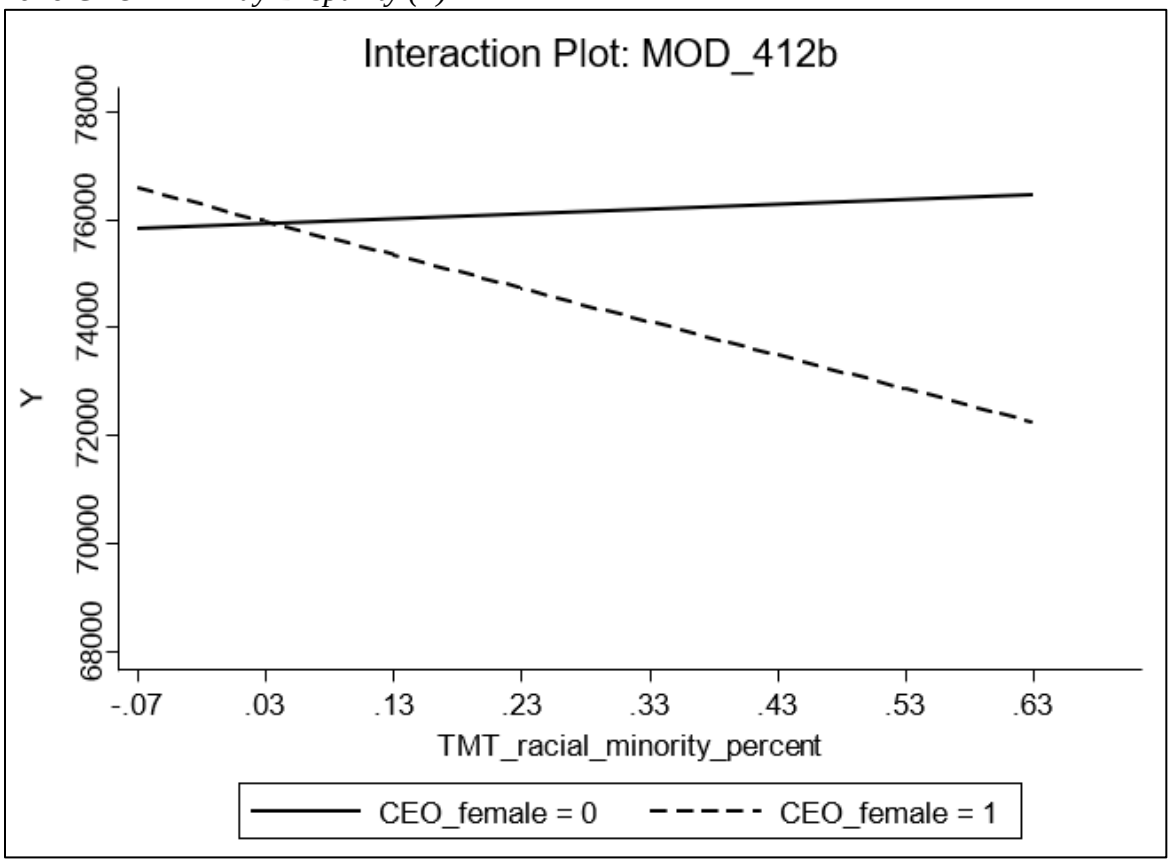
Plotting MOD_412a: TMT Percentage Racial Minority (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_412b: (TMT Percentage Racial Minority x CEO Racial Minority) demonstrated a significant and negative relationship with CEO-TMT Pay-Disparity ($\beta = -6955.66$, $p < .05$), indicating support for hypothesis 4.1.2.b, that racial minority TMT members whose incumbent CEO was a racial minority would be given more relative structural power. Figure 5.4 depicts the interaction plot for MOD_412a.

Figure 5.4

Plotting MOD_412b: CEO Female (X) x TMT Percentage Racial Minority Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_511a: (TMT Percentage Female x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -2529.32, ns), indicating lack of support for hypothesis 5.1.1., that female TMT members whose incumbent independent compensation committee had a higher percentage of females would be given more relative structural power. It is noteworthy that MOD_511a is a continuous*continuous interaction requiring a slightly different plot from interaction terms with factor*factor or factor*continuous interaction plots. The interaction plot for continuous interactions terms is available upon request.

MOD_511b: (TMT Percentage Female x Percentage Independent Compensation Committee Directors Racial Minority) demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity (β = 5320.14, ns), indicating lack of support for hypothesis 5.1.1.b, that female TMT members whose incumbent independent compensation committee had a higher percentage of racial minorities would be given more relative structural power.

MOD_512a: (TMT Percentage Racial Minority x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity (β = 1479.69, ns), indicating lack of support for hypothesis 5.1.2.a, that racial minority TMT members whose incumbent independent compensation committee had a higher percentage of females would be given more relative structural power.

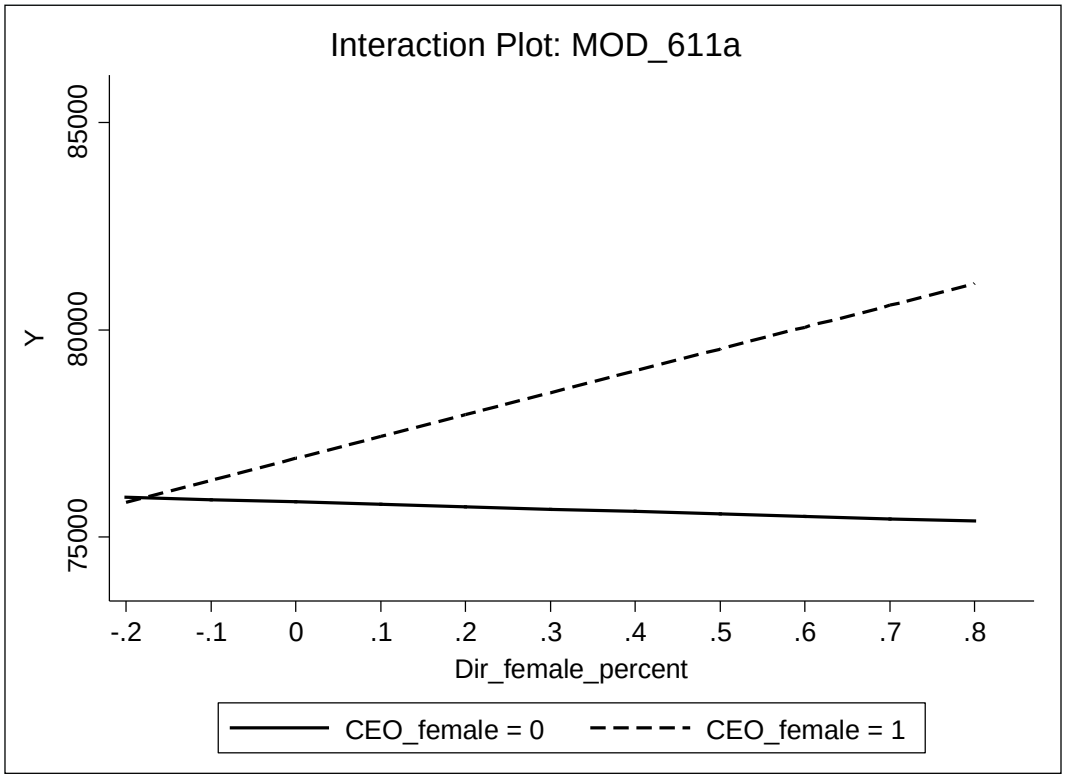
MOD_512b: (TMT Percentage Racial Minority x Percentage Independent Compensation Committee Directors Racial Minority) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -9643.94, ns), indicating lack of support for hypothesis 5.1.2.b, that racial minority TMT members whose incumbent independent compensation

committee had a higher percentage of racial minorities would be given more relative structural power.

MOD_611a: (*CEO Female* x *Percentage Independent Compensation Committee Directors Female*) demonstrated a significant and positive relationship with CEO-TMT Pay-Disparity ($\beta = 5751.34$, $p < .05$), indicating support for hypothesis 6.1.1.a, that female CEOs with a higher percentage of incumbent independent compensation committee members who were female would be given more relative structural power. Figure 5.5 depicts the interaction plot for MOD_611a.

Figure 5.5

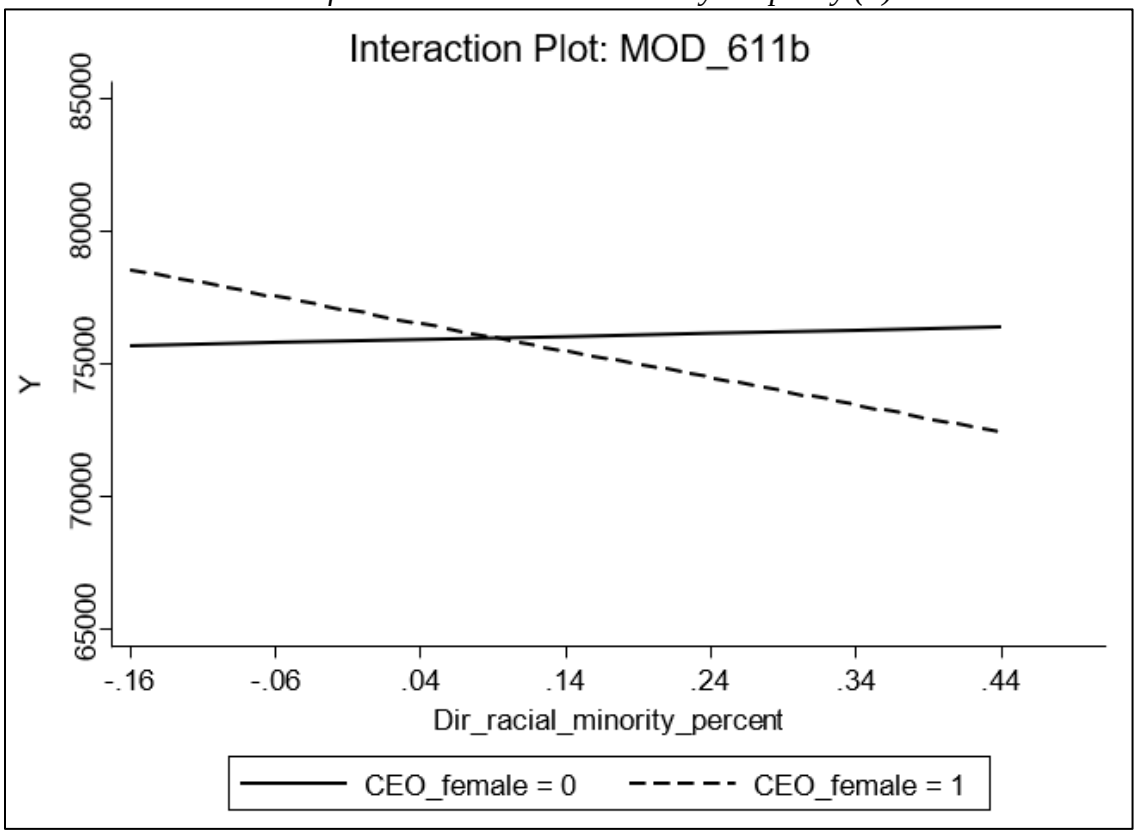
Plotting MOD_611a: Percentage Independent Compensation Committee Directors Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_611b: (*CEO Female* x *Percentage Independent Compensation Committee Directors Racial Minority*) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -11462.25, ns), indicating lack of support for hypothesis 6.1.1.b, that female CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative structural power. Figure 5.6 depicts the interaction plot for MOD_611b.

Figure 5.6

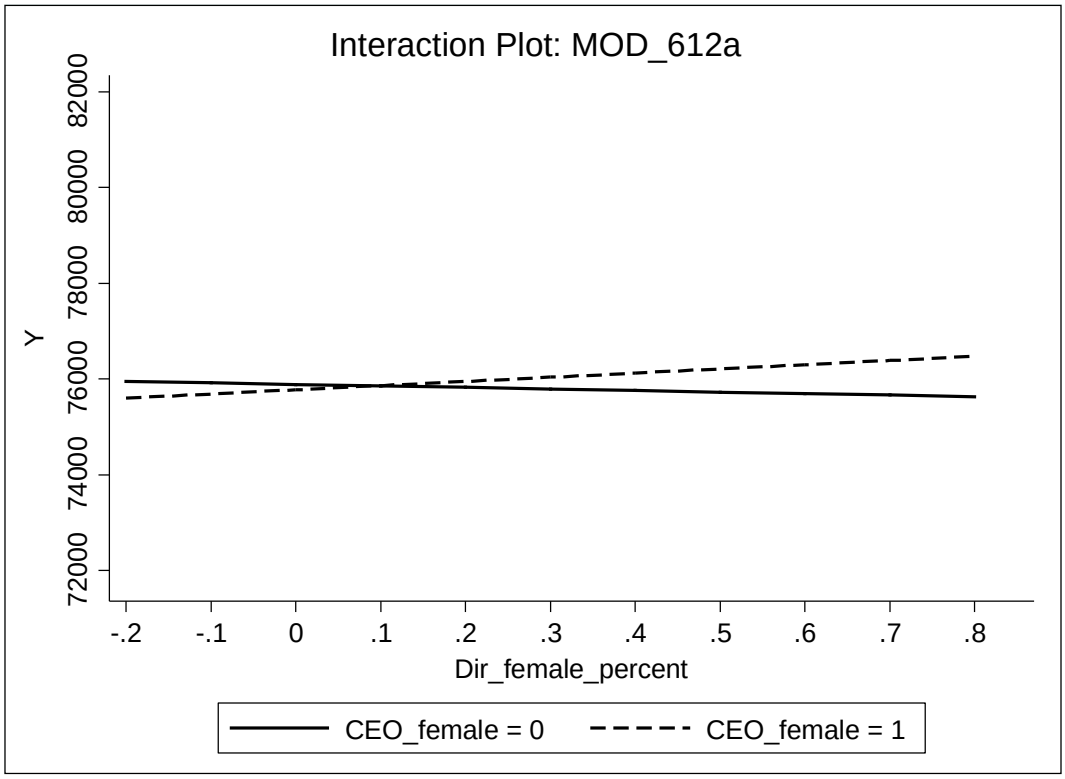
Plotting MOD_611b: Percentage Independent Compensation Committee Directors Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_612a: (*CEO Racial Minority* x *Percentage Independent Compensation Committee Directors Female*) demonstrated a non-significant and positive relationship with CEO-TMT Pay-Disparity (β = 1054.33, ns), indicating lack of support for hypothesis 6.1.2.a, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were females would be given more relative structural power. Figure 5.7 depicts the interaction plot for MOD_612a.

Figure 5.7

Plotting MOD_612a: Percentage Independent Compensation Committee Directors Female (X) x CEO Racial Minority Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_612b: (*CEO Racial Minority* x *Percentage Independent Compensation Committee Directors Racial Minority*) demonstrated a non-significant and negative relationship with CEO-TMT Pay-Disparity (β = -7177.21, ns), indicating lack of support for hypothesis 6.1.2.b, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative structural power. Figure 5.8 depicts the interaction plot for MOD_612b.

Figure 5.8

Plotting MOD_612b: Percentage Independent Compensation Committee Directors Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

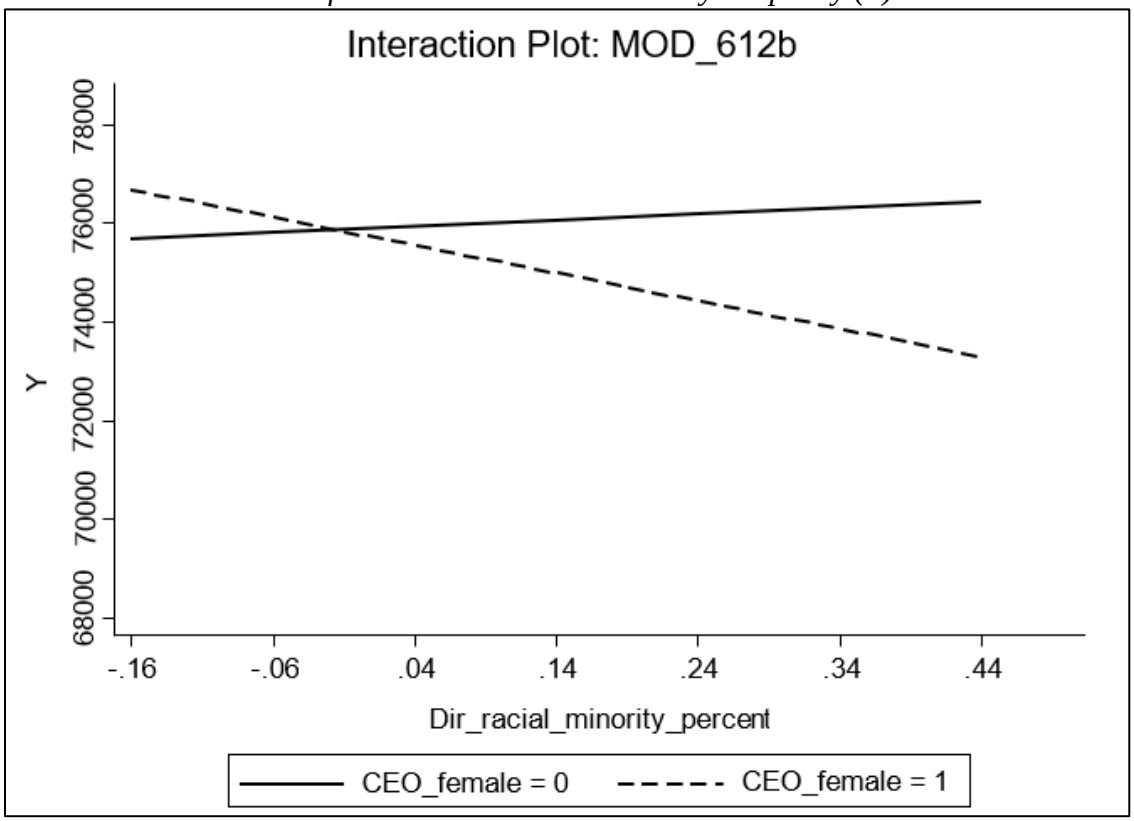


Table 5.3

Panel data multiple linear regression for CEO-TMT Pay-Disparity

	CEO_TMT_PD	CEO_TMT_PD	CEO_TMT_PD	CEO_TMT_PD
CEO_female		1,157.13	984.81	1,246.75
		(715.24)	(600.36)	(674.39)*
CEO_racial_minority		-214.06	-181.74	194.25
		(589.31)	(639.74)	(740.80)
TMT_female_percent		1,779.36	2,109.70	1,715.10
		(784.30)*	(816.41)**	(774.15)*
TMT_racial_minority_percent		19.36	-17.90	753.38
		(992.78)	(933.49)	(1,021.15)
Dir_female_percent		-347.86	-339.98	-310.95
		(698.69)	(697.17)	(703.25)
Dir_racial_minority_percent		705.98	709.70	715.87
		(1,078.20)	(1,138.07)	(1,166.24)
MOD_411a			-4,353.29	
			(2,810.06)	
MOD_411b			-2,742.61	
			(3,808.72)	
MOD_412a				-298.04
				(5,675.22)
MOD_412b				-6,955.66
				(3,222.66)*
Avg_Csuite_comp	0.69	0.69	0.69	0.69
	(0.09)***	(0.09)***	(0.10)***	(0.09)***
CEO_ownership	730.81	667.03	661.47	676.58
	(431.30)†	(480.97)	(469.96)	(484.75)
CEO_tenure	17.91	19.78	20.37	22.98
	(33.36)	(33.07)	(30.55)	(30.33)
Duality	612.08	633.92	631.08	629.17
	(271.92)*	(312.56)*	(301.17)*	(299.83)*
CEO_age	33.49	32.37	31.75	30.31
	(32.29)	(33.76)	(34.14)	(34.38)
TMT_avg_age	-88.58	-89.03	-87.16	-90.56
	(37.08)*	(36.52)*	(36.61)*	(39.62)*
TMT_ownership	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.03)	(0.02)	(0.02)
Firm_performance	976.69	900.49	938.68	859.10
	(1,528.08)	(1,632.15)	(1,648.01)	(1,822.54)
Firm_size	-0.01	-0.01	-0.01	-0.01
	(0.01)*	(0.01)*	(0.01) †	(0.01) †
Board_size	60.10	52.68	55.88	42.85
	(67.34)	(66.82)	(62.19)	(69.75)
Board_ind	1,939.83	1,932.04	1,966.86	1,818.99
	(1,393.49)	(1,429.51)	(1,458.13)	(1,520.17)
Dir_ownership	0.00	-0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Industry	-17.34	-17.36	-17.41	-17.35
	(7.87)*	(8.44)*	(7.76)*	(7.65)*
Beta	-113.00	-112.00	-107.89	-118.79
	(201.60)	(236.12)	(210.05)	(203.65)
2013bn.Year	563.28	560.95	571.11	561.23
	(217.73)**	(216.03)**	(201.97)**	(226.82)**
2014.Year	509.65	484.50	499.66	481.34
	(220.07)*	(214.15)*	(222.50)*	(238.45)*
2015.Year	402.17	388.51	396.70	396.61
	(246.55)	(235.96)*	(246.63)	(250.87)
2016.Year	736.32	776.62	780.46	787.26
	(238.60)**	(256.65)**	(266.12)**	(262.27)**
_cons	75,926.39	75,872.22	75,872.21	75,872.41
	(462.08)***	(492.69)***	(466.61)***	(445.32)***
N	1,990	1,959	1,959	1,959

z statistics in parentheses
† $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 5.3 Continued

Table 5.3 continued: Panel data multiple linear regression for CEO-TMT Pay-Disparity

	CEO_TMT_PD	CEO_TMT_PD	CEO_TMT_PD	CEO_TMT_PD
MOD_511a	-2,529.32			
	(3,579.73)			
MOD_511b	5,320.14			
	(7,145.36)			
MOD_512a		1,479.69		
		(6,154.16)		
MOD_512b		-9,643.93		
		(6,980.34)		
MOD_611a			5,751.34	
			(2,850.04)*	
MOD_611b			-11,462.25	
			(8,510.53)	
MOD_612a				1,054.33
				(2,790.76)
MOD_612b				-7,177.21
				(4,863.85)
CEO_female	1,168.19	1,140.12	1,235.41	1,195.57
	(691.86)†	(633.73)†	(809.65)	(656.97)†
CEO_racial_minority	-231.60	-214.35	-180.95	-247.91
	(552.20)	(621.23)	(583.11)	(628.45)
TMT_female_percent	1,783.89	1,764.28	1,760.66	1,776.48
	(769.99)*	(754.48)*	(707.53)*	(699.50)*
TMT_racial_minority_percent	25.52	49.46	32.78	36.22
	(958.71)	(915.54)	(872.56)	(911.60)
Dir_female_percent	-371.92	-366.07	-601.43	-394.57
	(695.04)	(703.30)	(675.19)	(705.14)
Dir_racial_minority_percent	730.54	780.88	955.57	1,136.96
	(1,121.95)	(1,122.79)	(1,203.83)	(1,107.69)
Avg_Csuite_comp	0.69	0.69	0.69	0.69
	(0.11)***	(0.09)***	(0.10)***	(0.10)***
CEO_ownership	669.66	667.47	653.40	685.49
	(446.84)	(440.32)	(475.61)	(472.05)
CEO_tenure	20.04	20.73	21.54	20.91
	(34.01)	(35.80)	(32.95)	(30.86)
Duality	632.07	633.70	640.48	638.20
	(320.98)*	(306.16)*	(308.18)*	(314.31)*
CEO_age	31.83	32.35	32.55	31.48
	(32.01)	(35.33)	(32.43)	(31.63)
TMT_avg_age	-88.59	-90.22	-89.59	-89.10
	(42.27)*	(41.55)*	(36.82)*	(40.46)*
TMT_ownership	-0.01	-0.01	-0.01	-0.01
	(0.03)	(0.02)	(0.02)	(0.03)
Firm_performance	926.61	869.35	913.08	904.99
	(1,688.76)	(1,702.48)	(1,614.26)	(1,686.99)
Firm_size	-0.01	-0.01	-0.01	-0.01
	(0.01) †	(0.01)†	(0.01)†	(0.01)†
Board_size	54.32	53.13	44.69	50.76
	(63.62)	(63.77)	(62.93)	(63.10)
Board_ind	1,876.57	1,876.96	1,998.43	1,940.69
	(1,552.61)	(1,435.33)	(1,370.47)	(1,508.20)
Dir_ownership	-0.00	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Industry	-17.29	-17.85	-17.35	-17.71
	(7.49)*	(7.96)*	(8.21)*	(7.46)*
Beta	-104.12	-111.15	-125.23	-110.39
	(204.96)	(217.59)	(225.65)	(202.30)
2013bn.Year	559.24	564.30	565.90	552.74
	(222.03)*	(211.79)**	(202.04)**	(213.99)**
2014.Year	479.71	490.23	479.49	479.89
	(218.00)*	(235.37)*	(229.96)*	(213.50)*
2015.Year	388.19	392.50	377.45	366.62
	(259.03)	(247.84)	(260.06)	(235.64)
2016.Year	775.68	778.89	770.05	761.35
	(268.49)**	(286.20)**	(243.75)**	(231.04)***
_cons	75,866.90	75,897.83	75,870.46	75,896.62
	(487.97)***	(500.95)***	(476.91)***	(427.09)***
N	1,959	1,959	1,959	1,959

z statistics in parentheses, † $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Section 5.2.2 CEO Within-Position Pay-Disparity

The regression results from predicting CEO Within-Position Pay-Disparity are summarized in Table 5.4 at the end of the sub-section. CEO Female demonstrated a non-significant and positive relationship with CEO Within-Position Pay-Disparity ($\beta = 893.65$, ns), indicating lack of support for hypothesis 1.2.1.a and hypothesis 1.2.2a that female CEOs would have a) less or b) more structural power relative to their male peers. Similarly, CEO Racial Minority demonstrated a non-significant and positive relationship with CEO Within-Position Pay-Disparity ($\beta = 138.65$, ns), indicating lack of support for hypothesis 1.2.1.b and hypothesis 1.2.2b, that racial minority CEOs would have a) less or b) more structural power relative to their Caucasian peers, after controlling for gender.

Several moderators of the CEO Within-Position Pay-Disparity relationship with females and racial minorities were analyzed. MOD_631a: (CEO Female x Percentage Independent Compensation Committee Directors Female) demonstrated a significant and positive relationship with CEO Within-Position Pay-Disparity ($\beta = 4745.53$, $p < .1$), indicating moderate support for hypothesis 6.3.1.a, that female CEOs with a higher percentage of incumbent independent compensation committee members who were females would be given more relative within-position structural power. Figure 5.9 depicts the interaction plot for MOD_631a.

Figure 5.9

Plotting MOD_631a: CEO Female (X) x Percentage Independent Compensation Committee Directors Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

MOD_631b: (CEO Female x Percentage Independent Compensation Committee Directors Racial Minority) demonstrated a non-significant and negative relationship with CEO Within-Position Pay-Disparity (β = -10034.84, ns), indicating lack of support for hypothesis 6.3.1.b, that female CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative within-position structural power. Figure 5.10 depicts the interaction plot for MOD_631b.

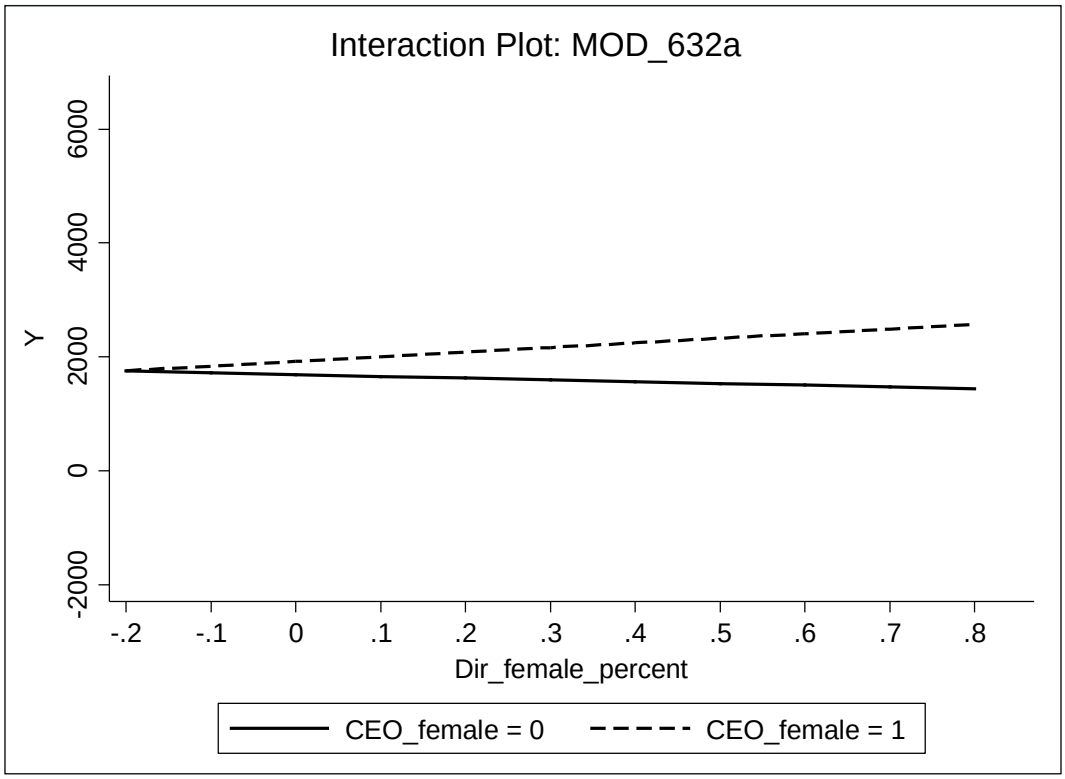
Figure 5.10

Plotting MOD_631b: Percentage Independent Compensation Committee Directors Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

MOD_632a: (CEO Racial Minority x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and positive relationship with CEO Within-Position Pay-Disparity (β = 1024.9, ns), indicating lack of support for hypothesis 6.3.2.a, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were females would be given more relative within-position structural power. Figure 5.11 depicts the interaction plot for MOD_632a.

Figure 5.11

Plotting MOD_632a: Percentage Independent Compensation Committee Directors Female (X) x CEO Racial Minority Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_632b: (CEO Racial Minority x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and negative relationship with CEO Within-Position Pay-Disparity (β = -5267.29, ns), indicating lack of support for hypothesis 6.3.2.b, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative within-position structural power. Figure 5.12 depicts the interaction plot for MOD_632b.

Figure 5.12

Plotting MOD_632b: Percentage Independent Compensation Committee Directors Female (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

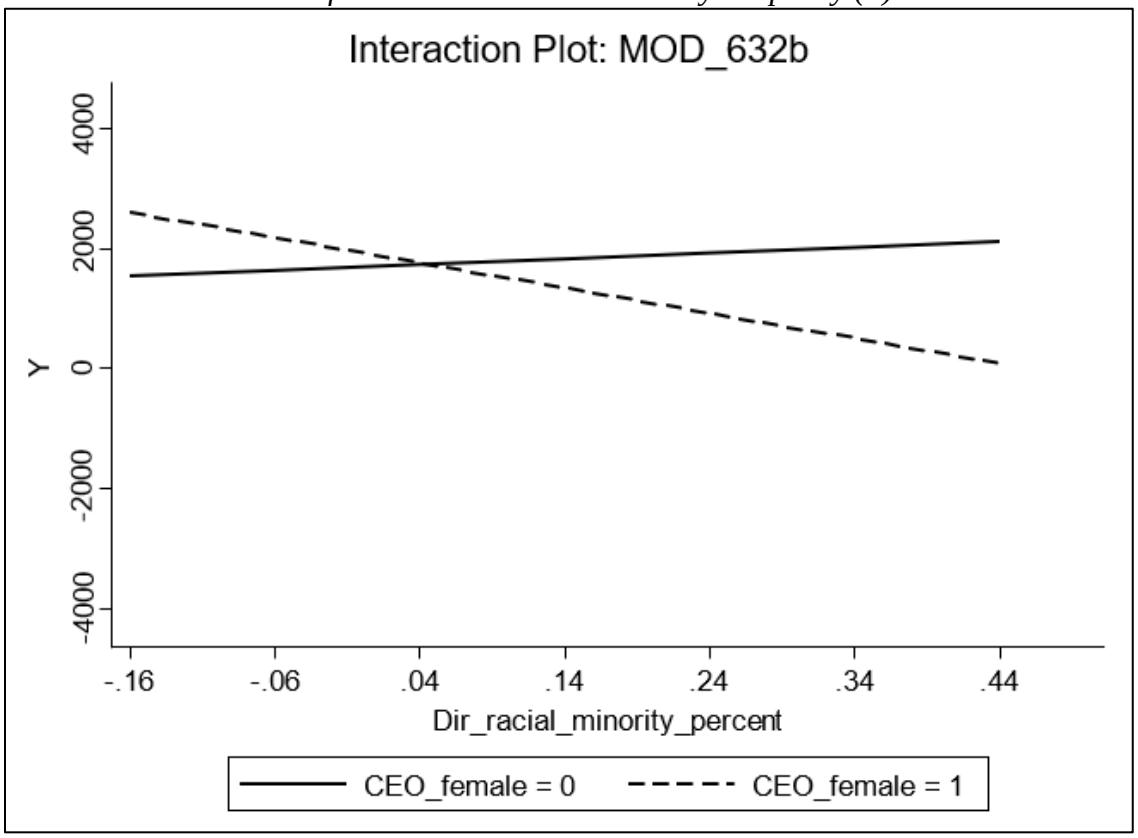


Table 5.4

Panel data multiple linear regression for CEO-TMT Pay-Disparity

	CEO_WPPD	CEO_WPPD	CEO_WPPD	CEO_WPPD
CEO_female		893.65	975.48	917.61
		(578.75)	(741.86)	(587.03)
CEO_racial_minority		138.65	162.47	120.32
		(642.33)	(627.01)	(734.89)
TMT_female_percent		1,474.77	1,451.46	1,468.63
		(675.25)*	(767.86)*	(728.77)*
TMT_racial_minority_percent		-384.00	-371.87	-366.46
		(1,048.89)	(1,135.35)	(1,038.51)
Dir_female_percent		-313.35	-516.86	-360.02
		(681.55)	(764.91)	(705.71)
Dir_racial_minority_percent		555.96	776.74	882.16
		(1,124.79)	(1,181.88)	(1,067.50)
MOD_631a			4,745.53	
			(2,518.27)†	
MOD_631b			-10,034.84	
			(7,032.44)	
MOD_632a				1,024.89
				(2,144.50)
MOD_632b				-5,267.29
				(4,187.62)
Avg_Csuite_comp	1.53	1.53	1.53	1.52
	(0.12)***	(0.12)***	(0.12)***	(0.12)***
CEO_ownership	577.00	513.08	498.99	527.55
	(414.47)	(435.82)	(446.08)	(408.77)
CEO_tenure	11.99	14.17	15.82	15.24
	(31.15)	(30.75)	(34.40)	(32.38)
Duality	479.34	493.48	501.49	496.07
	(268.78) †	(259.18)†	(273.92)†	(257.74)†
CEO_age	36.37	35.98	36.01	35.10
	(32.32)	(30.15)	(33.18)	(36.51)
TMT_avg_age	-82.34	-83.24	-84.15	-83.45
	(35.96)*	(37.63)*	(33.05)*	(34.13)*
TMT_ownership	0.00	0.00	0.00	0.00
	(0.02)	(0.03)	(0.04)	(0.04)
Firm_performance	967.88	921.12	929.30	920.66
	(1,243.58)	(1,375.09)	(1,349.03)	(1,545.93)
Firm_size	-0.01	-0.01	-0.01	-0.01
	(0.01)*	(0.01)†	(0.01)*	(0.01)*
Board_size	92.83	87.68	80.45	86.42
	(63.79)	(70.48)	(64.72)	(66.45)
Board_ind	1,304.09	1,288.65	1,343.66	1,294.12
	(1,620.71)	(1,633.69)	(1,596.36)	(1,430.60)
Dir_ownership	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Industry	-16.65	-17.17	-17.20	-17.39
	(7.21)*	(7.26)*	(8.14)*	(7.22)*
Beta	-60.39	-64.42	-76.48	-64.61
	(183.13)	(193.57)	(201.05)	(197.28)
2013bn.Year	-162.79	-163.47	-158.97	-169.36
	(181.05)	(186.71)	(200.33)	(187.46)
2014.Year	-751.97	-773.17	-777.07	-776.46
	(181.54)***	(199.81)***	(208.55)***	(171.65)***
2015.Year	-1,149.55	-1,162.16	-1,171.30	-1,178.52
	(224.96)***	(212.30)***	(219.71)***	(202.74)***
2016.Year	-1,512.07	-1,476.81	-1,482.20	-1,487.90
	(213.00)***	(220.02)***	(218.90)***	(189.37)***
_cons	2,968.71	2,939.80	2,939.29	2,956.65
	(385.15)***	(442.73)***	(443.68)***	(420.42)***
N	1,990	1,959	1,959	1,959

z statistics in parentheses

†. $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Section 5.2.3 Female/Racial Minority CEO Within-Position Pay-Disparity

The regression results from predicting female CEO Within-Position Pay-Disparity are summarized in Table 5.5 at the end of the sub-section. Percentage Independent Compensation Committee Directors Female demonstrated a non-significant and negative relationship with Female CEO Within-Position Pay-Disparity (β = -6.5, ns), indicating lack of support for hypothesis 6.2.1.a, that female CEOs with a higher percentage of incumbent independent compensation committee members who were females would be given more relative within-position structural power. Likewise, Percentage Independent Compensation Committee Directors Racial Minority demonstrated a non-significant and negative relationship with Female CEO Within-Position Pay-Disparity (β = -267.18, ns), indicating lack of support for hypothesis 6.2.1.b, that that female CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative within-position structural power. Percentage Independent Compensation Committee Directors Female demonstrated a non-significant and negative relationship with Racial minority CEO Within-Position Pay-Disparity (β = -51.92, ns), indicating lack of support for hypothesis 6.2.2.a, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were females would be given more relative within-position structural power.. Likewise, Percentage Independent Compensation Committee Directors Racial Minority demonstrated a non-significant and negative relationship with Racial minority CEO Within-Position Pay-Disparity (β = -138.69, ns), indicating lack of support for hypothesis 6.2.2.a, that racial minority CEOs with a higher percentage of incumbent independent compensation committee members who were racial minorities would be given more relative within-position structural power.

Table 5.5

Panel data multiple linear regression for Female/RM CEO Within Position Pay-Disparity

	Female_CEO_WPPD	Female_CEO_WPPD	RM_CEO_WPPD	RM_CEO_WPPD
CEO_female		3,778.32		136.98
		(1,352.05)**		(321.91)
CEO_racial_minority		-114.88		426.28
		(309.90)		(920.55)
TMT_female_percent		-173.40		249.14
		(185.74)		(214.51)
TMT_racial_minority_percent		-275.44		-714.40
		(186.72)		(331.74)*
Dir_female_percent		-6.50		-51.92
		(253.70)		(173.87)
Dir_racial_minority_percent		-267.18		-138.69
		(350.32)		(392.86)
Avg_Csuite_comp	0.04	0.04	0.06	0.06
	(0.02)*	(0.02)**	(0.02)**	(0.02)**
CEO_ownership	-159.49	-104.21	93.56	78.09
	(98.47)	(101.36)	(111.36)	(104.84)
CEO_tenure	1.71	5.99	-2.42	-0.68
	(6.04)	(6.65)	(6.22)	(5.91)
Duality	119.34	42.38	13.09	1.29
	(86.05)	(82.82)	(58.29)	(55.87)
CEO_age	0.98	1.17	-2.16	-1.60
	(6.18)	(6.33)	(5.37)	(6.25)
TMT_avg_age	-9.03	-14.89	2.37	0.82
	(9.74)	(8.78)†	(6.55)	(6.09)
TMT_ownership	0.01	0.01	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Firm_performance	444.25	713.23	149.42	189.46
	(290.24)	(391.45)†	(214.49)	(275.78)
Firm_size	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Board_size	14.32	10.95	30.95	30.24
	(13.70)	(15.95)	(25.81)	(28.88)
Board_ind	-259.89	-308.07	292.07	325.27
	(388.19)	(394.76)	(221.86)	(259.11)
Dir_ownership	-0.00	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Industry	-2.72	-1.86	-1.36	-1.75
	(2.98)	(2.62)	(3.68)	(3.06)
Beta	-15.50	64.00	42.98	35.67
	(69.11)	(67.73)	(56.48)	(52.02)
2013bn.Year	-6.70	-46.74	-102.17	-100.92
	(39.66)	(35.94)	(42.80)*	(45.68)*
2014.Year	69.65	35.02	-48.60	-54.14
	(51.35)	(48.60)	(54.18)	(54.32)
2015.Year	58.39	30.70	-36.49	-40.27
	(59.37)	(56.29)	(62.34)	(57.74)
2016.Year	136.76	89.73	-49.82	-45.83
	(81.21)†	(68.97)	(69.10)	(75.45)
_cons	139.75	40.32	185.45	186.58
	(158.61)	(143.05)	(179.29)	(146.84)
N	1,990	1,959	1,959	1,959

z statistics in parentheses

† $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Section 5.2.4 TMT Female Within-Position Pay-Disparity

The regression results from predicting TMT TMT Female Within-Position Pay-Disparity are summarized in Table 5.6 at the end of the sub-section. One or More TMT Females demonstrated a significant and positive relationship with TMT TMT Female Within-Position Pay-Disparity ($\beta = 684.94$, $p < .001$), indicating strong support for hypothesis 2.2, that female TMT members would be given less relative within-position structural power. However, CEO Female demonstrated a significant and negative relationship with TMT TMT Female Within-Position Pay-Disparity ($\beta = -1057.71$, $p < .05$), indicating support for hypothesis 4.2.1.a, that female TMT members with a female CEO would be given more relative within-position structural power. Yet, CEO Racial Minority demonstrated a non-significant and positive relationship with TMT TMT Female Within-Position Pay-Disparity ($\beta = 10.86$, ns), indicating lack of support for hypothesis 4.2.1.b, that female TMT members with a racial minority CEO would be given more relative within-position structural power.

Furthermore, Percentage Independent Compensation Committee Directors Female demonstrated a significant and negative relationship with TMT TMT Female Within-Position Pay-Disparity ($\beta = -625.5$, $p < .01$), indicating strong support for hypothesis 5.2.1.a, that the presence of independent compensation committee female directors decrease pay-disparity for females in the TMT. Yet, Percentage Independent Compensation Committee Directors Racial Minority demonstrated a non-significant and negative relationship with TMT Female Within-Position Pay-Disparity ($\beta = -130.53$, ns), indicating lack of support for hypothesis 5.2.1.b, that the presence of independent compensation committee racial minority directors decrease pay-disparity for females in the TMT.

Several moderators of the female average within-position pay-disparity in a TMT and females and racial minorities were analyzed. MOD_431a: (One or More TMT Females x CEO Female) demonstrated a non-significant and positive relationship with TMT Female Within-Position Pay-Disparity ($\beta = 270.93$, ns), indicating lack of support for hypothesis 4.3.1.a, that the presence of a female CEO negatively moderates Female TMT Within-Position Pay-Disparity. Figure 5.13 depicts the interaction plot for MOD_431a.

Figure 5.13

Plotting MOD_431a: One or More TMT Females (X) x CEO Female Interaction for 2012-2016 Female TMT Within-Position Pay-Disparity (Y)

MOD_431b: (One or More TMT Females x CEO Racial Minority) demonstrated a non-significant and positive relationship with TMT TMT Female Within-Position Pay-Disparity (β = 100.61, ns), indicating lack of support for hypothesis 4.3.1.b, that the presence of a racial minority CEO negatively moderates Female TMT Within-Position Pay-Disparity. Figure 5.14 depicts the interaction plot for MOD_431b.

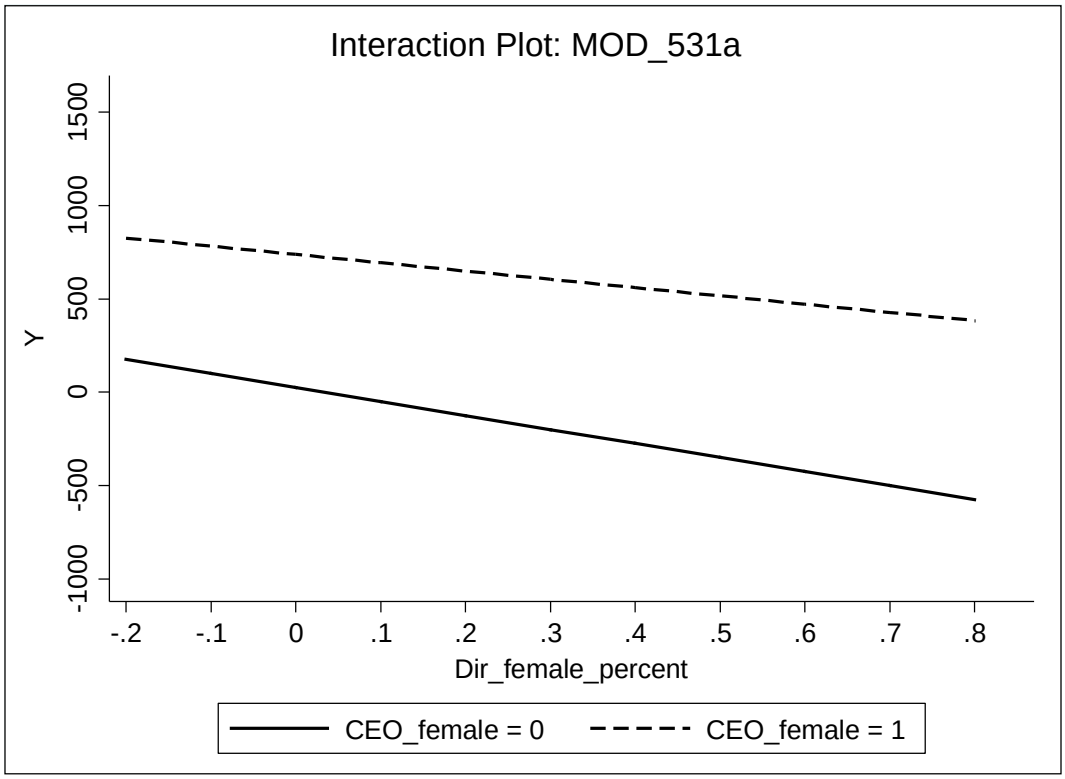
Figure 5.14

Plotting MOD_431b: One or More TMT Females (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

MOD_531a: (One or More TMT Females x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and positive relationship with TMT Female Within-Position Pay-Disparity (β = 294.13, ns), indicating lack of support for hypothesis 5.3.1.a, that a higher the percentage of independent compensation committee members who are female negatively moderates Female TMT Within-Position Pay-Disparity. Figure 5.15 depicts the interaction plot for MOD_531a.

Figure 5.15

Plotting MOD_531a: Percentage Independent Compensation Committee Directors Female (X) x One or More TMT Females Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_531b: (One or More TMT Females x Percentage Independent Compensation Committee Directors Racial Minority) demonstrated a non-significant and positive relationship with TMT Female Within-Position Pay-Disparity (β = 1612.81, ns), indicating lack of support for hypothesis 5.3.1.b, that a higher the percentage of independent compensation committee members who are racial minorities negatively moderates Female TMT Within-Position Pay-Disparity. Figure 5.16 depicts the interaction plot for MOD_531b.

Figure 5.16

Plotting MOD_531b: Percentage Independent Compensation Committee Directors Female (X) x One or More TMT Females Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

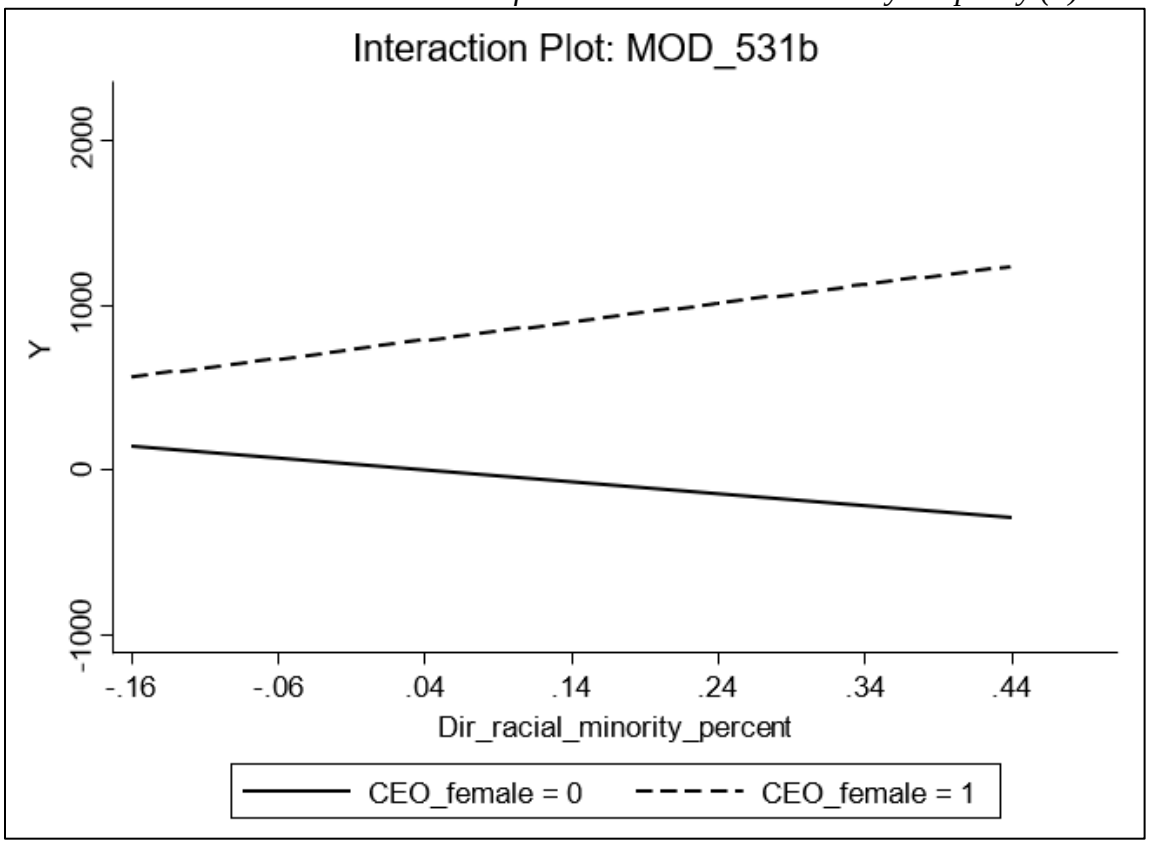


Table 5.6

Panel data multiple linear regression for TMT Female Within Position Pay-Disparity

	TMT_female_WPPD	TMT_female_WPPD	TMT_female_WPPD	TMT_female_WPPD
TMT_has_female		684.94	669.85	675.72
		(173.24)***	(223.17)**	(185.80)***
CEO_female		-1,057.71	-1,099.66	-1,029.03
		(445.05)*	(459.37)*	(395.64)**
CEO_racial_minority		10.86	-22.66	-1.48
		(189.28)	(167.82)	(190.90)
Dir_female_percent		-625.50	-628.07	-702.47
		(214.12)**	(251.84)*	(265.16)**
Dir_racial_minority_percent		-130.53	-132.99	-623.68
		(409.70)	(390.84)	(382.18)
MOD_431a			270.93	
			(502.91)	
MOD_431b			100.61	
			(436.32)	
MOD_531a				294.13
				(787.01)
MOD_531b				1,612.81
				(1,290.65)
Avg_Csuite_comp	0.20	0.19	0.19	0.19
	(0.03)***	(0.03)***	(0.03)***	(0.03)***
CEO_ownership	-73.25	-86.07	-85.69	-92.36
	(157.85)	(162.45)	(163.71)	(146.00)
CEO_tenure	-6.11	-7.90	-7.88	-6.98
	(10.02)	(9.58)	(9.33)	(10.04)
Duality	16.11	30.73	29.96	38.40
	(116.84)	(112.72)	(113.11)	(106.90)
CEO_age	4.05	4.21	4.22	3.66
	(11.98)	(13.19)	(11.96)	(11.93)
TMT_avg_age	-18.99	-13.69	-13.97	-14.57
	(12.27)	(11.84)	(12.11)	(11.01)
TMT_ownership	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.01)	(0.00)	(0.01)
Firm_performance	329.89	377.52	373.87	404.21
	(366.48)	(369.05)	(372.26)	(376.12)
Firm_size	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00) †
Board_size	-10.14	-18.93	-19.46	-15.54
	(19.00)	(17.76)	(17.40)	(17.69)
Board_ind	-393.69	-346.91	-347.15	-359.94
	(470.78)	(464.76)	(441.75)	(468.24)
Dir_ownership	0.00	0.00	0.00	0.00
	(0.00)	(0.00)†	(0.00)†	(0.00)
Industry	1.86	1.86	1.88	1.89
	(3.06)	(3.25)	(3.03)	(3.28)
Beta	42.04	12.91	12.96	17.04
	(83.39)	(68.48)	(72.55)	(78.22)
2013bn.Year	1.10	22.10	20.27	20.37
	(59.93)	(57.15)	(59.10)	(62.98)
2014.Year	-31.66	-17.92	-20.12	-23.83
	(61.72)	(63.08)	(62.85)	(66.51)
2015.Year	-80.65	-33.62	-35.42	-36.99
	(72.67)	(76.42)	(71.44)	(73.05)
2016.Year	-173.65	-90.72	-91.88	-100.02
	(84.83)*	(87.72)	(85.64)	(88.05)
_cons	219.87	4.58	9.38	-0.62
	(179.00)	(196.09)	(185.79)	(183.87)
N	1,990	1,959	1,959	1,959

z statistics in parentheses

†. $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Section 5.2.5 TMT Racial Minority Within-Position Pay-Disparity

The regression results from predicting TMT Racial Minority Within-Position Pay-Disparity are summarized in Table 5.7 at the end of the sub-section. One or More TMT Racial Minorities demonstrated a significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity ($\beta = 738.25$, $p < .001$), indicating strong support for hypothesis 2.3 in the results, that racial minorities are compensated less. CEO Female demonstrated a non-significant and negative relationship with TMT Racial Minority Within-Position Pay-Disparity ($\beta = -154.37$, ns), indicating lack of support for hypothesis 4.2.2.a, that racial minority TMT members with a female CEO would be given more relative within-position structural power. Conversely, CEO Racial Minority demonstrated a significant and negative relationship with TMT Racial Minority Within-Position Pay-Disparity ($\beta = -512.46$, $p < .05$), indicating support for hypothesis 4.2.2.b, that racial minority TMT members with a racial minority CEO would be given more relative within-position structural power. Yet, Percentage Independent Compensation Committee Directors Female demonstrated a non-significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity ($\beta = 154.72$, ns), indicating lack of support for hypothesis 5.2.2.a, that the presence of independent compensation committee female directors decrease pay-disparity for racial minorities in the TMT. Similarly, Percentage Independent Compensation Committee Directors Racial Minority demonstrated a non-significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity ($\beta = 295.7$, ns), indicating lack of support for hypothesis 5.2.2.b, that the presence of independent compensation committee racial minority directors decrease pay-disparity for racial minorities in the TMT.

Several moderators of TMT Racial Minority Within-Position Pay-Disparity and females and racial minorities were analyzed. MOD_432a: (One or More TMT Racial Minorities x CEO

Female) demonstrated a non-significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity (β = 115.27, ns), indicating lack of support for hypothesis 4.3.2.a, that the presence of a female CEO negatively moderates racial minority TMT within-position pay-disparity. Figure 5.17 depicts the interaction plot for MOD_432a.

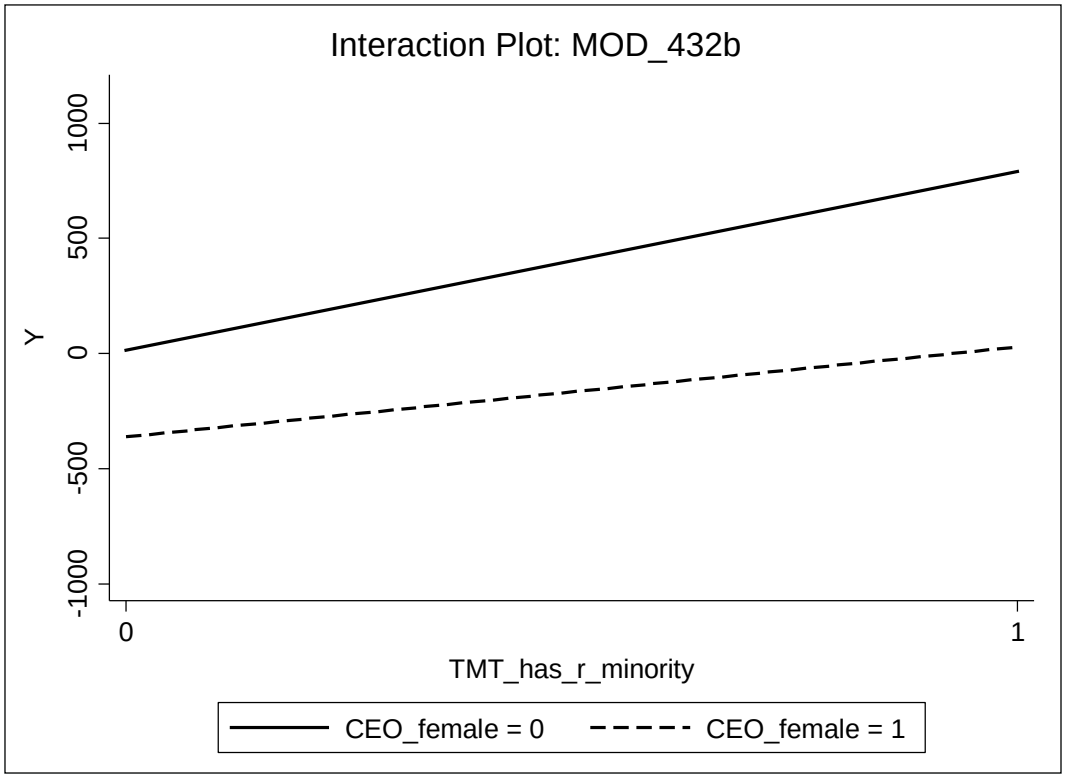
Figure 5.17

Plotting MOD_432a: One or More TMT Racial Minorities (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

MOD_432b: (One or More TMT Racial Minorities x CEO Racial Minority) demonstrated a non-significant and negative relationship with TMT Racial Minority Within-Position Pay-Disparity (β = -387.55, ns), indicating lack of support for hypothesis 4.3.2.b, that the presence of a racial minority CEO negatively moderates racial minority TMT within-position pay-disparity. Figure 5.18 depicts the interaction plot for MOD_432b.

Figure 5.18

Plotting MOD_432b: One or More TMT Racial Minorities (X) x CEO Female Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)



MOD_532a: (One or More TMT Racial Minorities x Percentage Independent Compensation Committee Directors Female) demonstrated a non-significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity (β = 1048.54, ns), indicating lack of support for hypothesis 5.3.2.a, that a higher the percentage of independent compensation committee members who are female negatively moderates racial minority TMT within-position pay-disparity. Figure 5.19 depicts the interaction plot for MOD_532a.

Figure 5.19

Plotting MOD_532a: Percentage Independent Compensation Committee Directors Female (X) x One or More TMT Racial Minorities Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

MOD_532b: (One or More TMT Racial Minorities x Percentage Independent Compensation Committee Directors Racial Minority) demonstrated a non-significant and positive relationship with TMT Racial Minority Within-Position Pay-Disparity (β = 1979.64, ns), indicating lack of support for hypothesis 5.3.2.b, that a higher the percentage of independent compensation committee members who are racial minorities negatively moderates racial minority TMT within-position pay-disparity. Figure 5.20 depicts the interaction plot for MOD_532b.

Figure 5.20

Plotting MOD_532b: Percentage Independent Compensation Committee Directors Female (X) x One or More TMT Racial Minorities Interaction for 2012-2016 CEO-TMT Pay-Disparity (Y)

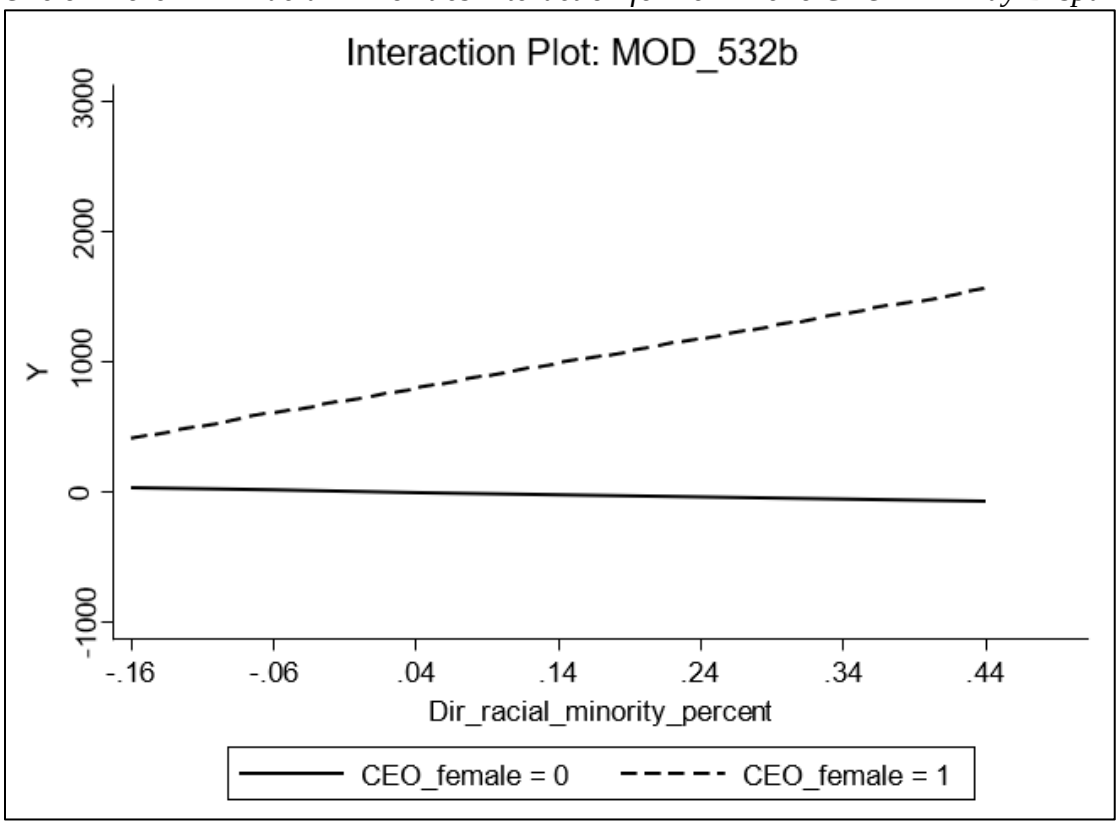


Table 5.7

Panel data multiple linear regression for TMT Racial Minority WPPD

	TMT racial minority WPPD	TMT racial minority WPPD	TMT racial minority WPPD	TMT racial minority WPPD
TMT_has_r_minority		738.25	765.97	725.04
		(182.76)***	(195.42)***	(167.72)***
CEO_female		-154.37	-166.88	-144.20
		(150.57)	(122.45)	(144.99)
CEO_racial_minority		-512.46	-361.33	-475.84
		(243.39)*	(238.63)	(212.86)*
Dir_female_percent		154.72	160.65	-50.84
		(191.98)	(184.49)	(146.30)
Dir_racial_minority_percent		295.70	289.04	-160.53
		(320.91)	(328.20)	(198.71)
MOD_432a			115.27	
			(547.64)	
MOD_432b			-387.55	
			(515.53)	
MOD_532a				1,048.54
				(757.76)
MOD_532b				1,979.64
				(1,378.37)
Avg_Csuite_comp	0.09	0.10	0.10	0.10
	(0.02)***	(0.02)***	(0.02)***	(0.02)***
CEO_ownership	-151.36	-151.45	-151.53	-152.26
	(122.40)	(126.98)	(112.96)	(108.05)
CEO_tenure	5.48	3.12	3.65	2.17
	(6.76)	(6.62)	(6.69)	(6.80)
Duality	-137.71	-75.73	-76.03	-69.00
	(83.58) †	(82.38)	(76.10)	(72.06)
CEO_age	7.25	6.04	5.71	5.99
	(6.75)	(6.33)	(6.01)	(6.06)
TMT_avg_age	-18.95	-13.58	-13.76	-12.73
	(11.78)	(9.61)	(10.23)	(9.21)
TMT_ownership	0.00	0.00	0.00	0.00
	(0.00)	(0.01)	(0.01)	(0.00)
Firm_performance	518.64	413.67	408.73	421.93
	(301.86) †	(280.54)	(289.61)	(302.60)
Firm_size	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Board_size	18.27	12.03	10.19	13.43
	(13.70)	(14.05)	(14.10)	(12.72)
Board_ind	154.26	64.89	44.03	57.23
	(348.40)	(346.64)	(332.32)	(346.55)
Dir_ownership	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Industry	-1.50	-0.86	-0.90	-0.42
	(1.82)	(1.73)	(1.93)	(1.70)
Beta	51.80	63.54	62.08	60.34
	(54.51)	(55.45)	(55.24)	(56.82)
2013bn.Year	-43.19	-51.54	-51.24	-62.71
	(49.81)	(49.10)	(46.77)	(42.57)
2014.Year	-31.90	-36.62	-35.90	-56.49
	(52.45)	(52.97)	(53.38)	(53.16)
2015.Year	-64.92	-60.54	-58.32	-70.02
	(67.26)	(67.61)	(65.22)	(61.02)
2016.Year	-102.00	-126.25	-124.57	-142.29
	(64.21)	(69.62) †	(62.59)*	(64.49)*
_cons	341.01	163.67	159.30	146.50
	(119.96)**	(112.24)	(110.30)	(101.72)
N	1,990	1,959	1,959	1,959

z statistics in parentheses

†. $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Table 5.8

Support for Hypotheses Summarized

Hypotheses	**a) Female**	**Coef.**	**b) Race**	**Coef.**
Hypothesis 1.1.1: A firm's CEO-TMT pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Negative
Hypothesis 1.1.2: A firm's CEO-TMT pay-disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Negative
Hypothesis 1.2.1: CEO within-position pay-disparity is positively associated with a firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Positive
Hypothesis 1.2.2: CEO within-position pay-disparity is negatively associated with a firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Positive
Hypothesis 2.1: CEO-TMT pay-disparity is positively associated with the percentage of: a) female TMT members, b) racial minority TMT members.	**Supported**	**Positive**	Not Sig	Positive
Hypothesis 2.2: Average within-position pay-disparity for females in a TMT is positively associated with having one or more female TMT members.	**Supported**	**Positive**		
Hypothesis 2.3: Average within-position pay-disparity for racial minorities in a TMT is positively associated with having one or more racial minority TMT members.			**Supported**	**Positive**
Hypothesis 3.1: CEO-TMT pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Negative	Not Sig	Positive

***Table 5.8 continued**: Support for Hypotheses Summarized Continued*

Hypotheses	**a) Female**	**Coef.**	**b) Race**	**Coef.**
Hypothesis 4.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is female is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Negative	Not Sig	Negative
Hypothesis 4.1.2: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of the TMT that is racial minority is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Negative	**Supported**	**Negative**
Hypothesis 4.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.	**Supported**	**Negative**	Not Sig	Positive
Hypothesis 4.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Negative	**Supported**	**Negative**
Hypothesis 4.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Positive
Hypothesis 4.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority members in the TMT is negatively moderated (weakened) by the firm having: a) a female CEO, b) a racial minority CEO.	Not Sig	Positive	Not Sig	Negative
Hypothesis 5.1.1: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of females in the TMT is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Negative	Not Sig	Positive
Hypothesis 5.1.2: The positive relationship between a firm's CEO-TMT pay-disparity and the percentage of racial minorities in the TMT is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Negative
Hypothesis 5.2.1: Average within-position pay-disparity for females in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	**Supported**	**Negative**	Not Sig	Negative
Hypothesis 5.2.2: Average within-position pay-disparity for racial minorities in a TMT is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Positive

***Table 5.8 continued**: Support for Hypotheses Summarized Continued*

Hypotheses	**a) Female**	**Coef.**	**b) Race**	**Coef.**
Hypothesis 5.3.1: The positive relationship between average within-position pay-disparity for females in a TMT and having one or more female TMT members is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Positive
Hypothesis 5.3.2: The positive relationship between average within-position pay-disparity for racial minorities in a TMT and having one or more racial minority TMT members is negatively moderated (weakened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Positive
Hypothesis 6.1.1: The relationship between a firm's CEO-TMT pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	**Supported**	**Positive**	Not Sig	Negative
Hypothesis 6.1.2: The relationship between a firm's CEO-TMT pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Negative
Hypothesis 6.2.1: Female CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Negative	Not Sig	Negative
Hypothesis 6.2.2: Racial minority CEO within-position pay-disparity is negatively associated with the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Negative	Not Sig	Negative
Hypothesis 6.3.1: The relationship between CEO within-position pay-disparity and having a female CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	**Moderate Support**	**Positive**	Not Sig	Negative
Hypothesis 6.3.2: The relationship between CEO within-position pay-disparity and having a racially diverse CEO is positively moderated (strengthened) by the percentage of independent, compensation committee: a) female directors, b) racial minority directors.	Not Sig	Positive	Not Sig	Negative

Chapter 6

Implications and Future Research

Chapter 6 contains a discussion of dissertation limitations and results as well as practical implications and directions for future research.

Section 6.1 Dissertation Limitations

Using the characteristics of upper echelon individuals, while common in UE research (Hambrick, 2007), does not measure the actual perceptions or attitudes of the upper echelon individuals in question. While obtaining survey data is a complex process, it is still possible in research. However, for a company to be utilized in this study all executives and board members would have to turn in a survey for each company, a very high bar to set in upper echelons diversity research, where there are so few companies with the diversity examined in this dissertation to start with. Furthermore, answering survey questions regarding the prejudice of upper echelon individuals could lead to legal issues for a company. Thus, by utilizing upper echelons theory, a sample large enough to statistically analyze was able to be used in this dissertation

Another limitation is the upper echelon compensation data available to researchers. The sample size, though large enough to run statistical analysis is a limitation given that there are so few females and racial minorities in the upper echelons (Catalyst, 2017; Zillman, 2014). In addition, companies are only required to report the top 5 highest paid executives in SEC filings, data which is available to the public and is used to populate EXECUCOMP. Because data on the top 5 highest paid executives is available to researchers, this dissertation utilizes this data as well. However, one premise of this dissertation is that females and racial minorities will be given less structural power in the upper echelons as measured by the compensation that they receive. In

other words, they may not make it to the top 5 highest paid executives. Thus, it is noteworthy that this dissertation examines the compensation of females and racial minorities who have been able to break the glass ceiling to the top 5 highest paid executives. If in the future all top executive compensation is required to be reported in SEC filings, a more complete sample could be obtained.

Section 6.2 Dissertation Results and Direction for Future Research

Two primary research questions guided this dissertation

1. How does CEO, TMT and BOD diversity influence the allocation of structural power in the C-suite?
2. Following this line of inquiry, how does this relationship change according to the moderating influences of CEO and BOD diversity.

The paragraphs in the following section address each of these questions.

Section 6.2.1 Dissertation Results and Contributions

This dissertation examined two research questions: How does CEO, TMT and BOD diversity influence the allocation of structural power in the C-suite and does this relationship change with CEO and BOD diversity? It was found that to an extent the distribution of power in the C-suite does change with diversity. While it was hypothesized that the presence of females and racial minorities in the upper echelons would exert influence to increase equality in the distribution of power for other upper echelon females and racial minorities in the organization, the results consistently show that the presence of females is to the benefit of females, but not racial minorities and the presence of racial minorities is to the benefit of racial minorities, but not to females in instances where significance was reached for any given hypothesis. In lieu of

offering the same explanation for these consistent findings in each area of the discussion, several are offered here. Competing hypotheses were developed in hypotheses set 1, that female and racial minority CEOs would be given less structural power or more structural power in terms of the CEO-TMT Pay-Disparity and within-position pay-disparity. Female and racial minority CEOs were not significant with the CEO-TMT Pay-Disparity or CEO Within-Position Pay-Disparity. These findings add to the growing debate over compensation to female and racial minority CEOs and the need to further examine the distribution of power to these individuals as well as other variables that may influence these relationships (Hill et al., 2015).

The core of hypotheses 2.1a and 2.1b examines whether having more females or racial minorities in the TMT, respectively, leads to less power being given to the TMT relative to the CEO. In support of hypothesis 2.1a having more females in the TMT leads to less structural power being allocated to the TMT relative to the CEO. However, having more racial minorities in the TMT was positive as expected, but did not reach significance. This could be due to sample size, as there were fewer firm years with racial minorities in the TMT than females in the TMT, see Table 5.2. While there was only partial support for hypothesis 2.1 with regards to the CEO-TMT Pay-Disparity, TMT females and racial minorities had higher within-position pay-disparity, and thus were allocated less structural power, as indicated by support for hypothesis 2.2 and hypothesis 2.3 in the results. This is in keeping with the literature (Mackey et al., 2014) that females and racial minorities are compensated less, and thus giving a highly visible indicator that less structural power is given to these individuals. More research is needed in this area, specifically as time progresses to see if this disparity narrows over time. These results give further support to findings that breaking the glass ceiling to the upper echelons by no means

indicates that the challenges and discrimination faced by these individuals is over (Lyness & Thompson, 1997).

Hypotheses set 3 addresses the influence that the presence of higher percentages of female or racial minority compensation committee members may have on the CEO-TMT Pay-Disparity. CEO-TMT Pay-Disparity and the percentage of the compensation committee that was female or the percentage of the compensation committee that was racial minority was not found to be related. This could be due to the idea that females and racial minorities on the board may be tokens (Kanter, 1977, 1987), bringing diversity of ideas, but given no real power to influence compensation outcomes in the organization. On the other hand, these individuals may not have the desire to influence compensation in this way, especially when taking into account the fact that there may be no in-group members in the TMT that they desire to assist. Furthermore, there is an assumption in these hypotheses that there is something wrong with the CEO-TMT Pay-Disparity. Future research could examine the influence that the presence of females or racial minorities in the compensation committee has in firms where the CEO-TMT Pay-Disparity is above average using the year before and after the diversity in the compensation committee changes.

Hypotheses set 4 addresses the influence that the presence of a minority, female or racial minority, CEO has on the compensation of females and racial minorities in the TMT with regards to moderation and association. Operating under the assumption that female CEOs have the structural power to influence the CEO-TMT Pay-Disparity as well as the desire to do so, results from hypothesis 4.1.1a and 4.1.1b. indicated that the presence of a female CEO did not moderate the relationship between the percentage of the TMT that is female, and the CEO-TMT Pay-Disparity. However, the coefficients were in the expected direction. Not reaching statistical

significance could be for several reasons, one being that diverse CEO's may not be allocated enough structural power to moderate the relationship between the percentage of the TMT that is female and influence the allocation of power between the CEO and TMT. In addition, diverse CEOs may not have the desire to influence structural power in this manner to shift the balance of power between the CEO and TMT regardless of the composition of the TMT in terms of in-group and out-group members. In addition, female and racial minority CEOs may feel that they had to work so hard to earn the position of CEO that they wish to maintain the power structure seen in other organizations.

Yet, in hypothesis 4.1.2a and hypothesis 4.1.2b examining the moderating influence of the presence of a female CEO or a racial minority CEO on the CEO-TMT Pay-Disparity and the percentage of the TMT that was racial minority and the CEO-TMT Pay-Disparity significance was not found for a female CEO but was significant for a racial minority CEO. Indicating that racial minority CEOs may have both the structural power and desire to increase equality for in-group members. However, they may not have enough structural power to influence the compensation of females in the TMT or may lack the desire to influence female TMT compensation in this way. It is also noteworthy that there are only 2 female racial minority CEOs in the dataset indicating that females on the TMT could belong to two demographic outgroups in terms of race and gender with the racial minority CEOs in the dataset.

Operating under the assumption that females in the TMT are compensated less, and that female CEOs will exert influence to benefit female members of their TMT, hypothesis 4.2.1a posited that the presence of a female CEO would be negatively associated with within-position pay-disparity for females in the TMT and the results support this idea. However, hypothesis 4.2.1b, posited that the presence of a racial minority CEO would be negatively associated with

within-position pay-disparity for females in the TMT, but this was not found to be true. A possible explanation for this is that although discrimination may be a predominantly male-on-male undertaking, the reversal of discrimination in place may be such a colossal undertaking that it may require in-group status between the CEO and TMT for this to take place.

In much the same way hypothesis 4.2.2a and 4.2.2b utilized the assumption that racial minorities in the TMT are compensated less, and that female CEOs will exert influence to benefit racial minorities in the TMT and that racial minority CEOs would exert influence to benefit racial minorities in the TMT. Although the coefficient was in the expected direction, female CEOs did not have a significant influence on TMT minority within-position pay-disparity, However, minority CEOs did have a significant negative influence on TMT minority within-position pay-disparity. The explanation for why this may be the case is similar to the one outlined above for hypothesis 4.2.1b, with the exception that it being a female CEO as opposed to a racial minority CEO. However, the presence of a diverse CEO is found to assist their in-group members in the TMT of the organization.

Utilizing the assumption that females as well as racial minorities will exert influence to benefit diverse members of the TMT, hypothesis 4.3.1a as well as hypothesis 4.3.1b posited that having a female CEO or a racial minority CEO would negatively moderate the positive relationship between TMT TMT Female Within-Position Pay-Disparity and the presence of a female in the TMT. However, this was not significant in the results for either female CEOs or racial minority CEOs and females in the TMT. Likewise, utilizing the assumption that females as well as racial minorities will exert influence to benefit diverse members of the TMT, hypothesis 4.3.2a as well as hypothesis 4.3.2b posited that having a female CEO or a racial minority CEO would negatively moderate the positive relationship between TMT Racial Minority Within-

Position Pay-Disparity and the presence of a racial minority in the TMT. However, this was not significant in the results for either female CEOs or racial minority CEOs and racial minorities in the TMT. This could be due to the sample size and number of female CEOs or racial minority CEOs who have females or racial minorities in their TMT.

Hypotheses set 5 addresses the influence that the presence of minority, female or racial minority, compensation committee members have on the compensation of females and racial minorities in the TMT with regards to moderation and association. Operating under the assumption that diverse compensation committee members have the structural power to influence the CEO-TMT Pay-Disparity as well as the desire to do so, results from hypothesis 5.1.1a and 5.1.1b. indicated that the presence of female or racial minority compensation committee members did not moderate the relationship between the percentage of the TMT that is female and the CEO-TMT Pay-Disparity. Likewise, using the assumption that diverse compensation committee members have the structural power to influence the CEO-TMT Pay-Disparity as well as the desire to do so, results from hypothesis 5.1.2a and 5.1.2b. indicated that the presence of female or racial minority compensation committee members did not moderate the relationship between the percentage of the TMT that is racial minority and the CEO-TMT Pay-Disparity. Not reaching statistical significance could be for several reasons, one being that diverse members of the compensation committee may not be allocated enough structural power to moderate the relationship between the percentage of the TMT that is diverse and influence the allocation of power between the CEO and TMT. In addition, diverse compensation committee members may not have the desire to influence structural power in this manner to shift the balance of power between the CEO and TMT regardless of the composition of the TMT in terms of in-group and out-group members.

The results did indicate that the presence of female compensation committee members is negatively associated with female TMT within position pay-disparity, indicating that these individuals increase equality to females in the TMT in support of hypothesis 5.2.1a. However, this does not hold true for racial minority compensation committee members and Female TMT Within-Position Pay-Disparity, in other words lack of support for hypothesis 5.2.1b. There was no support for females or racial minorities in the compensation committee increasing the equality in structural power to racial minorities in the TMT as indicated by lack of support for hypotheses 5.2.2a and 5.2.2b. A possible explanation for this is that although discrimination may be a predominantly male-on-male undertaking, the reversal of discrimination in place may be such a colossal undertaking that it may require in-group status between compensation committee members and TMT for this to take place. In addition, it is noteworthy that almost 60%, see Table 5.2, of the firm years in the sample had one or more racial minorities in their compensation committee. However, only about 40% of the firm years in the sample had females in the compensation committee. The higher percentage of racial minorities may indicate that these individuals are be given a seat on the committee because of racial diversity expected in S&P 500 companies, without any authority to make changes in the compensation of executives. This could be diluting the results and these relationships should be examined in future research.

Utilizing the assumption that females as well as racial minorities will exert influence to benefit diverse members of the TMT, hypothesis 5.3.1a as well as hypothesis 5.3.1b posited that the percentage of female compensation committee members and percentage of racial minority compensation committee members would negatively moderate the positive relationship between TMT TMT Female Within-Position Pay-Disparity and the presence of a female in the TMT. However, this was not significant in the results for either female compensation committee

members or racial minority compensation committee members and females in the TMT. In a similar way, hypothesis 5.3.2a as well as hypothesis 5.3.2b posited that the percentage of female compensation committee members or percentage of racial minority compensation committee member would negatively moderate the positive relationship between TMT Racial Minority Within-Position Pay-Disparity and the presence of a racial minority in the TMT. However, this was not significant in the results for either female compensation committee members or racial minority compensation committee members and racial minorities in the TMT. This could be due to the sample size and number of female compensation committees or racial minority committees that also had racial minorities in their TMT. In other words, for this to be significant the firms that had racial minorities in the TMT would also have to align with the firms that had females or racial minorities in the compensation committee. This may be why many of the moderating relationships examined in this dissertation were not significant.

Hypotheses set 6 addresses the influence that the presence of minority, female or racial minority, compensation committee members have on the compensation of a female or racial minority CEO with regards to moderation and association. Operating under the assumption that diverse compensation committee members have the structural power to influence the CEO-TMT Pay-Disparity as well as the desire to do so, results from hypothesis 6.1.1a indicate that the percentage of females in the compensation committee does increase the structural power allocated to female CEOs. However, the percentage of racial minority compensation committee members does not statistically influence structural power allocated to a female CEO indicated by lack of support for hypothesis 6.1.1b. Likewise, using the assumption that diverse compensation committee members have the structural power to influence the CEO-TMT Pay-Disparity as well as the desire to do so, results from hypothesis 6.1.2a and 6.1.2b. indicated that the percentage of

female or racial minority compensation committee members did not moderate the relationship between a racial minority CEO and the CEO-TMT Pay-Disparity. Not reaching statistical significance could be for several reasons, one being that diverse members of the compensation committee may not be allocated enough structural power to moderate the relationship between the percentage of the TMT that is diverse and influence the allocation of power between the CEO and TMT. In addition, diverse compensation committee members may not have the desire to influence structural power in this manner to shift the balance of power between the CEO and TMT regardless of the composition of the TMT in terms of in-group and out-group members.

The results also indicated lack of support for idea that the percentage of female or racial minority compensation committee members would be associated with the within-position pay-disparity for female or racial minority CEOs, as indicated by lack of support for hypotheses 6.2.1a, 6.2.1b, 6.2.2a, and 6.2.2b. This could be due to the fact that no significance was found in the dataset for female or racial minority CEOs being compensated more or less than their white male counterparts.

Utilizing the assumption that females as well as racial minorities will exert influence to benefit a female CEO, hypothesis 6.3.1a as well as hypothesis 6.3.1b posited that the percentage of female compensation committee members and percentage of racial minority compensation committee members respectively would negatively moderate the relationship between female CEO Within-Position Pay-Disparity and having a female CEO. There was moderate support for this in terms of having a female CEO and the percentage of females in the compensation committee. However, this was not significance in the results for the percentage of racial minority compensation committee members and a female CEO. Likewise, hypothesis 6.3.2a as well as hypothesis 6.3.2b posited that the percentage of female compensation committee members or

percentage of racial minority compensation committee member would negatively moderate the relationship between racial minority CEO Within-Position Pay-Disparity and having a racial minority CEO. However, this was not significant in the results for either the percentage of female compensation committee members or percentage of racial minority compensation committee members and a racial minority CEO. This could be due to sample size.

In summary of these results, social dominance theory indicates that females and racial minorities should not have the same desire to discriminate, leading to the hypotheses outlined in this dissertation that female CEOs would distribute power more equally to racial minorities in their TMT and that racial minority CEOs would distribute power more equally to females in their TMT. In most instances, the coefficients were in the expected direction; however, the results did not reach significance. This may be due to sample size and should be re-examined in the future. Thus in aggregate, these findings indicate further support for social categorization theory as well many some aspects of social dominance theory.

Section 6.3 Practical Implications and Direction for Future Research

Section 6.3.1 Implications

Firms need be cognizant of the pay-disparity for females and racial minorities and that this is an indicator to the world about the structural power allocated to these diverse individuals within the company. Windscheid et al. (2016), found that companies with a commitment to diversity, but were lacking in diversity were perceived as lacking in integrity and to have less employer attractiveness, which can impact the future success of a company. Thus, it can be inferred that compensating diverse individuals less would be viewed in an equally unfavorable way. It is important that there be equality in compensation for more reasons that just the fact that

it is illegal to not have equality. However, females and racial minorities are consistently compensated less in the upper echelons (Kulich et al., 2011).

Individuals with goals of reaching the top as well as equality in compensation may want to consider companies with more females and racial minorities in the upper echelons of the organization. In addition, companies without females or racial minorities in the upper echelons may need to put more emphasis on ensuring equality in compensation. Although anyone can and should stand up for equality in compensation. If no in-group members are present to stand up for diverse members of the C-suite, companies may need to put more emphasis on reaching equality. In so doing, focusing on equality in compensation and thus the distribution of structural power should bring it to the attention of out-group members who are potentially unaware of modern sexism (Kabat-Farr & Cortina, 2012) or aversive racism, the negative beliefs and feelings regarding racially diverse individuals based in often non-conscious psychological processes (Dovidio & Gaertner, 2004; Dovidio et al., 2016), which can be detrimental to the firm.

Section 6.3.2 Future Research

In this dissertation, many of the hypothesized relationships did not reach significance, especially with regards racial diversity. This is likely because the race variables need to be broken out by more specific categories for the individuals to feel that they are part of another member's in-group. While there are currently few racial minorities in the upper echelons there are even fewer instances where racial minorities who are in the upper echelons of a specific company are of the same race. This may change in the future and this study can be re-examined. At the core of this dissertation is the question of whether females and racial minorities influence outcomes for other females and racial minorities in the upper echelons. There are areas other than the distribution of structural power that can be examined in this vein of research. For

example, does the presence of females and racial minorities influence the distribution of other forms of structural power such as the number of titles that executives hold.

As an extension of this dissertation, the outcomes from unequal distribution of power to females and racial minorities in the TMT could be examined. Heightened leader power can diminish team performance (Tost, Gino & Larrick, 2013). Thus, when the power of the CEO is artificially heightened because less structural power is given to minority members of the TMT, it could be reducing the positive benefits that an organization could glean from a diverse TMT. If power were distributed more equally the benefits of diversity might be even higher and mixed results such as (Carter, D'Souza, Simkins & Simpson, 2010) may be explainable with differences in the distribution of power to diverse individuals in the C-suite. Future research should examine the influence that the distribution of power to females and racial minorities has on the performance of organizations.

Research has examined the impact of having females and racial minorities in the upper echelons on firm performance (Abdullah et al., 2016; Dezso & Ross, 2012; Hoobler et al., 2018). With findings that are sometimes mixed as to whether females and racial minorities increase firm performance (Abdullah et al., 2016). Future research should examine the structural power given to females and racial minorities in the upper echelons and the influence that this has on firm performance in firms with females and racial minorities in the upper echelons. Social dominance theory indicates that society distributes resources unequally to females and racial minorities and this holds true in the results to an extent. The female CEO and racial minority CEO relationships with the distribution of power were not significant in the dataset. These inconclusive results are yet another addition to research outlined in the literature review of this dissertation on the discrimination faced by females and racial minorities in the upper echelons. Future research

could examine the political ideology of an organization and how power is distributed to females and racial minorities. More specifically, organizational liberalism and the distribution of power to females and racial minorities could be examined in future research. Gupta et al. (2017) found that the political affiliation of the organization was associated with the percentage of the TMT that was female. Future research should examine the influence of political affiliation and the percent of the TMT that is racial minority. Although not directly related to this dissertation, this is a viable option using the dataset collected in this dissertation.

The results of this dissertation provide further fodder for the Queen Bee debate. Some have found support in favor of the Queen Bee ideology (Furst & Reeves, 2008), others have not found support (Dezso et al., 2016). The results in this dissertation do not find support for the Queen Bee ideology, but rather the opposite, that the presence of a female CEO or female independent compensation committee directors leads to more equality in the distribution of structural power to females in the TMT. In addition, the majority of the hypotheses in this dissertation had part a and part b. Part a indicated the female variable component and part b indicated the racial variable component to the hypotheses in different levels of the upper echelons. For example, according to the subordinate male target hypothesis, arbitrary set violence and discrimination are predominately male-on-male undertakings (Pratto et al., 2006; Sidanius & Pratto, 2001; Veniegas & Sidanius, 2013). Indicating that there should be less animosity between females and racial minorities. None of the hypotheses addressing this were significant, however the majority were in the expected direction and future research should examine this further.

Bilimoria and Piderit (1994) found that females are preferred for public affairs committees while men are more likely to be on compensation, executive, and finance

committees. Future research should reexamine the committees that female directors are preferred for and should also examine what committees in which racial minorities are more likely to be present and the influence that females and racial minorities have on these committees. The firm performance for firms with females and racial minorities on specific committees should also be examined to determine the influence this has on firm outcomes such as firm performance or charitable contributions made by the firm, while also considering the power these individuals have on the board. While this dissertation adds to the current literature, there is much research that still needs to be done in this area.

Section 6.4 Lessons Learned

During this dissertation process many lessons have been learned that will inform future research projects. Setting *reachable milestones* and end goals in the research process is paramount to finishing any research project. However, also keep in mind that things will not always go as planned and it is important to include a *time buffer* in research goals. Start sooner rather than later. Do some work on a research project every day, letting a research project sit for too many days disrupts workflow. Never put off till tomorrow what can be done today and have *patience* with processes that take longer to complete than anticipated. I greatly e*njoy the research topic* of this dissertation. This is important because research is a long, intense process and that interest will assist with seeing a research project through to completion. *Variable coding do's and don'ts*, when conducting research, especially research using archival data where many variables must be defined, it is vital to keep a codebook with variables names, definitions, and calculations, as well as the data source. No matter how clear a variable may seem at the time, there is no way that it will be remembered in a few weeks or a month. In other words, know the variables used in a research project inside and out.

With regards to *study measurement*, I found that many things are easier said than done, such as the categorization of executive titles into groups. In this, I learned that it is vital to lean on *past research* for ways of doing things in current research. There is no point in reinventing the wheel when other scholars have developed sound ways of doing things in research. In future research, when I need to measure or define a variable, I will do an extensive search to see what has been done in past research. With regards to *study design*, there are limited numbers of racial minorities in the upper echelons leading to the use of a Caucasian or non-Caucasian variable in this dissertation. However, research on race discrimination that breaks out racial minorities by more specific racial categories may better get at the relationships in this study and all racial minority research for that matter. My future research will attempt to refine racial categories to better get at the discrimination faced by specific racial minority groups whenever possible. In addition, data collection can be an arduous process and planning future studies ahead of time can allow one to collect additional variables so that various elements of a dataset can be utilized in studies that build on original work. For example, by collecting performance data in addition to the data collected for this dissertation, I will be able to conduct research into the outcomes of the distribution of structural power when there are females and racial minorities in the upper echelons. Indeed, carefully *planning research design* is important in this process and the potential for future publication. While dissertations are massive undertakings and rightfully so, there is great value in a large overarching project. The larger project can then be broken into meaningful articles that build on each other, thus facilitating the research success of the scholar. In the future I plan to engage in large studies that can be broken into meaningful articles that add to the research stream.

In addition, I learned much about statistical analysis during this dissertation process. My classroom experiences at Auburn University were extremely valuable in laying the foundation for completing statistical analysis for my dissertation. However, working with data to the extent required by a dissertation is an experience all its own, such as the use of bootstrapping when data is not normally distributed, or winsorizing data. This experience of finding the correct statistical analysis for the data in hand will assist me throughout my career. Specifically, I learned that analysis needs to be tailored to the data in hand. If the method originally applied does not work with the data, another analysis method should be evaluated. I also learned to *choose statistical analysis software wisely*, not all schools have access to expensive software packages such as SAS or Stata. During this dissertation process, I utilized Stata for analysis and SAS for defining variables, both software packages requiring expensive licenses. In hindsight, I should have utilized R for my coding and analysis as it is an open source software available to anyone. Because my future research will utilize the statistical software R, the countless hours spent writing code specifically for SAS and Stata as well as learning how to run analysis in license dependent software is in a sense lost. Fortunately, it will be relatively easy to transfer that knowledge to coding in R. However, it will be a considerable time investment. Code for variable definition as well as statistical analysis written in the dissertation process can be edited to use in later projects. Had I used R from the start, subsequent analysis for future research projects would require minor edits instead of needing to be completely re-written. If I could redo the process, I would only utilize R as this is the software is open source and has no cost. Last, but certainly not least, *be proactive* in research projects. Stay in touch with your research team as they have valuable insight to impart and it is far easier to implement insights proactively rather than retroactively.

Section 6.5 Conclusion

In summation, this dissertation adds to the power literature by examining the C-suite to include the CEO and TMT, while also including female and racial diversity as a research element in the study. This dissertation brings attention to how the power dynamic changes based on diversity in the upper echelons. This dissertation also brings further awareness to the many challenges faced by females and racial minorities after they break through the first glass ceiling, specifically the distribution of less structural power to these individuals. While this dissertation adds to the growing body of research on females and racial minorities and the discrimination that they face, much research is still needed in this area.

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